



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Overview



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



In this module, students engage in reading, writing, listening, and speaking to build knowledge of simple machines and how they impact force, effort, and work. Students begin by reading some basic informational text. They then read out loud and perform a short Readers Theater (written for classroom use) about simple machines in order to continue building background knowledge about simple machines while also learning the structural elements of drama and practicing reading fluently. In Unit 2, students examine an extended science text, *Simple Machines: Forces in Action* (870L), which gives them a chance to examine the structure and text features, as well as analyze concepts in scientific writing. Several sections of this science text will be structured as close reading experiences. Students also will write routinely to explain how various simple machines work. They then will develop deeper expertise by working in small groups to read more

about specific simple machines (inclined plane, levers, pulleys, etc.) as well as reading and conducting a series of science experiments using simple machines. They will synthesize their findings from the experiments by writing scientific conclusion statements. To appreciate just how prevalent simple machines are in daily life, students will conduct a simple machine “inventory” at home and school. In Unit 3, students will continue to learn about simple machines, and will write letters to people they know suggesting the most useful simple machine for a specific daily task, using key vocabulary and providing evidence to support their opinions about the value of simple machines. **This performance task centers on NYSP12 ELA CCLS RI.4.1, RI.4.3, W.4.1, W.4.4, W.4.5, W.4.7, W.4.9, and L.4.3.**

Guiding Questions and Big Ideas

- **How do simple machines impact our lives?**
- **How do readers and writers form and support opinions?**
- *Simple machines impact force, effort, and work.*



Performance Task

Students will write an editorial about which simple machine they think benefits people's lives the most. They will use the following prompt to guide their writing: "A local engineering magazine wants to educate its readers on the importance of simple machines in the age of high-tech gadgets. So they've decided to hold a 'Campaign for Simple Machines.' Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month's magazine." Students will support their opinions with evidence from their research. They will conclude their editorial with a summary of their opinion. **This performance task centers on NYSP12 ELA CCLS RI.4.1, RI.4.3, W.4.1, W.4.4, W.4.5, W.4.7, W.4.9, and L.4.3.**

Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Social Studies and Science content that may align to additional teaching during other parts of the day. These intentional connections are described below.

Science Learning Standard 4: The Physical Setting

- Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Key Idea 5

- Energy and matter interact through forces that result in changes in motion.

Performance Indicator 5.1

- Describe the effects of common forces (pushes and pulls) of objects, such as those caused by gravity, magnetism, and mechanical forces.



CCS Standards: Reading—Literature	Long-Term Learning Targets
<ul style="list-style-type: none">• RL.4.1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	<ul style="list-style-type: none">• I can explain what a text says using specific details from the text.
<ul style="list-style-type: none">• RL.4.5. Explain major differences between poems, drama, and prose, and refer to the structural elements of poems (e.g., verse, rhythm, meter) and drama (e.g., casts of characters, settings, descriptions, dialogue, stage directions) when writing or speaking about a text.	<ul style="list-style-type: none">• I can use literary terms to describe parts of a drama.• I can describe the differences in structure of drama.
CCS Standards: Reading—Informational Text	Long-Term Learning Targets
<ul style="list-style-type: none">• RI.4.1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	<ul style="list-style-type: none">• I can explain what a text says using specific details from the text.• I can make inferences using specific details from the text.
<ul style="list-style-type: none">• RI.4.2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.	<ul style="list-style-type: none">• I can determine the main idea using specific details from the text.
<ul style="list-style-type: none">• RI.4.3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.	<ul style="list-style-type: none">• I can explain the main points in a historical, scientific, or technical text, using specific details in the text.
<ul style="list-style-type: none">• RI.4.4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.	<ul style="list-style-type: none">• I can determine the meaning of academic words or phrases in an informational text.• I can determine the meaning of content words or phrases in an informational text.
<ul style="list-style-type: none">• RI.4.5. Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.	<ul style="list-style-type: none">• I can describe the organizational structure in informational text (chronology).



CCS Standards: Reading—Foundational Skills	Long-Term Learning Targets
<ul style="list-style-type: none">• RF.4.3. Know and apply grade-level phonics and word analysis skills in decoding words.<ul style="list-style-type: none">a. Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology (e.g., roots and affixes) to read accurately unfamiliar multisyllabic words in context and out of context.	<ul style="list-style-type: none">• I can use a variety of strategies to read words.
<ul style="list-style-type: none">• RF.4.4. Read with sufficient accuracy and fluency to support comprehension.<ul style="list-style-type: none">a. Read grade-level text with purpose and understanding.b. Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression.c. Use context to confirm or self-correct word recognition and understanding, rereading as necessary.	<ul style="list-style-type: none">• I can read fourth-grade-level texts accurately and fluently to make meaning.<ul style="list-style-type: none">a. I can read fourth-grade-level texts with fluency.
CCS Standards: Writing	Long-Term Learning Targets
<ul style="list-style-type: none">• W.4.1. Write opinion pieces on topics or texts, supporting a point of view with reasons and information.<ul style="list-style-type: none">a. Introduce a topic or text clearly, state an opinion, and create an organizational structure in which related ideas are grouped to support the writer's purpose.b. Provide reasons that are supported by facts and details.c. Link opinion and reasons using words and phrases (e.g., for instance, in order to, in addition).d. Provide a concluding statement or section related to the opinion presented.	<ul style="list-style-type: none">• I can write an opinion piece that supports a point of view with reasons and information.<ul style="list-style-type: none">a. I can introduce the topic of my opinion piece.a. I can create an organizational structure in which I group together related ideas.b. I can identify reasons that support my opinion.c. I can use linking words to connect my opinion and reasons.d. I can construct a concluding statement or section for my opinion piece.
<ul style="list-style-type: none">• W.4.4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	<ul style="list-style-type: none">• I can produce writing that is appropriate to task, purpose, and audience.



CCS Standards: Writing (continued)	Long-Term Learning Targets
<ul style="list-style-type: none">• W.4.7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.	<ul style="list-style-type: none">• I can conduct a research project to become knowledgeable about a topic.
<ul style="list-style-type: none">• W.4.8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.	<ul style="list-style-type: none">• I can recall information that is important to a topic.• I can document what I learn about a topic by taking notes.• I can sort my notes into categories.• I can provide a list of sources I used to gather information.
<ul style="list-style-type: none">• W.4.9. Draw evidence from literary or informational texts to support analysis, reflection, and research.<ul style="list-style-type: none">a. Apply grade 4 Reading standards to literature (e.g., “Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text [e.g., a character’s thoughts, words, or actions]”).b. Apply grade 4 Reading standards to informational texts (e.g., “Explain how an author uses reasons and evidence to support particular points in a text”).	<ul style="list-style-type: none">• I can choose evidence from informational texts to support analysis, reflection, and research.
<ul style="list-style-type: none">• W.4.10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.	<ul style="list-style-type: none">• I can write for a variety of reasons.



CCS Standards: Speaking & Listening	Long-Term Learning Targets
<ul style="list-style-type: none">• SL.4.1. Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.<ul style="list-style-type: none">a. Come to discussions prepared, having read or studied required material; explicitly draw on that preparation and other information known about the topic to explore ideas under discussion.b. Follow agreed-upon rules for discussions and carry out assigned roles.c. Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others.d. Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.	<ul style="list-style-type: none">• I can effectively engage in discussions with diverse partners about fourth-grade topics and texts.<ul style="list-style-type: none">a. I can prepare myself to participate in discussions.a. I can draw on information to explore ideas in the discussion.b. I can follow our class norms when I participate in a conversation.c. I can ask questions that are on the topic being discussed.c. I can answer questions about the topic being discussed.c. I can connect my questions and responses to what others say.d. After a discussion, I can explain what I understand about the topic being discussed.
CCS Standards: Language	Long-Term Learning Targets
<ul style="list-style-type: none">• L.4.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.<ul style="list-style-type: none">a. Choose words and phrases to convey ideas precisely.*	<ul style="list-style-type: none">• I can express ideas using carefully chosen words.



CCS Standards: Language (continued)	Long-Term Learning Targets
<ul style="list-style-type: none"> L.4.4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies. <ul style="list-style-type: none"> a. Use context (e.g., definitions, examples, or restatements in text) as a clue to the meaning of a word or phrase. b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., telegraph, photograph, autograph). c. Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases. 	<ul style="list-style-type: none"> I can use a variety of strategies to determine the meaning of words and phrases. <ul style="list-style-type: none"> a. I can use context to help me to determine what a word or phrase means. b. I can use common affixes and roots as clues to help me determine what a word means (e.g., telegraph, photograph, autograph). c. I can use resource materials (glossaries, dictionaries, thesauruses) to help me determine the pronunciation and meaning of key words and phrases.
<ul style="list-style-type: none"> L.4.6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation). 	<ul style="list-style-type: none"> I can accurately use fourth-grade academic vocabulary to express my ideas.

Central Texts
<ol style="list-style-type: none"> Buffy Silverman, <i>Simple Machines: Forces in Action</i>, Do It Yourself series (New York: Heinemann, 2009); ISBN: 978-1-4329-2317-4. Pamela Marx, <i>Take a Quick Bow!</i> (Culver City, CA: Good Year Books, 1997); ISBN: 978-1-59647-083-5 (NOTE: Only one copy required for teacher, then reproduced for students. The book explicitly states, “Only portions of this book intended for classroom use may be reproduced without permission in writing from the publisher.”)



Week	Instructional Focus	Long-Term Targets	Assessments
Unit 1: Building Background Knowledge about Simple Machines through Informational Text and Literature			
Week 1	<ul style="list-style-type: none"> • Concept sort • Close Read: <i>Simple Machines</i>, pages 4–5 • Begin Science journal, including vocabulary 	<ul style="list-style-type: none"> • I can explain what a text says using specific details from the text. (RI.4.1) • I can determine the main idea using specific details from the text. (RI.4.2) • I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) • I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) • I can determine the meaning of content words or phrases in an informational text. (RI.4.4) • I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) • I can write for a variety of reasons. (W.4.10) • I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> • Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text (RI.4.2, RI.4.3)



Week	Instructional Focus	Long-Term Targets	Assessments
Week 1 (continued)	<ul style="list-style-type: none"> Readers Theater 	<ul style="list-style-type: none"> I can explain what a text says using specific details from the text. (RL.4.1) I can use literary terms to describe parts of drama. (RL.4.5) I can describe the differences in structure of drama and prose. (RL.4.5) I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4) 	<ul style="list-style-type: none"> End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater (RL.4.1, RL.4.5, L.4.4)
Unit 2: Scientific Research: Researching Simple Machines: How They Help do Work			
Weeks 2–4	<ul style="list-style-type: none"> Science Talk research notebook Lesson Cycles: Read, experiment, write, discuss Vocabulary Work: Quiz-Trade 	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text (RI.4.3) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> Mid-Unit 2 Assessment: Reading and Answering Question about Screws (RI.4.3, RI.4.4, W.4.9)



Week	Instructional Focus	Long-Term Targets	Assessments
Weeks 2–4 (continued)	<ul style="list-style-type: none"> Lesson Cycles: Read, experiment, write, discuss Expert visits Vocabulary Quiz-Trade Science Talk 	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can describe the organizational structure in informational or persuasive text (chronology). (RI.4.5) I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> End of Unit 2 Assessment, Part I: Reading and Answering Question about Wedges (RI.4.3, RI.4.4, W.4.9) End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments (RI.4.3, RI.4.5, W.4.2)



Week	Instructional Focus	Long-Term Targets	Assessments
Unit 3: Sharing Opinions: The Best Simple Machine for a Job			
Weeks 4–7	<ul style="list-style-type: none">Choose a simple machineExamine mentor texts (editorials)	<ul style="list-style-type: none">I can describe the organizational structure in informational or persuasive text (chronology). (RI.4.5)I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8)	<ul style="list-style-type: none">Mid-Unit 3 Assessment: Reading and Answering Questions about Editorials (RI.4.5, RI.4.8)



Week	Instructional Focus	Long-Term Targets	Assessments
Weeks 4–7 (continued)	<ul style="list-style-type: none"> • Explicitly teach opinion writing • Using reasons to support opinion • Write an editorial 	<ul style="list-style-type: none"> • I can describe the organizational structure in informational or persuasive text (chronology). (RI.4.5) • I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) • I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) • I can produce writing that is appropriate to task, purpose, and audience. (W.4.4) • I can conduct a research project to become knowledgeable about a topic. (W.4.7) • I can choose evidence from literary or informational texts to support analysis, reflection, and research. (W.4.9) • I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) • I can use grammar conventions to send a clear message to a reader or listener. (L.4.1) • I can use conventions to send a clear message to my reader. (L.4.2) • I can express ideas using carefully chosen words. (L.4.3) 	<ul style="list-style-type: none"> • End of Unit 3 Assessment (RI.4.5, RI.4.8, W.4.1, W.4.4) • Read opinion piece and name supporting reasons and on-demand opinion writing • Performance Task: Opinion Writing: An Editorial on Simple Machines (RI.4.1, RI.4.3, W.4.1, W.4.4, W.4.7, L.4.1, L.4.2, L.4.3)



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Assessment Overview



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Final Performance Task	<p>Opinion Writing: An Editorial on Simple Machines</p> <p>After reading biographical texts on a famous American athlete of a historical era, students write a letter to a publishing company explaining the need for a biography (written at a level appropriate for fifth-graders) about that athlete. In the letter, students will discuss the athlete, evaluate the barriers that s/he broke during the era in which s/he lived, and give an opinion about the importance of that athlete's impact on American society. Students will support their opinion with reasons and evidence from their research. This task centers on NYSP12 ELA CCLS RI.4.9, W.4.1, W.4.5, W.4.7, W.4.8, W.4.9, L.4.1, L.4.2, and L.4.3.</p>
Mid-Unit 1 Assessment	<p>Finding the Main Idea of a Scientific Text</p> <p>This assessment centers on NYSP12 ELA CCLS RI.4.2 and RI.4.3. In this assessment, students read a new text about simple machines and their everyday uses. They use a graphic organizer to take notes from the text in order to identify the main idea and supporting details. After reading and taking notes, students answer a series of multiple-choice and short-answer questions that assess their ability to identify the main idea and a supporting detail as well as identify main points of the scientific text using explicit details from the text. Although students write a paragraph, this is not designed as a formal writing assessment.</p>
End of Unit 1 Assessment	<p>Reading and Answering Questions about Readers Theater</p> <p>This assessment centers on NYSP12 ELA CCLS RL.4.5, RL.4.1, and L.4.4. In this assessment, students read a new Readers Theater about simple machines and answer questions about the text structure and characteristics. They then complete short-answer questions to explain what the text is about and multiple-choice questions asking them to infer the meaning of vocabulary and support their answer with evidence from the text.</p>



Mid-Unit 2 Assessment	Answering Questions about Screws This assessment centers on NYSP12 ELA CCLS RI.4.2, and RI.4.3. In this assessment, students read a new text about the screw and answer a series of multiple-choice and short-answer questions that assess their ability to identify main points of the scientific text using explicit details from the text.
End of Unit 2 Assessment	Reading and Answering Question about Wedges (Part I); and Reading and Answering Questions about Experiments (Part II) This two-part assessment centers on NYSP12 ELA CCLS RI.4.3, RI.4.1, as well as RI.4.5, W.4.2, and W.4.9. During Part I, students will read about a new simple machine, wedges, from pages 12 and 13 of <i>Simple Machines: Forces in Action</i> . They will take notes using a graphic organizer and then answer text-dependent multiple-choice and short-answer questions. In Part II, students will read an experiment, answer text-dependent questions, then conduct the experiment and write about what they observed and conclude about wedges' impact on work from the experiment.
Mid-Unit 3 Assessment	Reading and Answering Questions about Editorials This assessment centers on NYSP12 ELA CCLS RI.4.5 and RI.4.8. During this assessment, students will read and answer questions about an on-demand opinion piece—an editorial. They will then answer text-dependent multiple-choice and short-answer questions.
End of Unit 3 Assessment	Planning and Drafting an Editorial (Part I); and Revising to Create a Polished Editorial (Part II) This two-part assessment centers on NYSP12 ELA CCLS RI.4.5, RI.4.8, W.4.1, and W.4.4. During Part I, will read and answer questions about an editorial. They will answer text-dependent multiple-choice and short-answer questions. In Part II, students will write an on-demand opinion piece. They will state an opinion and group ideas and reasons together to support their opinion.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Performance Task



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Summary of Task

- Students will synthesize their learning by stating an opinion about simple machines in an editorial. They will explain what simple machines are and then form an opinion about which simple machine benefits people the most in their everyday lives. The editorial will be submitted to a fictitious engineering magazine. The students will produce multiple drafts and participate in several structured peer critiques as they work toward a final polished editorial. **This task centers on NYSP12 ELA CCLS RI.4.1, RI.4.3, W.4.1, W.4.4, W.4.5, W.4.7, W.4.9, and L.4.3a.**
- If there is capacity to support high-quality illustrations (e.g., technical drawings, paintings, prints), the editorials may include technical drawings of simple machines and editorial layout as well. The “publication” of the editorials could be celebrated with an event that brings outside community members into the classroom, for which students will both describe their opinions and reflect on their learning for this public audience.

Format

Editorial (on a 8½" x 11" sheet of paper)

(Optional: Consider mocking up the writing as an actual magazine article)

Standards Assessed through This Task

- RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
- RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.
- W.4.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.
- W.4.4 Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- W.4.5 With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.
- W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.
- W.4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.
- L.4.3a Choose words and phrases to convey ideas precisely.



Student-Friendly Writing Invitation/Task Description

- A local engineering magazine wants to educate its readers about the importance of simple machines in the age of high-tech gadgets. So they've decided to hold a "Campaign for Simple Machines." Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month's magazine.

Key Criteria for Success (Aligned with NYSP12 ELA CCLS)

Below are key criteria students need to address when completing this task. Specific lessons during the module build in opportunities for students to understand the criteria, offer additional criteria, and work with their teacher to construct a rubric on which their work will be critiqued and formally assessed.

- Clear topic
- Clear organizational structure that groups related ideas
- Scientifically accurate reasons that support opinion
- Scientifically accurate vocabulary
- Linking opinion and reasons using words and phrases
- Concluding statement
- Peer critique



Options for Students

- Students will create their editorial based on their research during Units 1 and 2.
 - * Design a technically accurate drawing of their simple machine being used with labels and captions.
 - * Students could survey school personnel and community members to see what simple machines they use the most. This data could be included in their editorial as additional support for their opinion.
 - * As a technology extension, students may type their editorial.

Options for Teachers

- The class could create a magazine about simple machines and their benefits to people along with advertisements for products containing simple machines. This could be given to the school library as a resource for other students.
- If during the research, students find that particular tools/simple machine(s) are needed in their school (e.g., dollies, wheels for large trashcans, wheelchair ramps, doorstops), they could present their findings and suggestions to the school board.

Resources and Links

- Simple Machines with Bill Nye the Science Guy YouTube video (5:45), available at <http://www.youtube.com/watch?v=grWIC9VsFY4> (last accessed 12/23/12)
- EdHeads: Activate Your Mind Simple Machines games, available at <http://edheads.org/activity/simplemachines> (last accessed 12/23/12)
- Franklin Institute Resources for Science Learning Simple Machines, available at <http://sln.fi.edu/qa97/spotlight3/spotlight3.html> (last accessed 12/23/12)
- MIKIDS Simple Machines, available at www.mikids.com/Smachines.htm (last accessed 12/23/12)



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Overview



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 1: Building Background Knowledge about Simple Machines through Informational Text and Literature

In Unit 1, students are asked to infer the topic of their research for this module by sorting various pictures of simple machines and their everyday use. Students start by sorting these “Mystery Pictures” into inferred categories, then read an informational text from the book *Simple Machines* to learn basic information about simple machines. Once students discover the topic, they build background knowledge by rereading the text from *Simple Machines* and determine the main idea and supporting details, as well as the main points related to the scientific concepts of force, effort, and work explained in the text. This is followed by a mid-unit assessment of RI.4.2 and RI.4.3.

Students then read and analyze Readers Theater *The Machine*, which engages students as they continue to build content knowledge about simple machines, and also introduces students to a new genre (drama). They will examine the structure of drama and learn how drama is different from other types of literature (RL.4.5). The end of unit assessment focuses on standards RL.4.5 and RL.4.1: Students read a new Readers Theater about simple machines and answer questions about the characteristics of this type of drama as well as information about simple machines contained within the text. Overall, this unit prepares students for their deeper study in Unit 2 about simple machines and the work they do to help people.

Guiding Questions And Big Ideas

- **How do simple machines impact our lives?**
- **How do readers and writers form and support opinions?**
- *Simple machines impact force, effort, and work.*



Mid-Unit 1 Assessment	Finding the Main Idea of a Scientific Text This assessment centers on standards NYSP12 ELA CCLS RI.4.2 and RI.4.3. In this assessment, students read a new text about simple machines and their everyday uses. They use a graphic organizer to take notes from the text in order to identify the main idea and supporting details. After reading and taking notes, students answer a series of multiple-choice and short-answer questions that assess their ability to identify the main idea and a supporting detail as well as identifying main points of the scientific text using explicit details. Although students write a paragraph, this is not designed as a formal writing assessment.
End of Unit 1 Assessment	Reading and Answering Questions about Readers Theater This assessment centers on standards NYSP12 ELA CCLS RL.4.1, RL.4.5, and L.4.4. In this assessment, students read a new Readers Theater about simple machines and answer questions about the text structure and characteristics. They then complete short-answer questions to explain the text and multiple-choice questions asking them to infer the meaning of the vocabulary and support their answer with evidence from the text.

Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Science content that many teachers may be teaching during other parts of the day. These intentional connections are described below.

Big ideas and guiding questions are informed by the New York State Common Core K–8 Social Studies Framework:
<http://engageny.org/sites/default/files/resource/attachments/ss-framework-k-8.pdf>

NYS Social Studies Core Curriculum

- Science Learning Standard 4: The Physical Setting
 - Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.
- Key Idea 5
 - Energy and matter interact through forces that result in changes in motion.
- Performance Indicator 5.1
 - Describe the effects of common forces (pushes and pulls) of objects, such as those caused by gravity, magnetism, and mechanical forces.



Central Texts

1. Buffy Silverman, *Simple Machines: Forces in Action*, Do It Yourself series (New York: Heinemann, 2009); ISBN: 978-1-4329-2317-4.
2. Pamela Marx, *Take a Quick Bow!* (Culver City, CA: Good Year Books, 1997); ISBN: 978-1-59647-083-5. (NOTE: Only one copy required for teacher, then reproduced for students. The book explicitly states, "Only portions of this book intended for classroom use may be reproduced without permission in writing from the publisher.")



This unit is approximately 1 week or 6 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Using Mystery Pictures and Text to Discover the Topic (Simple Machines)	<ul style="list-style-type: none"> I can explain what a text says using specific details from the text. (RI.4.1) I can make inferences using specific details from the text. (RI.4.1) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) 	<ul style="list-style-type: none"> I can find the meanings of unfamiliar words to help me better understand a scientific text. I can categorize pictures based on details from the text. 	<ul style="list-style-type: none"> Simple Machines Science journal (page 2, Vocabulary) 	<ul style="list-style-type: none"> Reading and Writing Like a Scientist Vocabulary Strategies
Lesson 2	Reading and Writing about Simple Machines	<ul style="list-style-type: none"> I can explain the main points in a historical, scientific, or technical text, using specific details in the text. (RI.4.3) I can determine the main idea using specific details from the text. (RI.4.2) I can document what I learn about a topic by taking notes. (W.4.8) 	<ul style="list-style-type: none"> I can determine the main idea of a scientific text. I can write a paragraph describing what simple machines do using details from the text. 	<ul style="list-style-type: none"> Simple Machines Science journal (page 4, Building Background Knowledge) 	<ul style="list-style-type: none"> Guiding Question
Lesson 3	Mid-Unit Assessment and Introduction to Science Talks	<ul style="list-style-type: none"> I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) I can determine the main idea using specific details from the text. (RI.4.2) I can explain the main points in a historical, scientific, or technical text, using specific details in the text. (RI.4.3) 	<ul style="list-style-type: none"> I can determine the main idea of a scientific text. I can explain how simple machines help people do work using details from the text. I can effectively participate in a Science Talk about simple machines. I can prepare for the Science Talk by gathering evidence from scientific texts about simple machines. 	<ul style="list-style-type: none"> Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text Simple Machine Science journals (page 9) 	<ul style="list-style-type: none"> Science Talk Norms Participating in a Science Talk Science Talk protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 4	Learning from Literature: Simple Machines Readers Theater	<ul style="list-style-type: none"> • I can use literary terms to describe parts of a story, poem, or drama (e.g., verse, rhythm, meter, casts of characters, settings, descriptions, dialogue, stage directions). (RL.4.5) • I can describe the differences in structure of poems, drama, and prose. (RL.4.5) • I can explain what a text says using specific details from the text. (RL.4.1) • I can read fourth-grade-level texts with fluency. (RF.4.4) • I can express my own ideas clearly during discussions. (SL.4.1) • I can follow our class norms when I participate in a conversation. (SL.4.1) 	<ul style="list-style-type: none"> • I can share my opinion on a topic and respect the opinions of others. • I can identify the characteristics of Readers Theater through examining the text <i>The Machine</i>. • I can explain how drama is different from other types of fiction. 	<ul style="list-style-type: none"> • Exit ticket 	<ul style="list-style-type: none"> • Exploring Opinions as Readers and Writers • Readers Theater
Lesson 5	Learning from Literature Continued: Examining Text Structure, Vocabulary, and Information about Simple Machines in the Readers Theater <i>The Machine</i>	<ul style="list-style-type: none"> • I can explain how authors use evidence and reasons to support their points in informational texts. (RI.5.8) • I can summarize or paraphrase information in my notes and in finished work. (W.5.8) • I can create an organizational structure in which I group together related ideas. (W.5.1) • I can write an opinion piece that supports a point of view with reasons and information. (W.5.1) 	<ul style="list-style-type: none"> • I can identify the characteristics of Readers Theater through examining the text <i>The Machine</i>. • I can share my opinion on a topic and respect the opinions of others. • I can determine the meaning and pronunciation of challenging words. • I can explain what the text says about simple machines using details from the text. 	<ul style="list-style-type: none"> • Annotated text (<i>The Machine</i>) 	<ul style="list-style-type: none"> • Readers Theater • Vocabulary Strategies



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 6	Assessing Readers Theater and Performing <i>The Machine</i>	<ul style="list-style-type: none">• I can use literary terms to describe parts of a story or drama. (RL.4.5)• I can describe the differences in structure of drama and prose. (RL.4.5)• I can explain what a text says using specific details from the text. (RL.4.1)• I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4)• Addressed but not assessed:• I can read fourth-grade-level texts with fluency. (RF.4.4)	<ul style="list-style-type: none">• I can identify the characteristics of Readers Theater in a text.• I can explain what the text says about simple machines using details from the text.• I can read my Readers Theater line fluently and at an appropriate volume.	<ul style="list-style-type: none">• End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater	<ul style="list-style-type: none">• Readers Theater• Back-to-Back and Face-to-Face protocol



Optional: Experts, Fieldwork, and Service

Experts:

- Invite a drama teacher to explain the genre of drama and how it is similar and different from other types of fiction. They could also provide support for students to practice their articulation and fluent reading of text.

Fieldwork:

- Take a tour of your school to try to identify everyday uses of simple machines. Have students visit a stage, theater, or playhouse and practice their Readers Theater in this authentic setting.

Optional: Extensions

- Invite an audience from outside the classroom for students to perform their Readers Theater.



Science Journals

- This unit introduces a Science journal used throughout the lessons. Students will work in this journal during most lessons. Prepare it in advance. In order to prepare, look for the actual Science journal pages in Unit 1, Lesson 1, supporting materials. The journal is actually used for the first time during Unit 1, Lesson 2.

Anchor Charts

- Vocabulary Strategies (Lesson 1), Reading and Writing Like a Scientist (Lesson 1), Guiding Questions (Lesson 2), Science Talk protocol (Lesson 3), Science Talk Norms (Lesson 3), Participating in a Science Talk (Lesson 3), Exploring Opinions as Readers and Writers (Lesson 4), Readers Theater (Lesson 4).

Graphic Organizers

- Most graphic organizers are included in the Science journal; see Lesson 1.
- Graphic Organizer for Finding the Main Idea about *Simple Machines* (Lesson 3).



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1:

Recommended Texts



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 1 focuses on simple machines and how those machines help people. The list below includes texts with a range of Lexile text measures on this topic. This provides appropriate independent reading for each student to help build content knowledge.

It is imperative that students read a high volume of texts at their reading level to continue to build the academic vocabulary and fluency demanded by the CCLS.

Common Core Band Level Text Difficulty Ranges:

(As provided in the NYSED Passage Selection Guidelines for Assessing CCSS ELA)

- Grades 2–3: 420–820L
- Grades 4–5: 740–1010L
- Grades 6–8: 925–1185L

Where possible, texts in languages other than English are also provided. Texts are categorized into three Lexile ranges that correspond to Common Core Bands: below-grade band, within band, and above-grade band. Note, however, that Lexile® measures are just one indicator of text complexity, and teachers must use their professional judgment and consider qualitative factors as well. For more information, see Appendix 1 of the Common Core State Standards.

Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below-grade band level (below 740L)			
<i>What Is a Plane?</i>	Lloyd G. Douglas (author)	Informational	230
<i>What Is a Lever?</i>	Lloyd G. Douglas (author)	Informational	230
<i>What Is a Wedge?</i>	Lloyd G. Douglas (author)	Informational	280
<i>What Is a Pulley?</i>	Lloyd G. Douglas (author)	Informational	300
<i>What Is a Screw?</i>	Lloyd G. Douglas (author)	Informational	310
<i>Push and Pull</i>	Patricia J. Murphy (author)	Informational	480
<i>Inclined Planes and Wedges</i>	Sally M. Walker and Roseann Feldmann (authors), Andy King (photographer)	Informational	520

*Lexile based on a conversion from Accelerated Reading level;

Lexile® is a trademark of MetaMetrics, Inc., and is registered in the United States and abroad. Copyright © 2012 MetaMetrics.



Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below-grade band level (below 740L)			
<i>Simple Machines</i>	Deborah Hodge (author), Ray Boudreau (illustrator)	Informational	580
<i>Lance Dragon Defends His Castle with Simple Machines</i>	Eric Braun (author), Anthony Briglia (illustrator)	Informational	475*
<i>Machines We Use</i>	Sally Hewitt	Informational	640
<i>Tires, Spokes, and Sprockets: A Book about Wheels and Axles</i>	Michael Dahl (author) Denise Shea (illustrator)	Informational	660
<i>Screws to the Rescue</i>	Sharon Thales	Informational	660
<i>Wedges to the Rescue</i>	Sharon Thales	Informational	660
<i>Levers to the Rescue</i>	Sharon Thales	Informational	660
<i>Cut, Chop, and Stop: A Book about Wedges</i>	Michael Dahl (author) Denise Shea (illustrator)	Informational	670
<i>Simple Machines</i>	Vijaya Khisty Bodach (author)	Informational	680
<i>Inclined Planes to the Rescue</i>	Sharon Thales	Informational	690
<i>Wheels and Axles to the Rescue</i>	Sharon Thales	Informational	690
<i>Ramps and Wedges</i>	David Glover (author)	Informational	700
<i>Pulleys to the Rescue</i>	Sharon Thales	Informational	710
<i>Levers and Pulleys: Lift Anything!</i>	Emily Sohn and Frederick Fellows (authors)	Informational	720
<i>Powerful Machines: Discover Science through Facts and Fun</i>	Gerry Bailey (author)	Informational	730



Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below-grade band level (below 740L)			
<i>Roll, Slope, and Slide: A Book about Ramps</i>	Michael Dahl (author), Denise Shea (illustrator)	Informational	No Lexile
Lexile text measures within band level (740-1010L)			
<i>Scoop, Seesaw, and Raise: A Book about Levers</i>	Michael Dahl (author) Denise Shea (illustrator)	Informational	740
<i>How Do You Lift a Lion?</i>	Robert E. Wells (author/illustrator)	Informational	750
<i>Wedges in Action</i>	Gillian Gosman (author)	Informational	770*
<i>Science Experiments with Simple Machines</i>	Sally Nankivell-Aston and Dorothy Jackson (authors)	Informational	770
<i>Simple Machines</i>	Dana Meachen Rau (author)	Informational	780
<i>Pull, Lift, and Lower: A Book about Pulleys</i>	Michael Dahl (author) Denise Shea (illustrator)	Informational	780
<i>Simple Machines</i>	Ade Deane-Pratt (author)	Informational	820*
<i>How to Catapult a Castle: Machines That Brought Down the Battlement</i>	James de Winter (author)	Informational	820
<i>Explore Simple Machines!</i>	Anita Yasuda (author)	Informational	830
<i>Simple Machines: Discover Science through Facts and Fun</i>	Steve Way and Gerry Bailey (authors)	Informational	840
<i>Forces and Simple Machines</i>	Jon Richards (author)	Informational	875*
<i>How Things Work Encyclopedia</i>	DK Publishing	Informational	960*
<i>Force and Simple Machines</i>	Jon Richards (author)	Informational	No Lexile



Title	Author And Illustrator	Text Type	Lexile Measure
Lexile text measures above-grade band level (over 1010L)			
<i>Simple Machines Made Simple</i>	Ralph St. Andre (author)	Informational	No Lexile
<i>Sir Isaac Newton: Brilliant Mathematician and Scientist</i>	Natalie M. Rosinsky (author)	Informational	1080
<i>Force and Motion</i>	Peter Lafferty (author)	Informational	1110
<i>The New Way Things Work</i>	David Macaulay (author)	Informational	1180
<i>Machines and Work (Science Fair Projects)</i>	Patricia Whitehouse (author)	Informational	No Lexile



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 1

Using Mystery Pictures and Text to Discover the Topic (Simple Machines)



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can explain what a text says using specific details from the text. (RI.4.1)
I can make inferences using specific details from the text. (RI.4.1)
I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
I can determine the meaning of content words or phrases in an informational text. (RI.4.4)

Supporting Learning Targets

- I can find the meanings of unfamiliar words to help me better understand a scientific text.
- I can categorize pictures based on details from the text.

Ongoing Assessment

- Simple Machines Science journal (pages 2-6, Vocabulary)



Using Mystery Pictures and Text to Discover the Topic (Simple Machines)

Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader: Mystery Pictures (15 minutes) B. Reviewing Learning Targets (5 minutes) 2. Work Time <ol style="list-style-type: none"> A. First Read: Getting the Gist about <i>Simple Machines</i> (15 minutes) B. Rereading: A Closer Look at Words (15 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Revisiting the Concept Sort: Identifying the Six Simple Machines (10 minutes) 4. Homework <ol style="list-style-type: none"> A. None 	<p><i>Note: In this module, students focus their reading and writing on the topic of simple machines. For the past two modules, students have been learning to read and write through social studies topics (the Iroquois and colonial America). To help students shift their focus to reading and writing about science, consider reminding students that readers and writers of informational text focus on many topics and disciplines, including both history and science.</i></p> <ul style="list-style-type: none"> • In the opening of this lesson, students work in small groups to sort “mystery” pictures. For this activity to fully engage students, do NOT tell them the topic of the module in advance. Keep simple machines a mystery. • If students discover the simple machines topic early in this lesson, it’s fine—they likely won’t know how to categorize all the pictures by the types of simple machines, which is the bulk of both Work Time A and B. Reading the text will help them refine their knowledge. • Students discuss what it means to read and write like scientists and begin a Reading and Writing Like a Scientist anchor chart, which will develop throughout the module. • After the topic of simple machines is revealed, remind students that while the focus of their reading, research, and writing is now a science topic, they will still learn the skills and strategies used by readers and writers. • During this module, students read and take notes on a variety of texts, learn new domain and academic vocabulary, conduct science experiments, and participate in several Science Talks. These experiences require different note-catchers and graphic organizers. Consider copying these documents and stapling them into a Simple Machines Science journal (packet) so all documents are held together and less likely to be lost. See supporting materials. This Science journal is used for the first time during Lesson 2. • Students can keep their Science journal in their research folders (from Module 2). Help students learn the organizational strategy of keeping all notes, writing drafts, texts, etc. on a topic in one folder—or designate an alternate system. • Begin to prepare for Independent Reading, which is launched in Lesson 2. See teaching note at the end of this lesson for details. • In advance: Post or create a new version of the Vocabulary Strategies anchor chart (created in Module 2, Unit 1, Lesson 3). • Post: Learning targets. • Record and post the Directions for Determining the Meaning of Simple Machine Words on the board or on chart paper for use with students in Work Time B. See supporting materials.



Using Mystery Pictures and Text to Discover the Topic (Simple Machines)

Lesson Vocabulary	Materials
scientist, scientific text, simple machines, work, force, effort	<ul style="list-style-type: none">• Reading and Writing Like a Scientist anchor chart• Mystery pictures (one set each for a group of three to four)• Document camera• <i>Simple Machines: Forces in Action</i> (book; one per student plus one for teacher use)• Simple Machines Science journal (1 stapled packet per student; prepare for use in Lesson 2)• Equity sticks (created in Module 2, Unit 1, Lesson 3)• Vocabulary Strategies anchor chart (created in Module 2, Unit 1 Lesson 3; see supporting materials if chart must be recreated)• Directions for Determining the Meaning of Simple Machine Words (for teacher reference)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Mystery Pictures (15 minutes) <i>Note: Do not yet reveal the topic of these pictures or how they should be sorted.</i></p> <ul style="list-style-type: none">• Post chart paper and record the title at the top of a new anchor chart: Reading and Writing Like a Scientist anchor chart. Tell students today and for the next several weeks they'll learn to read and write like scientists. Ask students to turn to a partner and talk about what it means to "read and write like a scientist." Have students share their thinking.• Tell students the root for <i>scientist</i> comes from Latin and means "to know." Explain that good scientists have a lot in common with good readers, and record the following on the anchor chart:<ul style="list-style-type: none">– Ask questions– Seek more information– Base thinking or conclusions on evidence• Elaborate on each bullet point to clarify with students. (For example, you might explain that readers base their inferences on evidence from the text and scientists do the same when reading about or observing their topics.) Tell students starting today they'll get to do all of these things as they discover the topic they will read and write about as scientists for the next several weeks.• Display the mystery pictures using a document camera or enlarge pictures and post on the board. Do not reveal the topic of the pictures.• Explain to students that they will be working in groups to examine and discuss these pictures. Remind them of the class expectation for working in a small group. For example: All will participate and share their thinking; be respectful of other's ideas; etc.• Place students in groups of three or four. Distribute the mystery pictures to each group. Ask students to examine the pictures with their group and discuss the following question:<ul style="list-style-type: none">* "What do you notice about these pictures?"• Give students 3 minutes to examine and discuss.	<ul style="list-style-type: none">• Asking students to justify their thinking by citing evidence in pictures helps them to take these same steps when reading a text.



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask students to sort pictures into groups based on details they see. Reassure students there is no right or wrong answer; the purpose is to explain why they sorted the pictures the way they did. Give students 3 more minutes. Students may sort pictures by shape (wheels and pulleys together or levers and inclined planes together) or function (doorknob and bottle cap together—turn to open).• Circulate among groups to determine how students categorize their pictures. Prompt them to explain their sorting using explicit details from the pictures. For example, a group might report: “We grouped the seesaw with the slide because they are both on a playground.” After groups have sorted, ask them to explain how they sorted their pictures.• Next, ask students to discuss with their group the following question:<ul style="list-style-type: none">* “What do all these pictures have in common?”• Allow groups 3 minutes to discuss, then have each group share their thoughts. Push students to provide evidence for their thinking from the pictures. For example, you might ask: “What detail in these pictures caused you to group time into the same category?”• Have students stack pictures in a pile. Consider paper-clipping stacks or using plastic baggies to store pictures between sorting.	



Opening (continued)	Meeting Students' Needs
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Tell students that they'll read something to help them solve the mystery of what the pictures have in common. Explain that you would like them to use the following learning targets: "I can find the meanings of unfamiliar words to help me better understand a scientific text," and "I can infer about pictures using details from the text."• For the first target, have students turn to a partner and share:<ul style="list-style-type: none">* "When have you figured out the meaning of an unfamiliar word? How did it help you better understand a text?"• Have partners share their thinking. Underline the words <i>scientific text</i> and explain that this means the text will explain something in scientific terms.• For the second learning target, explain that they have already sorted the mystery pictures once, but they'll do it again once they've read the text and have more information. Ask students to think about the target and discuss with their groups:<ul style="list-style-type: none">* "How will your second sorting be different based on this learning target?"• Ask groups to share their thinking and explain that in their second sorting, they will have to use evidence from the text to justify their categories. If necessary, give students the synonym for the word <i>categories</i> by writing the word <i>groups</i> above it on the learning target. Clarify that categories are groups based on similar characteristics or features.	<ul style="list-style-type: none">• To further support ELLs and other students with vocabulary needs, consider giving concrete examples to clarify the meaning of academic vocabulary. For example, with the word <i>categories</i>, you could give students the example of sorting blocks into categories by their color, shape, or size.
Work Time	Meeting Students' Needs
<p>A. First Read: Getting the Gist about Simple Machines (15 minutes)</p> <ul style="list-style-type: none">• Distribute the text <i>Simple Machines: Forces in Action</i> to each student. Explain that this is the text they will use to read like scientists. Before you begin reading, remind students as with any first read of a complex text, they are likely to notice many words they don't know. Explain it is a good idea to read for the gist; what is the text about?• Ask students to follow along with you as you read pages 4 to 5. After reading, ask groups to discuss what they think this text is about. Call on a member from each group to share the group's thinking. Probe so students cite evidence to support their thinking. For example, if a student says, "This is about simple machines," ask: "What did the text say about simple machines?"	



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading: A Closer Look at Words (15 minutes)</p> <ul style="list-style-type: none"> • Have students pair up for reading. Distribute the Simple Machines Science journal. Explain that this journal will be used throughout the next few weeks as they research simple machines. Tell students the first thing they'll do is record important vocabulary from this text. Point to pages 2 through 7 in the Science journal, titled "Simple Machines: Vocabulary." Explain that this is where the class will collect important words for understanding simple machines and other words that students might need to write like scientists. Remind students they have collected important words as readers and writers in the past when they used a vocabulary notebook when reading and writing about Colonial America (in Module 2). • Ask students to reread the text to see what they notice about the words. Have them discuss with their partner what they see that stands out. Have a few pairs share. They should notice many bolded words in the text. If not, point this out. Ask them to Think-Pair-Share by discussing why think these words are bolded with their partner. Cold call a few students using equity sticks. Students should recall that authors use bold type to indicate importance. Explain that in informational text bold type also indicates the meaning of a word is explained in the glossary. Revisit Vocabulary Strategies anchor chart. • The chart should contain something similar to the following: <ul style="list-style-type: none"> – Reading on in the text and inferring – Thinking about parts of the word that you know (like word roots) – Looking for a text feature that defines the word – Looking in the glossary – Looking in a dictionary – Discussing a word with another (after attempting some of the above strategies) • Explain that today students will focus on <i>Simple Machines</i> to determine the meaning of the following words: <i>simple machines, work, force, effort, and experiment</i>. • Review the Directions for Determining the Meaning of Simple Machine Words posted in advance of the lesson with students. Explain that students will be able to use the glossary to determine the meaning of most, but not all words. 	<ul style="list-style-type: none"> • Help students prepare for cold-calling by informing them before they Think-Pair-Share. • For students who need further support, consider simplifying and typing the directions. • Also consider giving sentence starters for students to discuss their understanding of the words with their partners. For example, "To me this word means_____. I am still confused by this word because_____."



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Demonstrate the following:<ol style="list-style-type: none">1. Find the bolded word simple machines in the text.2. Locate the glossary at the back of the text.3. Locate the phrase “simple machines” and read the definition.4. Find the phrase in the alphabetized list of vocabulary words in the Simple Machines Science journal on page 6, and record its definition (second column only—Definition).5. Reread the paragraph containing the bolded word in the text. Think aloud about the meaning of the word and what, if anything, still confuses you. For example, you might say something such as: “Now I know that there are six types of simple machines and that they help people do work, but I am still unsure how each of them work.”• Give students 10 minutes to look up the remaining four words, record their definitions, and discuss their understanding and record their questions and visuals/notes. Circulate and support pairs as needed. Remind them that the words are listed alphabetically in the Vocabulary section of their Science Journal.• Cold call pairs to share their definitions and visuals/notes for remembering each word and what still confuses them. Reassure students that it is okay if they still have questions about these simple machine words, because they will continue to read about simple machines and discuss these words over the course of the module. <p><i>Note: Students <u>do not</u> complete the last two columns for the words they record in their journals (“This helps me know what this word means ...” and “Connections to Simple Machines”). They need to build more background knowledge about these words in future lessons before they can complete these categories.</i></p>	



Closing and Assessment	Meeting Students' Needs
<p>A. Revisiting the Concept Sort: Identifying the Six Simple Machines (10 minutes)</p> <ul style="list-style-type: none">• Ask students to gather in their original groups and get out their mystery pictures. Ask groups to take 3 minutes to re-sort and to infer new categories based on their reading of <i>Simple Machines</i>.• Ask groups to share their newly inferred categories and to explain what details in the text support their thinking. Reveal that the intended categories are the six types of simple machines. Have groups modify their sorting if necessary, then distribute the answer key for groups to check their work.• Finally, ask groups to discuss the following question:<ul style="list-style-type: none">* “How did reading this text change your thinking about the pictures?”• Have groups share out their thoughts.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• None. <p><i>Note: Each unit in this module is accompanied by an extensive list of Recommended Texts at a variety of reading levels. Students should use the classroom, school, or local library to obtain book(s) about the topics under study at their independent reading level. These books can be used in a variety of ways—as independent and partner reading in the classroom whenever time allows, as read-alouds by the teacher to entice students into new books, and as an ongoing homework expectation. During this unit, let students know you expect them to read at home from a related book at their independent reading level. In addition, students may be assigned additional work, such as rereading complex text or completing a writing task. For more information on independent reading, see also Launching Independent Reading in Grades 3-5: Sample Plan, which is a stand-alone document on EngageNY.org.</i></p>	<ul style="list-style-type: none">• Students who cannot yet read independently at any level will benefit from hearing books read to them, either by a caregiver or through audio recordings. Hearing books/texts can be an ongoing assignment for these students.• In addition, www.novelnewyork.org has a free, searchable database of content-related texts that can be played as audio files on a home or library computer. Texts on this site can also be translated into many languages. Use the database to provide at-home reading of related texts to ELLs and their families in their native languages.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 1

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Mystery Pictures





Mystery Pictures





Mystery Pictures

9



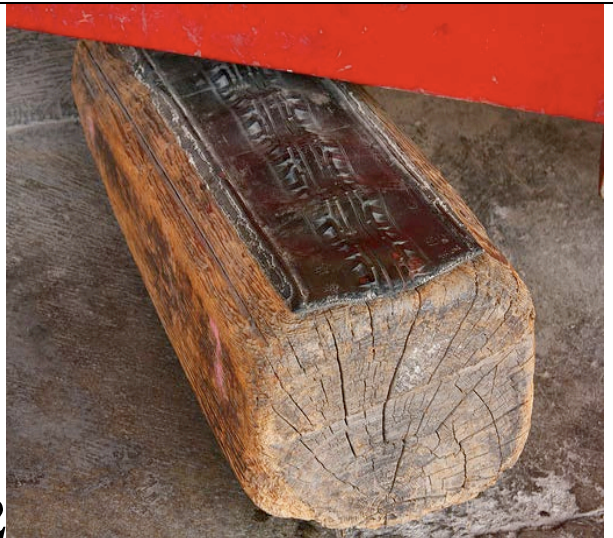
10



11



12





Categories

Levers

Wedges

Pulleys

Wheels and Axles

Screws

Inclined Planes



Answer Key

1. seesaw = lever
2. teeth = wedge
3. sailboat = pulley
4. door knob = wheel and axle
5. bottle top = screw
6. toilet handle = lever
7. flagpole = pulley
8. bike wheel = wheel and axle
9. screw = screw
10. slide = inclined plane
11. on-ramp = inclined plane
12. door stop = wedge

Photo #1 Bakke, Peat. "Night Seesaw." 3 March 2008. Online Image. Flickr. <http://www.flickr.com/photos/mistermoss/2308968745/>.

Photo #2 Gennari, Claudio. "The Threat." 10 Jan 2009. Online Image. Flickr. <http://www.flickr.com/photos/claudiogennari/3187479048/>.

Photo #3 Leo-Seta. "Pulleys." Aug 1994. Online Image. Flickr. <http://www.flickr.com/photos/uncle-leo/3172970451/>.

Photo #4 Sattler, Gary, and Anna Sattler. "LockSet01-at-440." 13 July 2007. Online Image. Flickr. Source:
<http://www.flickr.com/photos/9512074@N02/815185256/>.

Photo #5 Holifield, Chris. "Yet Another Mutant Zucchini." 3 Jan 2005. Online Image. Flickr. <http://www.flickr.com/photos/dropdeadchris/2785904134/>.

Photo #6 Jordan, Brett. "Toilet Humour." 14 Oct 2007. Online Image. Flickr. <http://www.flickr.com/photos/x1brett/4481271046/>.

Photo #7 Joshua Davis Photography. "My America." 5 Aug 2004. Online Image. Flickr. <http://www.flickr.com/photos/articnomad/8643121/>.

Photo #8 Dodson, E. Used by permission.

Photo #9 Hudson, Paul. "Screw: Theme 2: Mundane Technology." 18 Feb 2012. Online Image. Flickr. <http://www.flickr.com/photos/pahudson/6897093529/>.

Photo #10 Brown, Elliott. "Piazza Antiche Mura, Sorrento – play ground – slide." 30 June 2012. Online Image. Flickr. <http://www.flickr.com/photos/ell-r-brown/7538200214/>.

Photo #11 Cozart, Justin. "Unfinished Ramp, Frisco TX." 29 June 2011. Online Image. Flickr. <http://www.flickr.com/photos/fatguyinalittlecoat/5773420857/>.

Photo #12 Murrell, Leigh A. "Untitled." 20 June 2011. Online Image. Flickr. <http://www.flickr.com/photos/echameagua/7236933840/in/photostream/>.

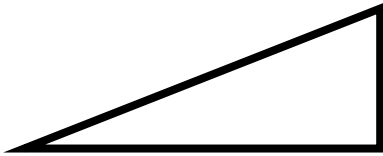


Simple Machines Science Journal

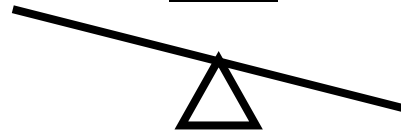
Name: _____

Date: _____

Inclined Plane



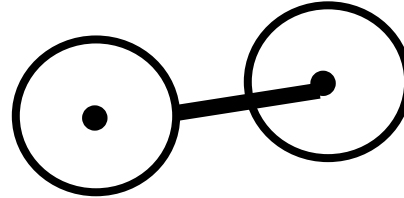
Lever



Wedge



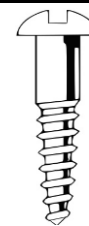
Wheel and Axle



Pulley



Screw



Simple Machines Science Journal
Vocabulary

Word/Phrase	Definition	This helps me know what this word means ...	Connections to <i>Simple Machines</i>
balance			
compound machine			
conclusion			
decrease			
distance			

Simple Machines Science Journal
Vocabulary

Word/Phrase	Definition	This helps me know what this word means ...	Connections to <i>Simple Machines</i>
effort			
experiment			
fixed pulley			
force			
friction			

Simple Machines Science Journal
Vocabulary

Word/Phrase	Definition	This helps me know what this word means ...	Connections to <i>Simple Machines</i>
fulcrum			
hypothesis			
inclined plane			
increase			
lever			

Simple Machines Science Journal
Vocabulary

Word/Phrase	Definition	This helps me know what this word means ...	Connections to <i>Simple Machines</i>
load			
moveable pulley			
observe			
pulley			
ramp			

Simple Machines Science Journal

Vocabulary

Word/Phrase	Definition	This helps me know what this word means ...	Connections to Simple Machines
resistance			
simple machine			
wheel and axle			
work			

Simple Machines Science Journal

Vocabulary

This section is intentionally blank. Use the table below to add any other words you think are important as you continue to learn more about simple machines

Word/Phrase	Definition	This helps me know what this word means ...	Connections to Simple Machines

Simple Machines Science Journal
Building Background Knowledge
What Are Simple Machines?

Text: Use the information on pages 4-5 of *Simple Machines* by Buffy Silverman, and fill in below.

<div>Main Idea:</div>	<div>Supporting Detail</div>	<div>Why are simple machines important?</div>
	<div>Supporting Detail</div>	
	<div>Supporting Detail</div>	

Reading and Writing Like a Scientist:

Explain what simple machines do. Use details from the text to support your explanation.

Question: How do simple machines impact our lives?

Preparation: Look back in your notes and texts about simple machines to find evidence to help you answer the Science Talk question.

When I read or saw this evidence ...	I think that simple machines impact our lives by ...
(Example) that part in <i>Simple Machines</i> that said pyramid workers used levers to help them pick up bricks	(Example) I think that levers help lift really heavy things.

My Science Talk notes: Ideas and Questions
My teacher's feedback:
My goals for the next Science Talk:

Simple Machines Science Journal
KWL Chart

I KNOW ...		I WANT to know ...	I LEARNED ...	
Information	Y/N		Information	Source

Hypothesis: What do you think is going to happen?

Materials: List the materials needed for this experiment.

<ul style="list-style-type: none">••	<ul style="list-style-type: none">••
-------------------------------------------------------------	-------------------------------------------------------------

Observations: As you conduct this experiment, what do you see happening?

Lifting bag straight up (*Hint: Step 8*):

Pulling bag on top of books (*Hint: Step 10*):

Conclusion: Describe what you learned about the inclined plane and how it works. Make sure to use scientific vocabulary in your conclusion.

1. Record important information about the inclined plane from the text.

What an inclined plane looks like:	Type of work it helps a person do:	Example of an inclined plane:

2. Diagram showing how this simple machine helps people. Make sure to label your diagram.

--

3. How does an inclined plane impact *work*?

Hypothesis: What do you think is going to happen?

Materials: List the materials needed for this experiment.

•	•	•	•
•	•	•	•

Observations: As you conduct this experiment, what do you see happening?

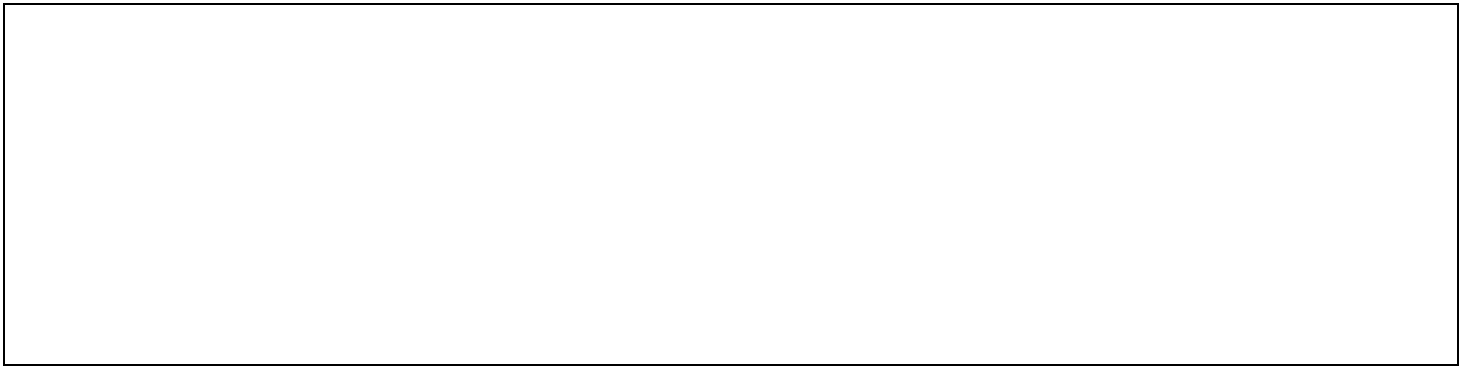
Six and four dimes:
Prediction for seven and three dimes:
Test seven and three dimes:
Eight and two dimes:
Nine dimes and one dime:

Conclusion: Describe what you learned about the lever and how it works. Make sure to use scientific vocabulary in your conclusion.

1. Record important information about the inclined plane from the text.

What a lever looks like:	Type of work it helps a person do:	Example of a lever:

2. Diagram showing how this simple machine helps people. Make sure to label your diagram.



3. How does a lever impact *work*?

Question: How do simple machines impact our lives?

Preparation: Look back in your notes and texts about simple machines to find evidence to help you answer the Science Talk question.

When I read or saw this evidence ...	I think that simple machines impact our lives by ...
(Example) that part in <i>Simple Machines</i> that said pyramid workers used levers to help them pick up bricks	(Example) I think that levers help lift really heavy things.

My Science Talk notes: Ideas and Questions

My teacher's feedback:

My goals for the next Science Talk:

1. Record important information about the inclined plane from the text.

What a pulley looks like:	Type of work it helps a person do:	Example of a pulley:

2. Diagram showing how this simple machine helps people. Make sure to label your diagram.

--

3. A single pulley **does** / **does not** [circle one] change the effort needed to lift a load. Explain your answer.

--

4. A double pulley **does** / **does not** [circle one] change the effort needed to lift a load. Explain your answer.

--

Simple Machines Science Journal
Wheel and Axle Research Notes

1. Record important information about the inclined plane from the text.

What a wheel and axle look like:	Type of work it helps a person do:	Example of a wheel and axle:

2. Diagram showing how this simple machine helps people. Make sure to label your diagram.

--

3. Describe how the wheel and axle is similar to the lever? Use scientific vocabulary in your explanation.

4. Explain why a screwdriver is an example of a wheel and axle.

5. How does a wheel and axle impact *work*? Make sure to use scientific vocabulary in your explanation. (Hint: make sure to use the word *friction* in your explanation.)

Simple Machines Science Journal
Pulley Experiment Notes

Hypothesis: What do you think is going to happen?

Materials: List the materials needed for this experiment.

• •	• •	• •
------------	------------	------------

Observations: As you conduct this experiment, what do you see happening?

Pick up the pail without a pulley. (<i>Hint: Step 3</i>):
Raising the pail with a single pulley. (<i>Hint: Step 5</i>):
Raising the pail with a double pulley. (<i>Hint: Step 9</i>):

Conclusion: Describe what you learned about the pulley and how it works. Make sure to use scientific vocabulary in your conclusion. (Hint: What's the difference between a single pulley and a double pulley on the effort it takes to lift a load?)

Hypothesis: What do you think is going to happen?

Materials: List the materials needed for this experiment.

Observations: As you conduct this experiment, what do you see happening?

- Length of rubber band attached to the wheeled object:

_____centimeters _____inches

- Length of rubber band as the wheeled object is pulled on its wheels:

_____centimeters _____inches

Describe the effort it took to move the object:_____

- Length of rubber band as the wheeled object is pulled on its side:

_____centimeters _____inches

Describe the effort it took to move the object:_____

Conclusion: Describe what you have learned about the wheel and axle and how it works. Make sure to use scientific vocabulary in your conclusion.

Simple Machines Science Journal
Preparing for a Science Talk
(Unit 2 Lesson 11)

Question: How do simple machines impact our lives?

Preparation: Look back in your notes and texts about simple machines to find evidence to help you answer the Science Talk question.

When I read or saw this evidence ...	I think that simple machines impact our lives by ...
(Example) that part in <i>Simple Machines</i> that said pyramid workers used levers to help them pick up bricks	(Example) I think that levers help lift really heavy things.

My Science Talk notes: Ideas and Questions

Reflect on the following learning target:

“I can effectively participate in a Science talk about simple machines.”



Vocabulary Strategies Anchor Chart

Directions for creating: Write the following underneath on chart paper to create this anchor chart.

Vocabulary Strategies

- * Reading on in the text and infer
- * Think about parts of the word that you know (like word roots)
- * Look in the glossary
- * Look for a text feature that defines the word
- * Look in a dictionary
- * Discuss a word with another (after attempting some of the above strategies)



Directions for Determining the Meaning of Simple Machine Words

Teacher directions: Write the following directions on the board or chart paper for students in advance of this lesson.

Directions: Using your glossary or another strategy, find the meaning of the following words: *simple machines, work, force, effort, and experiment*.

- 1) Determine the meaning of each word.
- 2) Find the word in your journal and write the definition (complete the second column only).
- 3) Reread the text with your partner.
- 4) Discuss the following questions: How has your understanding of these words changed? Which words are still confusing for you and why?



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 2

Reading and Writing about Simple Machines



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can explain the main points in a historical, scientific, or technical text, using specific details in the text. (RI. 4.3)</p> <p>I can determine the main idea using specific details from the text. (RI.4.2)</p> <p>I can document what I learn about a topic by taking notes. (W.4.8)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none"> I can determine the main idea of a scientific text. I can write a paragraph describing what simple machines do using details from the text. 	<ul style="list-style-type: none"> Simple Machines Science journal (page 8, Building Background Knowledge)

Agenda	Teaching Notes
<ol style="list-style-type: none"> Opening <ol style="list-style-type: none"> Engaging the Reader: Discussion of the Guiding Question (5 minutes) Reviewing Learning Targets (5 minutes) Work Time <ol style="list-style-type: none"> Review and Identify Main Idea in a Scientific Text (10 minutes) Partner Reading: Supporting Details (15 minutes) Writing Like a Scientist (15 minutes) Closing and Assessment <ol style="list-style-type: none"> Browsing and Selecting Independent Reading Books (5 minutes) Reflecting on Learning Targets (5 minutes) Homework 	<ul style="list-style-type: none"> In advance: Have the directions for Partner Reading ready to share. Create the guiding question anchor chart with the question: “How do simple machines impact our lives?” on it, written large. Post: Learning targets.



Lesson Vocabulary	Materials
determine, main idea, scientist, scientific text, simple machines, work, force, effort	<ul style="list-style-type: none"> Guiding Question anchor chart (new; teacher-created; see teaching notes) Sticky notes (2-3 per student) Equity sticks <i>Simple Machines: Forces in Action</i> (book; one per student plus one for teacher use) Science journal (one per student; from Lesson 1) Document camera Directions for Partner Reading (one per student) Homework for <i>Simple Machines: Forces in Action</i>, pages 4–5 (one per student)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader: Discussion of the Guiding Question (5 minutes)</p> <ul style="list-style-type: none"> Remind students that for the next few weeks they will be reading and writing like scientists and learning all about simple machines. Direct students' attention to the Guiding Question anchor chart: "How do simple machines impact our lives?" Ask students to think about their response and Write-Pair-Share on a sticky note. Use equity sticks to call on a few students to share out something their partner said. As they share their thinking, have them hand in their sticky note with the date next to their response. Tell students they will revisit this chart throughout the module, adding new thinking as their learning progresses. 	<ul style="list-style-type: none"> Consider coming up with a visual cue for the word <i>main idea</i> that you hold up each time you read this word. This will help your ELLs make connections to this word from previous learning.
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> Invite students to read the learning target: "I can determine the main idea of a scientific text." Underline the phrase <i>main idea</i>. Ask students to reflect with a partner on a time the class has discussed main idea. Students should recall identifying the main idea in the texts they read about the Iroquois earlier in the year (see Module 1, Unit 2, Lesson 2). Remind students that the main idea is the most important idea from the text. Circle the word <i>determine</i> and ask them to share with their group what they think the word means. Have groups share out and clarify that determine means: "to decide after thinking." Tell students they will decide, or determine, the main idea using details to support their decision. 	



Work Time	Meeting Students' Needs
<p>A. Review and Identify Main Idea in a Scientific Text (10 minutes)</p> <ul style="list-style-type: none">• Distribute the text <i>Simple Machines</i> and the Simple Machines Science journal to each student.• Inform the students today they'll reread the same pages they read during Lesson 1 (pages 4–5) to determine the main idea. Remind them that they have read for the main idea before and the graphic organizer on page 8 of their Simple Machines Science journal should look familiar (first introduced in Module 1, Unit 2, Lesson 2). Point out the box for recording the main idea and boxes for recording supporting details.• Invite students to reread the text out loud with a partner and discuss what they think the main idea of the text is.• Use equity sticks to call on pairs to share their main ideas. Using a document camera, model recording the main idea in the graphic organizer on page 8 of the Simple Machines Science journal, titled "Building Background Knowledge: What Are Simple Machines?" A possible main idea from the text could be: "Machines have been used in the past and present to help people do work," or "Simple machines help people past and present to do work." Direct the students to write the main idea in the graphic organizer of their researcher's notebook. Students can copy the exact phrasing that is written on the class chart, or they can put it in their own words.	<ul style="list-style-type: none">• Consider placing gist cards on each table. This could be a gist sentence generated from the previous day's lesson. This may help your struggling readers focus on the most important parts of the text.• It may help your ELLs or struggling readers to pair with students reading at higher levels to discuss the main idea and supporting details.



Work Time (continued)	Meeting Students' Needs
<p>B. Partner Reading: Supporting Details (15 minutes)</p> <ul style="list-style-type: none"> Inform students they will again read pages 4 to 5 in the book to identify details supporting the main idea of the text and record into the next three boxes of their graphic organizers. Briefly review the Topic Expansion graphic organizer (which students should recognize from Module 1, Unit 2, Lesson 2). Post and hand out copies of the Directions for Partner Reading: <ol style="list-style-type: none"> Take turns rereading the text paragraph by paragraph. Look for details that support the main idea. Record three details that best support the main idea into the middle boxes of your graphic organizer (use notes or phrases, not sentences). Synthesize what you have learned by answering the question in the box on the right of the graphic organizer. Stop: We will answer the question at the bottom of page 8 together later in this lesson. <ul style="list-style-type: none"> Give students at least 10 minutes to reread and record. Invite each pair to join another pair to share the details they have identified supporting the main idea. Some details they may identify could be: "In ancient Egypt, workers used levers to lift heavy blocks to put them in the right spot," or "As the pyramids grew taller, the workers built ramps to move the heavy blocks to a higher level of the pyramid." 	<ul style="list-style-type: none"> Providing students with highlighters to find supporting details may help them identify the information they need in the text. Consider underlining the words in bold and including visuals next to each step.
<p>C. Writing Like a Scientist (15 minutes)</p> <ul style="list-style-type: none"> Explain to students that they will now use their graphic organizer to write a paragraph on page 8 of their Science journals that expresses the main idea and details of the portion of the text they read. Ask them to read the second learning target: "I can write a complete paragraph describing what simple machines do using details from the text." Ask them what it means to write a "complete paragraph." Jot their thinking down above the words in the learning target for clarification. Explain to students that after they have read the text and determined the main idea, they will write a paragraph describing what simple machines do. Remind students of the work they did writing paragraphs in Modules 1 and 2. Remind them that the characteristics of a quality paragraph are: a topic sentence, supporting details, and a concluding sentence. Give students 10 minutes of work time to write one paragraph. 	<ul style="list-style-type: none"> Using paragraph frames can help ELLs articulate their learning. For example: "Simple machines are _____. One of the ways simple machines help people is _____. Another way simple machines help people is _____."



Reading and Writing about Simple Machines

Closing and Assessment	Meeting Students' Needs
<p>A. Browsing and Selecting Independent Reading Books (5 minutes)</p> <ul style="list-style-type: none">• Allow students time to select a book from the recommended texts for this unit for independent reading. Let students know that you expect them to read at home from this book and will be asked to do so for homework as well as in class. Be sure to assist students in selecting a book at their independent reading level.	
<p>B. Reflecting on Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Direct students' attention to the second learning target: "I can use details from the text to explain what simple machines do using details from the text." Ask students to Think-Pair-Share about how successful they were in meeting this learning target. Make sure they show evidence from their paragraphs to support their reflection.• Remind students that tomorrow they will be assessed on the learning targets they used today. On the assessment they will be asked to identify the main idea of new scientific text about simple machines and write a paragraph explaining how simple machines are used.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Review pages 4 to 5 in <i>Simple Machines: Forces in Action</i>. Answer the question on the Homework for Simple Machines: Forces in Action, pages 4–5 handout using evidence from the text.• Begin to read from the independent reading book you selected for this unit.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 2

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Directions for Partner Reading

Directions for creating: Write the following underneath on chart paper to create this anchor chart.

1. Take turns rereading the text paragraph by paragraph.
2. Look for details that support the main idea.
3. Record three details that best support the main idea into the middle boxes of your graphic organizer (use notes or phrases, not sentences).
4. Stop: We will complete last box and answer the question at the bottom of page 4 in the next lesson.



Homework for *Simple Machines:*
Forces in Action, pages 4–5

Name:

Date:

Read pages 4–5 in *Simple Machines: Forces in Action* again. The text says: “Effort is a **force** acting on an object that moves the object.” Explain what this sentence means using evidence from the text to support your thinking.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 3

Mid-Unit 1 Assessment and Introduction to Science Talks



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)</p> <p>I can determine the main idea using specific details from the text. (RI.4.2)</p> <p>I can explain the main points in a historical, scientific, or technical text, using specific details in the text. (RI.4.3)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can determine the main idea of a scientific text.• I can explain how simple machines help people do work using details from the text.• I can effectively participate in a Science Talk about simple machines. I can prepare for the Science Talk by gathering evidence from scientific texts about simple machines.	<ul style="list-style-type: none">• Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text• Simple Machine Science journals (page 9)



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader and Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text (20 minutes)B. Science Talks: Communicating Like Scientists (5 minutes)C. Preparing Evidence and Questions for the Science Talk (10 minutes)D. Conducting the Science Talk (15 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Reflect on Discussion (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• Science Talks provide students the opportunity to collectively theorize and build on each other's ideas. These talks provide a window to students' thinking that helps teachers figure out what students know and possible misconceptions.• Because this lesson is an introduction to the Science Talk for students, it may take longer than 60 minutes to complete the mid-unit assessment and the Science Talk. Consider breaking this lesson into two class periods if you feel that your students need more time to complete these tasks.• Students will need access to pages 4–5 of <i>Simple Machines: Forces in Action</i> and their Simple Machines Science journals (for their Science Talk).• Review: Science Talk protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
norms, discussion, Science Talk, participate, effectively, inform, impact	<ul style="list-style-type: none">• Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text (one per student)• Mid-Unit 1 Assessment (answers, for teacher reference)• 2-Point Rubric: Writing from Sources/Short Response (for teacher reference)• Science Talk Norms anchor chart (newly created)• Simple Machine Science journals (introduced in Lesson 2)• Document camera• Participating in a Science Talk anchor chart (see supporting materials)• Sticky notes• Science Talk Criteria checklist (for teacher reference)• Equity sticks



Opening	Meeting Students' Needs
<p>A. Engaging the Reader and Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Collect students' homework from Lesson 2.• Tell students today they will complete a formal assessment in which they will do on their own much of what they have been practicing:<ul style="list-style-type: none">– Read an informational text.– Identify and record the main idea and details in the graphic organizer.– Answer text-dependent questions.– Write a paragraph based on details from the text.• Remind them they will need to refer to the text to answer the questions thoroughly. They will be assessed on being able to identify the main idea and details from the text that support it.• Encourage students to do their best. Let them know this is a chance to show what they know and the effort they make to read carefully and identify important details in an informational text. This also is an opportunity to discover even more about simple machines.• Ask students to read the first two learning targets silently (“I can determine the main idea of a scientific text,” and “I can write a paragraph explaining how simple machines are used in daily life using details from the text”). Have them give a thumbs-up if they are clear on what’s expected of them, a thumbs-sideways if they understand part but not all of what to do, and a thumbs-down if they are very unsure. Address any clarifying questions before beginning the assessment.	<ul style="list-style-type: none">• Using visual cues or physical gestures for the term <i>main idea</i> will help your ELLs connect this to learning done in previous sessions.• Consider underlining or drawing a box around the vocabulary words in the learning targets to help struggling readers focus on those key words.



Work Time	Meeting Students' Needs
<p>A. Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text (20 minutes)</p> <ul style="list-style-type: none">• Distribute the Mid-Unit 1 Assessment: Finding the Main Idea of a Scientific Text. Give students 20 minutes to complete the assessment.• While students take the assessment, circulate to monitor their test-taking skills. This is an opportunity to analyze students' behaviors while taking an assessment. Document strategies students are using during the assessment. For example, look for students annotating their text, using their graphic organizer to take notes before answering questions, and students going back to the text as they answer questions.	<ul style="list-style-type: none">• For students needing additional support producing language, consider offering a word bank of content words from the text to be used in the graphic organizer.
<p>B. Science Talks: Communicating Like Scientists (5 minutes)</p> <ul style="list-style-type: none">• Introduce the Science Talk by saying researchers share information they have learned with others and ask questions of other experts. This helps experts build their understanding by sharing their own thoughts as well as learn from what others say. Experts in the real world talk all the time to expand their thinking.• Remind students of all the learning they have done so far about simple machines. Tell them today they will have the opportunity to use what they've learned in a Science Talk. Share today's last learning target for the Science Talk. "I can effectively participate in a Science Talk about simple machines." Ensure that students understand the meaning of the words <i>effectively</i> and <i>participate</i>.• Inform students that a Science Talk is a discussion about big or important questions scientists have. While scientists discuss these big questions with one another, it is important for them to create a set of rules, or norms, they'll follow so everyone's ideas can be heard and considered.• Start a Science Talk Norms anchor chart and focus students' attention on the phrase <i>effectively participate</i>. Ask them what it looks/sounds like to effectively participate with peers. Listening for ideas such as: "Wait my turn to speak, so I am heard; don't shout/speak too loudly; make sure everyone gets a turn to speak; no one person does most/all of the speaking; use information from text to support my ideas," etc. Add students' ideas to the anchor chart.	<ul style="list-style-type: none">• Science Talks help your ELLs process their thinking verbally, and learn from the thoughts of others.• Encourage students to agree or disagree using thumbs-ups or thumbs-down. This can help students who struggle with language to process what their peers say.• Consider drawing visuals next to each norm, giving ELLs another access point to understand the text. Providing visual models of academic vocabulary supports language development and comprehension.



Work Time (continued)	Meeting Students' Needs
<p>C. Preparing Evidence and Questions for the Science Talk (10 minutes)</p> <ul style="list-style-type: none">• Ask the class the Science Talk question (which is also a guiding question): “How do simple machines impact our lives?” Clarify the meaning of the word <i>impact</i> if necessary. During this talk, students will start to build an understanding of how simple machines impact our lives.• Refer to the supporting learning target for today: “I can prepare for the Science Talk by gathering evidence from scientific texts about simple machines.” Explain the importance of experts sharing specific evidence from texts in their discussions with others.• Show page 9 of the Simple Machine Science journals on the document camera. Point out the different sections for recording notes on this page. Indicate to students they will only be taking notes on the first two sections of the recording form. The last two sections are for reflection and goal setting.• Briefly model how to fill in the first section on page 9 using evidence from the texts. In the first column, you could write: “When I read that pyramid workers used levers to help pick up bricks.” And in the second column: “I think levers help lift heavy things.”• Explain to students that the section marked “My Science Talk Notes: Ideas and Questions” is a space to write notes and questions during the Science Talk and to leave this space blank until the discussion begins.• Give students 10 minutes to complete their first section of page 9. Confer with the class as necessary, and remind them to use specific evidence from the text to support their thinking.	<ul style="list-style-type: none">• Having the students generate a physical gesture for the word <i>impact</i> will help your struggling readers associate meaning to this word.• Allow ELLs and other students to use pictures and symbols as necessary on their recording forms.



Work Time (continued)	Meeting Students' Needs
<p>D. Conducting the Science Talk (15 minutes)</p> <ul style="list-style-type: none">• Gather students on the rug. Remind them to bring their Simple Machine Science journals. Display the Participating in a Science Talk anchor chart for students. Briefly review the anchor chart with students, and answer any clarifying questions.• Remind students they can take notes in the second section on page 9 of their Science journal if they think of an idea or question they would like to share while waiting their turn to speak.• As you circulate and note which students speak and what ideas are being shared, record these observations on sticky notes. Refer to these in future lessons.• Direct students to begin the Science Talk. Use the Science Talk Criteria checklist during this time to monitor student progression toward the learning targets. Quickly redirect and support students as needed, but avoid leading the conversation. Remind students that their questions and comments should be directed to one another, not the teacher. Briefly review the Science Talk Norms anchor chart.	<ul style="list-style-type: none">• Provide sentence frames for students as they participate in the Science Talk: “When I saw/heard _____, I learned _____” and “I wonder _____.”



Closing and Assessment	Meeting Students' Needs
<p>A. Reflect on Discussion (5 minutes)</p> <ul style="list-style-type: none">Read aloud the learning target: "I can effectively participate in a Science Talk about simple machines." Ask students to give a thumbs-up if they met the target or thumbs-down if they still need to work on the target. Using equity sticks, cold call several students to share why they gave themselves a thumbs-up or thumbs-down, prompting them to refer to the norms they determined for the Science Talk Norms anchor chart to support their self-assessment.	<ul style="list-style-type: none">Allowing students to work in small groups provides the opportunity for all students to share their voices.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Continue reading in your independent reading book for this unit at home. <p><i>Note: Students will need specific feedback from this Science Talk to reflect on and set goals before beginning their next Science Talk (Unit 2, Lesson 6). Write feedback on the Teacher Feedback sections on page 9 of students' Simple Machines Science journal.</i></p> <p><i>Focus the feedback on the learning target that was emphasized in this lesson: "I can prepare for the Science Talk by using evidence from scientific texts." Also give suggestions to students who may need more coaching to follow the Science Talk norms created in this lesson. Keep feedback focused, brief, and encouraging. For example: "I noticed that you recorded three pieces of evidence from the text on your form. Great! During our next Science Talk, be sure to mention the text during the class the discussion." Or: "I noticed you were able to use evidence from the text when sharing your ideas during the Science Talk. Good work! One thing you should focus on for our next Science Talk is waiting your turn to speak."</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 3

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.

Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

Name:

Date:

Directions:

1. Read “Everyday Simple Machines” text.
2. Complete the graphic organizer.
3. Use evidence from the text to answer the questions.

Everyday Simple Machines

Wouldn't it be great if there were some cool inventions that could make work easier? Actually, there are! These inventions are ancient, and they are called **simple machines**. Simple machines have helped people do **work** for ages, and they are still used today.

When you ride an elevator, you are using a pulley. When you cut something with a knife, you are using a wedge. When you open a jar, you are using a screw. Simple machines are all around us. A slide is an inclined plane, a doorknob is actually a wheel and axle, and the handle on your toilet is a lever. It is amazing, really, how our lives are made easier by simple machines.

But simple machines are not called simple because they make life simple; they are called simple because they have few or no moving parts. And they make only a certain type of work easier, too. They won't help with your homework, but they can help you move something. If you need to push, pull, or lift something, a simple machine makes it easier by reducing the amount of **effort** needed.

Great, so using a simple machine means less work, right? Actually, no. When you use a simple machine, there is a trade-off. It takes less effort, but you have to move a greater distance. For example, if you choose to walk up a ramp instead of the stairs, it might not feel as hard, but you have to walk a longer distance. So you end up using about the same amount of **energy**.

So the next time you ride your bike down a ramp, bite down on apple, open a can of peanut butter, reel in a fish, or ride on a seesaw, thank a simple machine. They make work easier, but they can also make life more fun!



Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

Glossary

effort: a force (push or pull) that moves an object

energy: the ability to do work

simple machines: tools with few or no moving parts that make work easier; there are six types of simple machines: inclined plane, lever, pulley, screw, wedge, and wheel and axle

work: using a force (push or pull) to move an object over a distance

Written by Expeditionary Learning for Instructional Purposes

Sources:

Buffy Silverman, *Simple Machines: Forces in Action*, Do It Yourself series (New York: Heinemann, 2009); ISBN: 978-1-4329-2317-4.

Science Education at Jefferson Lab: <http://education.jlab.org/>, education.jlab.org/jsat/powerpoint/work_and_simple_machines.ppt

The Franklin Institute, Resources for Science Learning: <http://www.fi.edu/qa97/spotlight3/>

Scholastic Teacher Resource: <http://teacher.scholastic.com/dirtrep/simple/invest.htm>



Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

Main Idea:

Supporting Detail

Supporting Detail

Supporting Detail

Why are simple machines important?

Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

1. Which of the following is the best example of a main idea for this text?
 - A. Simple machines are easy to make.
 - B. Simple machines are only good for some work.
 - C. Simple machines are old.
 - D. Simple machines can be found everywhere and are used everyday.

2. Which detail from the text best supports the main idea in Question 1?
 - A. “Simple machines have helped people do work for ages ...”
 - B. “When you ride an elevator, you are using a pulley.”
 - C. Simple machines “have few or no moving parts.”
 - D. “They won’t help with your homework ...”

3. Which detail from the text helps explain how simple machines help with work?
 - A. “... a simple machine makes [work] easier by reducing the amount of effort needed.”
 - B. “They make work easier, but they can also make life more fun!”
 - C. “... our lives are made easier by simple machines.”
 - D. “Simple machines have helped people do work for ages ...”



Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

4. Reread the following paragraph from the text and answer the question below:

“Great, so using a simple machine means less work, right? Actually, no. When you use a simple machine, there is a trade-off. It takes less effort, but you have to move a greater distance. For example, if you choose to walk up a ramp instead of the stairs, it might not feel as hard, but you have to walk a longer distance. So you end up using the same amount of energy.”

What is the *trade-off* of using simple machines described in this paragraph? Use details from the text to support your answer.



Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text

5. Write a paragraph explaining how simple machines are used to help do work in everyday life.
Use details from the text to support your explanation.

Mid-Unit 1 Assessment:
Finding the Main Idea of a Scientific Text
(Answers, for Teacher Reference)

1. Which of the following is the best example of a main idea for this text?
 - A. Simple machines are easy to make.
 - B. Simple machines are only good for some work.
 - C. Simple machines are old.
 - D. **Simple machines can be found everywhere and are used everyday.**

2. Which detail from the text best supports the main idea in Question 1?
 - A. "Simple machines have helped people do work for ages ..."
 - B. **"When you ride an elevator you are using a pulley."**
 - C. Simple machines "have few or no moving parts."
 - D. "They won't help with your homework ..."

3. Which detail from the text helps explain how simple machines help with work?
 - A. **"... a simple machine makes [work] easier by reducing the amount of effort needed."**
 - B. "They make work easier, but they can also make life more fun!"
 - C. "... our lives are made easier by simple machines."
 - D. "Simple machines have helped people do work for ages ..."



Mid-Unit 1 Assessment:

Finding the Main Idea of a Scientific Text
(Answers, for Teacher Reference)

***Note: Use the rubric below to score the following questions:**

4. Reread the following paragraph from the text and answer the question below:

“Great, so using a simple machine means less work, right? Actually, no. When you use a simple machine there is a trade-off. It takes less effort, but you have to move a greater distance. For example, if you choose to walk up a ramp instead of the stairs, it might not feel as hard, but you have to walk a longer distance. So you end up using the same amount of energy.”

What is the *trade-off* of using simple machines described in this paragraph? Use details from the text to support your answer.



Mid-Unit 1 Assessment:

Finding the Main Idea of a Scientific Text
(Answers, for Teacher Reference)

5. Write a paragraph explaining how simple machines are used to help do work in everyday life.
Use details from the text to support your explanation.

2-Point Rubric: Writing from Sources/Short Response¹
(For Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

2-point Response	<p>The features of a 2-point response are:</p> <ul style="list-style-type: none"> • Valid inferences and/or claims from the text where required by the prompt • Evidence of analysis of the text where required by the prompt • Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt • Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt • Complete sentences where errors do not impact readability
1-point Response	<p>The features of a 1-point response are:</p> <ul style="list-style-type: none"> • A mostly literal recounting of events or details from the text as required by the prompt • Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt • Incomplete sentences or bullets
0-point Response	<p>The features of a 0-point response are:</p> <ul style="list-style-type: none"> • A response that does not address any of the requirements of the prompt or is totally inaccurate • No response (blank answer) • A response that is not written in English • A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



Science Talk Criteria Checklist

Teacher directions: List each student's name. Add any norms your class has agreed on. In the columns, note how well each student demonstrates the norms and meets the learning targets listed in the heading columns.

Learning target: I can effectively participate in a Science Talk about simple machines.

- I can follow our class norms when I participate in a conversation (review from Module 1).
- I can prepare for the conversation by using evidence from simple machines texts.
- I can ask questions so I am clear about what is being discussed.
- I can ask questions on the topic being discussed.

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



Science Talk Criteria Checklist

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



Participating in a Science Talk Anchor Chart

- Real scientists often participate in Science Talks to share ideas and work through questions they have.
- Think about the question: How do simple machines impact our lives?
- Revisit the text and gather evidence to support your thinking.
- Gather in a circle on the floor, with your Science journals.
- Take turns sharing your thinking about the question. Be sure to reference the evidence you gathered from the text.
- As you listen to the conversation, record any new ideas or questions you would like to share with the group as you wait to speak.
- Respond to others and build on their ideas.
- Follow Science Talk norms.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 4

Learning from Literature: Simple Machines

Readers Theater



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can use literary terms to describe parts of a story, poem, or drama (e.g., verse, rhythm, meter, casts of characters, settings, descriptions, dialogue, stage directions). (RL.4.5)
I can describe the differences in structures of poems, drama, and prose. (RL.4.5)
I can explain what a text says using specific details from the text. (RL.4.1)
I can read fourth-grade-level texts with fluency. (RF.4.4)
I can express my own ideas clearly during discussions. (SL.4.1)
I can follow our class norms when I participate in a conversation. (SL.4.1)

Supporting Learning Targets

- I can share my opinion on a topic and respect the opinions of others.
- I can identify the characteristics of Readers Theater through examining the text *The Machine*.
- I can explain how drama is different from other types of fiction.

Ongoing Assessment

- Exit ticket



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Forming Opinions as Readers (15 minutes) B. Reviewing Learning Targets (5 minutes) 2. Work Time <ol style="list-style-type: none"> A. Noticing the Characteristics of Readers Theater (10 minutes) B. First Read of Readers Theater: Getting the Gist of <i>The Machine</i> (10 minutes) C. Second Read: Practice Performing a Readers Theater (15 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Exit Ticket (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Reread <i>The Machine</i> silently to yourself. Find your lines and mark with a star in pencil. Practice reading your assigned part out loud to a family member, friend, or yourself. 	<ul style="list-style-type: none"> • This lesson has three purposes. The first and obvious purpose is to continue to build students' knowledge about simple machines. This second purpose is to orient students to the skill of sharing and supporting their opinions with evidence; this begins to prepare students for the module performance task, which focuses on W.4.1. The final purpose is to engage students on the topic of simple machines by introducing some of their daily uses as described by a Readers Theater. This also introduces students to a new genre (drama). Because students began this unit by reading informational text, it is important to signal the shift to reading literature. Explain to students that readers use a variety of texts to learn about a topic; they will still be building content knowledge about simple machines. • In this lesson students examine the structure of drama and learn how drama is different from other types of literature (RL.4.5). Emphasize this, since it is students' first time working with this standard. • Prepare the Exploring Opinions as Readers and Writers anchor chart and the Readers Theater anchor chart (see supporting materials for directions). • Review Mix and Mingle (see supporting materials). • In advance: Consider practicing reading the Readers Theater script <i>The Machine</i> (spoken parts only) aloud before this lesson, to prepare to model fluent reading of this text for students. • Determine which students to assign to each part on s 219–221. There are 12 parts, so two or three students may need to be assigned to the same part. Consider partnering ELL L1s with L2s of the same home language or less fluent readers with more fluent readers. Students will practice their lines for homework and again with their partner in the next lesson. • Students will read from page 219 title, "<i>The Machine</i>," until the line "CHILD 4: Yes, and when you put them together, you can make big, big machines." • Note: <i>The Machine</i> (pp. 219–221 in the book <i>Take a Quick Bow!</i> by Pamela Marx) (one book for the teacher plus copies for students.) The book explicitly indicates: "Only portions of this book intended for classroom use may be reproduced without permission in writing from the publisher." Thus, making copies for students is permissible. • Post: Learning targets.



Lesson Vocabulary	Materials
opinion, fiction, Readers Theater, drama, set, players, script	<ul style="list-style-type: none">• Exploring Opinions as Readers and Writers anchor chart• Mix and Mingle (directions posted or copied on board; see supporting materials)• Readers Theater anchor chart• <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> by Pamela Marx (one book for the teacher, plus copies for students; see teaching notes)• Highlighters or sticky notes (for each student)• Document camera• Equity sticks• 3" x 5" index cards (one per student)



Opening	Meeting Students' Needs
<p>A. Forming Opinions as Readers (15 minutes)</p> <ul style="list-style-type: none"> • Post the first learning target: "I can share my opinion on a topic and respect the opinions of others." Have students turn to a partner and explain this target in their own words. Have a few pairs share their thinking. • Post the Exploring Opinions as Readers and Writers anchor chart. Read the definition of <i>opinion</i> written on the chart "Opinion: what a person thinks about a topic; their view or judgment. This thinking can be based on facts, feelings, experience, or a combination of all three." • Tell students they will be reading and writing like scientists as they research simple machines. But they will also examine how readers and writers share and support opinions. Explain that over the next several weeks, they'll study a lot of facts about simple machines and they'll practice forming and supporting opinions about how these machines help people do work. • Tell students that today they will practice forming and sharing their opinions. Explain that sometimes people become emotional about their opinions and even angry when others do not agree with them. Ask students to think about what it means to "respect the opinions of others." Have them turn to a partner and discuss what it means to them. Have pairs share and briefly discuss with the class what it will look and sound like when they respect others' opinions. Listen for students to suggest behaviors such as looking at the speaker, one person speaking at a time, and disagreeing calmly and kindly. Consider giving students sentence frames for disagreeing with their peers and practice using a respectful tone of voice ("I disagree with that because I think _____"). • Tell students they are going to read a Readers Theater about simple machines. Explain that <i>Readers Theater</i> is a type of fiction. Point out that so far they've been reading informational text about simple machines. If necessary, review the meaning of the word <i>fiction</i> (an imagined story). • Tell them you would like them to form an opinion, which they will share in a few minutes with their peers. Be clear with students that at this moment, they are just thinking about the question, not answering aloud. Ask and post the following questions on the board: <ul style="list-style-type: none"> * "Is fiction a good teacher of facts? What is your opinion and why?" • Explain that there is not one set right or wrong answer. Remind students they must have a reason for their opinion, so they should be ready to explain their answers to this question when they share. 	<ul style="list-style-type: none"> • This activity gives students practice forming their opinions. In Lesson 6, they then take the next step to support those opinions with reasons drawn from examples in the text <i>The Machine</i>. These two lessons give students oral practice with these skills before they write in Unit 3 (W.4.3). This oral rehearsal supports all students, particularly ELLs. • Consider placing ELLs who are L1 with an L2 who speaks the same language. <p><i>Note: Rules for eye contact vary across cultures, particularly for eye contact between people of different genders or with those who are considered authority figures. Be sure to be sensitive to this when discussing eye contact with your students.</i></p>



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Tell students that they are going to use a Mix and Mingle to practice sharing their opinions and respecting others' opinions. Explain that Mix and Mingle is similar to Think-Pair-Share, but instead of sharing with a single partner, they get to move around and share their thinking with several peers. Post the following directions below the question:• Post the following directions for Mix and Mingle:<ol style="list-style-type: none">1. Read the question and think about your opinion.2. Stand up and find a partner.3. Share your opinions with each other. Be sure to explain why you have this opinion. Be respectful speakers and listeners.4. Thank your partner, then find another and repeat.• Address any clarifying questions about Mix and Mingle.• Give students 1 minute to complete Step 1 of the directions.• Then give students 4 minutes to complete the rest of the steps for Mix and Mingle. Listen to students' conversations for opinions based on prior experience reading fiction in class. (For example, some students may feel fiction is imaginary and therefore cannot reliably teach facts; others may recall the facts that were important to the genre of historical fiction in the previous module and believe that readers can learn facts from fiction.)• Gather students together and ask for a few volunteers to share their opinions. Try to get at least one opinion from each perceptive.• Tell students today they will read a piece of fiction related to simple machines and think more about their opinion on this question.	<ul style="list-style-type: none">• For students who need further support participating in discussions, consider handing out hard copies of the Mix and Mingle directions for their reference.



Opening (continued)	Meeting Students' Needs
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Tell students today they'll read a text called <i>The Machine</i>, which is a type of fiction called <i>Readers Theater</i>. Explain to students that for the last few lessons they have been reading informational text to learn about simple machines, so they'll have some background knowledge to help them understand this new text. Tell them that they will revisit the question "Is fiction a good teacher of facts?" after they have a chance to read.• Post the following learning targets: "I can identify the characteristics of Readers Theater through examining the text <i>The Machine</i>," and "I can explain how drama is different from other types of fiction." Ask students to Think-Pair-Share about the phrase <i>Readers Theater</i> and discuss what the characteristics of this type of text could be. Then have a few pairs share with the whole group.• Explain that Readers Theater is a special type of <i>drama</i> or performance. Give students examples of different types of drama plays, movies, puppet shows. Explain that today students will learn about the characteristics of Readers Theater and be asked to <i>explain</i> how this type of drama different from other types of fiction.	



Work Time	Meeting Students' Needs
<p>A. Noticing the Characteristics of Readers Theater (10 minutes)</p> <ul style="list-style-type: none">Place students with a reading partner. Tell students today they'll learn about drama by reading a Readers Theater and then revisit their opinions about whether fiction teaches facts. Post the Readers Theater anchor chart (see supporting materials for a model). Read the definition of Readers Theater written below the title: "Readers Theater."<ul style="list-style-type: none">"IT IS ... a type of drama where performers read a script aloud to an audience. Usually, there are no costumes or sets and lines are not memorized."Circle the word <i>script</i>. Explain to students the meaning of script as: "the written text of a play or Readers Theater" and tell them this is a characteristic of Readers Theater. Record the word and its definition below the section of the chart labeled "IT HAS ..."Explain that now you would like students to examine the text and help you identify other characteristics to add to the anchor chart. Distribute the text <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> by Pamela Marx.Ask students to look at page 219 and see what they notice about the characteristics of a Readers Theater. Encourage students to annotate the text with pencils, highlighters or sticky notes. Give students 5 minutes to read the text, annotate, and discuss with their partner.Display page 219 of the text using a document camera. Use equity sticks to cold call pairs to share what they notice. Identify the following terms and definitions as students share what they notice about the text: <i>players</i>, <i>dialogue</i>, <i>directions</i>. Add words and definitions to the Readers Theater anchor chart so it has students' own words that are like the following in the section for "IT HAS ...":<ul style="list-style-type: none">– a script: written text of a play or Readers Theater– players: characters in a play or Readers Theater, who are usually listed in the beginning of the script; their names are written in bold text to indicate when they speak– dialogue: lines players or characters speak aloud in a performance; each line is written after the bolded name of the player that is to speak it– stage directions: tell performers how to act or what to do during the performance, usually written in italics and/or in parenthesis	<ul style="list-style-type: none">Consider placing ELLs who are L1 with an L2 who speaks the same language. Also consider providing definitions of Readers Theater and related vocabulary in students' home language.



Work Time (continued)	Meeting Students' Needs
<p>B. First Read of Readers Theater: Getting the Gist of <i>The Machine</i> (10 minutes)</p> <ul style="list-style-type: none">• Tell students you'll read the text aloud so students can see what Readers Theater is about. Be sure to point out that this first read is not a performance, since you will read all parts of the script, including the stage directions. Ask them to read along and listen for the gist of the text. What is it mostly about?• Read aloud pages 219–221 to the students, using different voices to signal the switch from one character to another. Stop reading once you have read the following line towards the bottom of page 221: "CHILD 4: Yes, and when you put them together, you can make big, big machines."• Ask student to turn to a partner to explain what the gist of text is. Give pairs a few minutes to brainstorm. Using equity sticks, cold call a few students to share with the whole group. Students should notice that the text is about the six types of simple machines and examples of the how they are used to do work.• Ask the students to write their gist statements at the top of their copies of the play (page 219 of <i>Take a Bow</i>).	



Work Time (continued)	Meeting Students' Needs
<p>C. Second Read: Practice Performing a Readers Theater (15 minutes)</p> <ul style="list-style-type: none">• Display page 219 of the text on the document camera. Explain to students that you'll read the text aloud again, but this time just the spoken parts, so they can see which parts of a Readers Theater are read aloud to the audience. Ask them to read along and notice the parts of the text you read aloud and those you skip.• Read the first three lines from page 219 (CHILD 1, CHILD 2, and CHILD 3), skipping the list of players and stage directions at the top of the text to model this for students. Ask students to turn to a partner and point out:<ul style="list-style-type: none">* "Which portions of the text were read aloud? Which were not? Why?"• Have groups share out and highlight the portions of the text read aloud on the text using the document camera.• Explain to students that now they get to try reading the script, focusing on the first page (page 219). Place students in groups of six. (If your class does not divide evenly into six, make some groups of five.) Explain that their reading is not likely to be very good this first time, but not to worry. They will practice more later. Once students are grouped, ask them to follow these directions:<ol style="list-style-type: none">1. Count off from 1 to 6.2. On page 219 only: Identify your players' line(s). Individually, practice reading your line(s).3. As a group, take turns reading your lines aloud.• Give students 10 minutes to do the above. As groups practice, circulate and support them. The purpose of this part of the lesson is to give students practice reading the text structure of drama and help them read this text fluently.	<ul style="list-style-type: none">• To further support struggling readers, consider dividing parts then reading it as a whole class before breaking into groups. This will provide struggling readers with more practice reading their parts and allow them to hear the text read aloud by others.• Since students will later divide parts and read <i>The Machine</i> as a whole class, they should not yet mark parts, as this may confuse them later.



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket (5 minutes)</p> <ul style="list-style-type: none">• Have students Think-Pair-Share on the following question: How is reading drama like Readers Theater different from reading other fiction? Once students have shared their thoughts with a partner, ask them to write an answer to the question on 3" x 5" index cards and turn it in as an exit ticket.• Assign students a part to practice for homework from page 219 and stopping at page 221 after the line "CHILD 4: Yes, and when you put them together, you can make big, big machines."• Since there are 12 parts, two or three students may need to be assigned the same part.	<ul style="list-style-type: none">• For students who struggle with writing, consider checking for understanding by listening to their conversation with a partner.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Reread <i>The Machine</i> silently to yourself. Find your lines and mark with a star in pencil. Practice reading your assigned part out loud to a family member, friend, or yourself. <p><i>Note: Use exit tickets to determine gaps in student understanding of the structure of drama versus other types of fiction. This allows you to adjust your instruction to address these gaps or misunderstandings in the beginning of the next lesson.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 4

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Exploring Opinions as Readers and Writers Anchor Chart
(For Teacher Reference)

Directions: Write the following at the top of a piece of chart paper:

Exploring Opinions as Readers and Writers

opinion—what a person thinks about something or someone. This thinking can be based on facts, feelings, experience, or a combination of all three.



Mix and Mingle

Description: Mix and Mingle is similar to Think-Pair-Share, but instead of sharing with a single partner, students get to move around and share their thinking with several peers.

Directions for students:

1. Read the question and think about your opinion.
2. Stand up and find a partner.
3. Share your opinions with each other. Be sure to explain why you have this opinion. Be respectful speakers and listeners.
4. Thank your partner, then find another and repeat.



Readers Theater Anchor Chart
(For Teacher Reference)

Directions: Write the following at the top of a piece of chart paper.

Readers Theater

IT IS ...

a type of drama where performers read a script aloud to an audience. Usually, there are no costumes or sets and lines are not memorized.

IT HAS ...



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 5

Learning from Literature Continued: Examining Text Structure, Vocabulary, and Information about Simple Machines in the Readers Theater *The Machine*



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can use literary terms to describe parts of a story, poem, or drama (e.g., verse, rhythm, meter, casts of characters, settings, descriptions, dialogue, stage directions). (RL.4.5)
I can describe the differences in structures of poems, drama, and prose. (RL.4.5)
I can explain what a text says using specific details from the text. (RL.4.1)
I can read fourth-grade-level texts with fluency. (RF.4.4)
I can express my own ideas clearly during discussions. (SL.4.1)
I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4)

Supporting Learning Targets

- I can identify the characteristics of Readers Theater through examining the text *The Machine*.
- I can share my opinion on a topic and respect the opinions of others.
- I can determine the meaning and pronunciation of challenging words.
- I can explain what the text says about simple machines using details from the text.

Ongoing Assessment

- Annotated text (*The Machine*)



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Identifying Characteristics of Readers Theater (10 minutes)B. Tackling Challenging Vocabulary and Pronunciation (20 minutes)C. Identifying Information about Simple Machines (15 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Preparing for Performance and Assessment (5 minutes)B. Debrief: Revisiting Our Opinions (5 minutes)4. Homework<ol style="list-style-type: none">A. Practice reading your assigned lines from <i>The Machine</i>. Read the line directly before your lines silently, then read your line aloud to help prepare you for the performance. If possible, find someone at home to read aloud the parts before and after you line.	<ul style="list-style-type: none">• In this lesson, students do a close reading of <i>The Machine</i> (pages 219–221 in the book <i>Take a Quick Bow!</i>, by Pamela Marx) with a focus on text structure, meaning, and vocabulary. Consider which students may need to be pulled into a small group for more supported reading of grade-level texts.• In advance: Consider tape recording this Readers Theater in advance so struggling readers can listen to it while they read. See Work Time A.• Post: Learning targets.



Lesson Vocabulary	Materials
pronunciation, stage, technology, ancient, remain, dollies, Atlas	<ul style="list-style-type: none"> • <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> • Readers Theater anchor chart (from Lesson 4) • Document camera • Highlighter (one per student) • Vocabulary Strategies anchor chart (from Lesson 1) • Equity sticks

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Post the learning targets. Ask students to find a partner and explain in their own words the meaning of the two targets they recognize from Lesson 4: “I can identify the characteristics of Readers Theater through examining the text <i>The Machine</i>,” and “I can share my opinion on a topic and respect the opinions of others.” Have pairs share their explanations and clarify as necessary. Students should have a good understanding of these targets from Lesson 4. Explain that they will reread <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> again today and look for specific examples of characteristics of Readers Theater in the text. • Direct students’ attention to the remaining two targets: “I can determine the meaning and pronunciation of challenging words,” and “I can explain what the text says about simple machines using details from the text.” Underline “determine the meaning” in the first target and “explain” and “using details from the text” in the second target. Remind students that these parts of the targets should be familiar to them. • Circle the words <i>pronunciation</i> and <i>simple machines</i> and tell students that these parts of the targets may seem new or unfamiliar. Ask them to share with a partner what they think each of these targets means based on what they already know. Have a few pairs share their thinking with the group. Students will be familiar with the term <i>simple machines</i> but may not be familiar with the word <i>pronunciation</i>. However, students may notice the word <i>pronunciation</i> looks similar to the word <i>pronounce</i>. If not, point this out and explain that <i>pronounce</i> means to say a word correctly aloud. So the word <i>pronunciation</i> in this learning target means figuring out how to say unfamiliar words aloud correctly. 	



Work Time	Meeting Students' Needs
<p>A. Identifying Characteristics of Readers Theater (10 minutes)</p> <ul style="list-style-type: none">Place students with a partner who was assigned to the same part in Lesson 4. Explain to students that they will be reading <i>The Machine</i> Readers Theater more closely today. Tell them that when they read today they will read for the following purposes (post these on the board with space for directions under each):<ol style="list-style-type: none">Identifying Characteristics of Readers TheaterTackling Challenging Vocabulary and PronunciationIdentifying Information about Simple MachinesTell students each time they read for a new purpose, they will annotate, or take notes on their text, in a different way. Remind them annotating a text is one strategy readers can use to help them better understand a complex text.Have students get out <i>The Machine</i> and turn to page 219. Post the Readers Theater anchor chart (from Lesson 4). Tell students that first they will read to identify the characteristics of Readers Theater in this text. Give students more detailed directions (on the board, write these in under Step 1):<ul style="list-style-type: none">Identifying Characteristics of Readers Theater<ul style="list-style-type: none">Read page 219 and circle one example of a player, dialogue, and stage directions. Record a label above each circled example.Display page 219 using the document camera and quickly model how to annotate the text in this way.Give partners 5 minutes to read and annotate. Then cold call pairs to share their examples. As students share, annotate your text to identify more examples of these characteristics (players, dialogue, and stage directions) of Readers Theater.Ask students to turn and talk with their partner about which of these words or phrases should be read aloud to the audience. Have a pair share out. Listen for students to identify that dialogue is the only part read aloud to the audience. The other aspects of the text are meant to inform the reader/performer.Next, ask pairs to look through the text and identify their lines (assigned at the end of Lesson 4). Then give students 2 minutes to use a highlighter to highlight the dialogue they will read aloud when performing. Circulate to support students as needed.	<ul style="list-style-type: none">Consider pairing students who struggle with reading grade-level text fluently with students who are fluent readers to provide them with strong models.For students who struggle with reading grade-level texts, consider tape recording this Readers Theater in advance so students can listen to it while they read. After listening to the text a few times, they could then record themselves reading the text so they could listen to themselves reading. This is a powerful example for them to know where they need to work on their fluency in a private way.



Work Time (continued)	Meeting Students' Needs
<p>B. Tackling Challenging Vocabulary and Pronunciation (20 minutes)</p> <ul style="list-style-type: none"> • Tell students now they will read the text and focus on the second purpose mentioned for reading this text today, identifying challenging vocabulary or words they don't know how to pronounce. Ask a student to remind the class what <i>pronounce</i> means (to say a word correctly aloud). • Ask partners to briefly discuss: <ul style="list-style-type: none"> * "Why do you think pronunciation is important in Readers Theater?" • Have pairs share their thinking. Students should be able to articulate that pronouncing words correctly is important since this text will be read aloud to an audience. Remind students that unlike most types of drama, the dialogue in a Readers Theater is read aloud to the audience directly from the script. Explain that in most other types of drama, dialogue would be memorized then performed by the players, but that in either case pronunciation is important if the audience is to understand the performance. • Post the Vocabulary Strategies anchor chart where students can reference it as they work. Tell students to use the strategies listed to help them determine the meaning of the words they identify. • Under the second purpose listed on the board, write the following directions. <ul style="list-style-type: none"> – Tackling Challenging Vocabulary and Pronunciation <ul style="list-style-type: none"> • Read pages 219–221. Circle any words you do not understand or do not yet know how to pronounce. • Give students 10 minutes to read with a partner and identify challenging words. Confer with students who struggle or pull a small group to work with you during this time. • Gather students together and have them share out their challenging words in groups of three or four. Some likely words that students will point out may include: <i>technology</i>, <i>ancient</i>, <i>remain</i>, <i>dollies</i>, and <i>Atlas</i>. Point out in the text where the word <i>technology</i> is defined in context on page 219 "CHILD 4: Technology is really almost anything that people make to help them do a job." Point out where the words <i>ancient</i>, <i>dollies</i>, and <i>Atlas</i> are defined in the text using text features in the margins on pages 219, 220, and 221. 	<ul style="list-style-type: none"> • Consider pulling struggling readers together for small group instruction during this time.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Explain to students that the word <i>technology</i> is a word they may need to know as they read and write like a scientist in the next few weeks. Ask them if they think any of the other words are important to reading and writing about simple machines. Cold call students to share their thinking using equity sticks.• Finally, address words that students identify as “challenging to pronounce.” To help students with pronunciation of these words, review word-decoding strategies that students may be familiar with from guided reading lessons (e.g., chunking words, looking for roots, or other phonics strategies).• Note: Consider adding some of the identified words to your class Word Wall (i.e.; <i>technology</i>, <i>ancient</i>, <i>dollies</i>).	
<p>C. Identifying Information about Simple Machines (15 minutes)</p> <ul style="list-style-type: none">• Tell students now they’ll focus on using details in the text to explain what the text says about simple machines.• Explain that as they read the text again, they will underline details that support their gist statement from Lesson 4. Remind them that the gist statement is written at the top of their copies of the play.• Give students 10 minutes to reread the text and underline details with their partner.• Ask pairs to share the details they found in the text about simple machines. After a few pairs share details, point out each place in the text that mentions and describes one of the six simple machines (pages 220–221).• Next ask students to Think-Pair-Share about why simple machines are important based on evidence from this text. Use equity sticks to call on pairs of students to share what they can conclude about the importance of simple machines.• Students should notice that the text gives many examples of how each simple machine helps do work.	



Closing and Assessment	Meeting Students' Needs
<p>A. Preparing for Performance and Assessment (5 minutes)</p> <ul style="list-style-type: none">• Tell students they are ready to perform <i>The Machine</i> and will have an opportunity to do this as a whole class tomorrow.• Explain to students that after their close examination of this Readers Theater, they are also now ready to be assessed on the characteristics of Readers Theater. Tell students that in the next lesson they will be asked to read another Readers Theater about simple machines and answer some questions about it. Have students reflect on the following learning targets: "I can identify the characteristics of Readers Theater through examining the text <i>The Machine</i>."• Have students discuss the meaning of the following learning targets with a partner.: "I can determine the meaning and pronunciation of challenging words" and "I can explain what the text says about simple machines using details from the text." Afterward, have students show a thumbs-up if they feel ready, a thumb-sideways if they feel mostly ready, or a thumbs-down if they do not feel ready for the assessment. Use this information to determine whether students need clarification of a specific target before the assessment.	
<p>B. Debrief: Revisiting our Opinions (5 minutes)</p> <ul style="list-style-type: none">• Read aloud and repost the opinion questions from Lesson 4:<ul style="list-style-type: none">* "Is fiction a good teacher of facts?"* "What is your opinion and why?"• Give students 1 minute to think about whether their opinion about this question has changed, and why or why not.• Then ask them to discuss their thoughts with another round of Mix and Mingle, just as they did in Lesson 4.• After a few minutes, ask a few students to share. Listen for students to make references to the text. If they do not, prompt them to reference examples from the text that support their current opinion. (For example, a student who thinks this author wrote to teach about simple machines may reference that all six simple machines were explained in the text. A student who believes that authors of fiction mainly write to entertain their readers might say that the Readers Theater gave examples of simple machines, but not a lot of information.)• Explain to students that over the next several weeks they'll be asked to form opinions as readers and writers and support those opinions using examples from the various texts they will read.	<ul style="list-style-type: none">• To further support students consider using the following sentence frame for sharing: "I used to think _____, and my opinion has/has not changed because _____."



Homework	Meeting Students' Needs
<ul style="list-style-type: none">Practice reading your assigned lines from <i>The Machine</i>. Read the line directly before your lines silently, then read your line aloud to help prepare you for the performance. If possible, find someone at home to read aloud the parts before and after you line.	

There are no new supporting materials for this lesson.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 6

Assessing Readers Theater and Performing *The Machine*



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can use literary terms to describe parts of a story or drama. (RL.4.5)
I can describe the differences in structure of drama and prose. (RL.4.5)
I can explain what a text says using specific details from the text. (RL.4.1)
I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4)
Addressed but not assessed:
I can read fourth-grade-level texts with fluency. (RF.4.4)

Supporting Learning Targets

- I can identify the characteristics of Readers Theater in a text.
- I can explain what the text says about simple machines using details from the text.
- I can read my Readers Theater line fluently and at an appropriate volume.

Ongoing Assessment

- End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater
- Tracking My Progress, End of Unit 1 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. End of Unit Assessment: Reading and Answering Questions about Readers Theater (30 minutes)B. Performing Readers Theater (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Self-Assessment (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading your independent reading book for this unit at home.	<ul style="list-style-type: none">• This assessment narrowly focuses on RL.4.5 and therefore is shorter than most assessments in these modules.• Be sure students have their scripts from the text <i>The Machine</i> (pages 219–221 in the book <i>Take a Quick Bow!</i>, by Pamela Marx).• Review: Back-To-Back and Face-to-Face protocol (see Appendix).



Lesson Vocabulary	Materials
fluently, “appropriate volume”	<ul style="list-style-type: none"> Readers Theater anchor chart (from Lesson 4) <i>A Simple Solution: A Readers Theater</i> (assessment text; one per student) End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater (one per student) <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> (one per student)

Opening	Meeting Students’ Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> Post the following learning targets for students: “I can identify the characteristics of Readers Theater in a text,” and “I can explain what the text says about simple machines using details from the text.” Explain to students that this is what their assessment today will measure. If necessary, review the Readers Theater anchor chart and have students discuss with a partner their understanding of these targets to help them prepare for the upcoming assessment. As usual, they also will self-assess on these targets by putting them into their own words and determining how close they are to meeting the targets. Remind students they have done this orally in every lesson and formally in past assessments (see Module 2). <p><i>Note: Be sure to take down the Readers Theater anchor chart before the class takes the assessment.</i></p>	<ul style="list-style-type: none"> Using examples and non-examples of certain vocabulary terms (such as Readers Theater) helps students clarify the meanings of new words.
Work Time	Meeting Students’ Needs
<p>A. End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater (30 minutes)</p> <ul style="list-style-type: none"> Ask students to clear their desks and get out a pencil. Distribute copies of <i>A Simple Solution: A Readers Theater</i> and the End of Unit 1 Assessment: Reading and Answering Questions about Readers Theater. Remind students that they should refer back to this text when they answer the questions on the assessment. 	<ul style="list-style-type: none"> For students needing additional support producing language, consider offering a word bank of content words from the text to be used in the graphic organizer.



Work Time (continued)	Meeting Students' Needs
<p>B. Performing Readers Theater (20 minutes)</p> <ul style="list-style-type: none"> • Post the following learning target for students: “I can read my Readers Theater line fluently and at an appropriate volume.” • Circle the words <i>fluently</i> and the phrase <i>appropriate volume</i>. Explain that the root for <i>fluently</i> is fluid, which has several meanings. It can be used to describe a liquid or a smooth movement. Tell students that, in this case, the word <i>fluently</i> means reading something in a smooth clear voice. It means your words are easy for others to understand and not too fast or slow. Give students an example and non-example of the word by reading the learning target fluently and in a halting voice. Tell students that their practice reading their lines with partners and for homework has prepared them to read fluently. • Next ask students to consider the phrase <i>appropriate volume</i>. Ask them to turn to a partner and discuss what this phrase might mean. Have partners share their thinking. Students may notice the word <i>volume</i> also has multiple meanings (measurement of liquid or sound). Clarify that in this case you are referring to sound and how loud or soft words are spoken. <i>Appropriate</i>, or correct, volume in this case means that words are spoken loud enough so an audience can clearly understand what is being said, but not so loud that listeners want to cover their ears. • Consider having a few students demonstrate what reading fluently and at an appropriate volume sounds like for the class. They can do this with their assigned line. Tell students they will work toward this target today when they perform <i>The Machine</i>: Readers Theater as a class. • Have students get out the text <i>The Machine</i>, pages 219–221 in <i>Take a Quick Bow!</i> with their assigned and highlighted lines (done in Lesson 5). • Partner students with peers assigned to the same parts of the script. Tell them you would like them to practice reading their lines fluently and at an appropriate volume. Give them 5 minutes to practice. • Prepare students for their performances: Tell your class that now they will split into two groups. One group will perform while the other acts as an audience, then they will switch. <ol style="list-style-type: none"> 1. Divide your class into two groups. Each group should have a reader or readers for each part. 2. Remind students they will not likely give a perfect performance since this will be their first reading together, but that they should try their best to read fluently and at an appropriate volume. 3. Allow groups to perform for their classmates and celebrate their progress. As students act as an audience, ask them to take note what they think the performers did well, so that they can share this praise at the close of the lesson. 	<ul style="list-style-type: none"> • Consider finding time for students to perform this Readers Theater a few more times for each other or an audience outside the classroom. This will give them further practice with RF.4.4 (reading grade-level text fluently).



Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Gather students together for the Back-to-Back and Face-to-Face protocol (see Appendix).• Partner students with so each student in the pair observed the their partner's performance and ask them to stand back-to-back.• Ask students to think of one thing they liked about the performance of their partner's group.• Remind students to thank their partner after receiving praise.• Signal students to turn face-to-face and share.• Call on a few volunteers to share performance praise with the whole class.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 1: Lesson 6

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



A Simple Solution: A Readers Theater
(Text for End of Unit 1 Assessment)

Players: John, Lee, Devon, Maria, and Rover

Scene

John is trying to get his dog, Rover, to climb the ladder into his tree house. John is pointing up and Rover is looking up. Lee, Devon, and Maria walk onto the stage.

John: (*pointing up*) Climb up, Rover. Come on. Give it a try.

Rover: (*sitting and shaking his head*) Woof! Woof!

Lee: What are you doing, John?

Maria: Yeah, dogs can't climb trees.

John: I really want Rover to come hang out in my tree house.

Devon: Maybe we could help.

John: How? I already tried to carry him up, but he's too heavy to lift.

Lee: What about one of those simple machine things? We learned about them before school got out.

Rover: (*turning his head and looking confused*) Woof?

Devon: Aren't there six types? Which do you think would be best for this job?

Maria: Well the wedge, screw, and wheel and axle won't help.

John: Why not?

Lee: I think it's because they are too expensive.



A Simple Solution: A Readers Theater
(Text for End of Unit 1 Assessment)

Maria: (*sighing and rolling her eyes*) Not really. It's because none of them will help us lift Rover up into the tree. Take a wedge; it is used to push things apart, like an axe cutting wood. Then there is the screw. It changes the direction of a force while it spins—it can help make drilling a hole easier. And then there is the wheel—

Lee: (*interrupting*) Yeah, yeah, yeah. And it would be too hard to roll a wheel up a tree.

Maria: Yep. A wheel and axle changes a small force into a large one, like when you ride a bike. You can go faster with less effort on a bike than you can on foot.

Lee (*looking puzzled*) That's what I said!

Rover (*looking bored, yawns, and curls up to lie down*) Ahhh.

John: Well, what type of simple machine could we use to lift Rover up into this tree house?

Devon: An inclined plane helps you move things up, like a wheelchair moves up a ramp, but you would have to build a really long ramp to reach the top of the tree.

Lee: Isn't a seesaw a type of simple machine? A seesaw moves people up and down and Rover is smaller than a person. I bet we could use that simple machine.

Maria: You mean a lever? That is a type of simple machine, but I don't think it would work. It would have to be a giant seesaw to lift Rover all the way up there.

Devon: Well, a pulley is the last one. Could that work?

John (*looks concerned*) What's a pulley? I don't want to hurt him!

Maria: A pulley is a wheel with a rope wrapped around it. Pulleys are how an elevator lifts people to the next floor.

John: Great! Anyone know how to make an elevator?



A Simple Solution: A Readers Theater
(Text for End of Unit 1 Assessment)

(Everyone shakes their heads. Rover is snoring under the tree.)

John: Well, maybe we can ask your teacher for help when summer break is over. Sounds like she knows a lot about simple machines. Until then, maybe we can just hang out with Rover down here on the ground.

(Group nods and sits down under the tree next to a sleeping Rover.)
THE END

Lexile 730L

Written by Expeditionary Learning for Instructional Purposes

Sources:

Buffy Silverman, *Simple Machines: Forces in Action*, Do It Yourself series (New York: Heinemann, 2009); ISBN: 978-1-4329-2317-4.

Pamela Marx, *Take a Quick Bow!* (Culver City, CA: Good Year Books, 1997); ISBN: 978-1-59647-083-5 (NOTE: Only one copy required for teacher).

Aaron Shepard, *RT Tips: A Guide to Reader's Theater (or Readers Theatre)*, from *Readers on Stage* (Shepard Publications, 2003), available at <http://www.aaronsherp.com/rt/Tips.html> (last accessed 12/23/12).



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater

Name: _____

Date: _____

Directions:

- Read the text *A Simple Solution: A Readers Theater*.
- Answer the following questions and use the text to support your answers.
- Reread the test questions and answers before turning in.

1. What type of fiction is a Readers Theater?
 - A. historical fiction
 - B. imaginary fiction
 - C. drama
 - D. narrative
2. Which of the following is the most accurate definition of Readers Theater?
 - A. A type of drama in which performers read a script aloud to an audience.
 - B. A type of drama in which performers read a script to memorize their lines.
 - C. A performance based on a book.
 - D. A theater where you can read your favorite books.
3. Which of the following is an example of **stage directions** from the text *A Simple Solution*?
 - A. *A Simple Solution: A Readers Theater*
 - B. **Players:** John, Lee, Devon, Maria, and Rover
 - C. **Devon:** Maybe we could help.
 - D. **Rover:** (*looking bored, yawns and curls up to lie down*)



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater

4. The written text of a play or Readers Theater is called:

- A. a novel
- B. a script
- C. a dialogue
- D. a story

5. List three characteristics of Readers Theater:

1.

2.

3.

6. What is this Readers Theater mainly about? Use at least two details from the text to support your answer.



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater

7. According to the text, why would an inclined plane be a poor choice for getting Rover into the tree house?

8. What is the meaning of the word **concerned** as it is used in the following section from the text:

Devon: Well, a pulley is the last one. Could that work?

John (*looking concerned*): What's a pulley? I don't want to hurt him!

Maria: A pulley is a wheel with a rope wrapped around it. Pulleys are how an elevator lifts people to the next floor.

John: Great! Anyone know how to make an elevator?

- A. excited
B. doubtful
C. knowing
D. worried
9. Which one of these details from the text best supports your answer to Question 8?
- A. "Could that work?"
B. "I don't want to hurt him."
C. "A pulley is a wheel with a rope wrapped around it."
D. "Great!"



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater
(Answers, for Teacher Reference)

Standards Assessed: Questions 1–5: RL 4.5; Question 6 and 7: RL 4.1; Questions 8 and 9: L 4.4.

Directions:

- Read the text *A Simple Solution: A Readers Theater*.
- Answer the following questions and use the text to support your answers.
- Reread the test questions and answers before turning in.

1. What type of fiction is a Readers Theater?
 - A. historical fiction
 - B. imaginary fiction
 - C. **drama**
 - D. narrative
2. Which of the following is the most accurate definition of Readers Theater?
 - A. **A type of drama in which performers read a script aloud to an audience.**
 - B. A type of drama in which performers read a script to memorize their lines.
 - C. A performance based on a book.
 - D. A theater where you can read your favorite books.
3. Which of the following is an example of **stage directions** from the text *A Simple Solution*?
 - A. *A Simple Solution: A Readers Theater*
 - B. **Players:** John, Lee, Devon, Maria, and Rover
 - C. **Devon:** Maybe we could help.
 - D. **Rover:** (*looking bored, yawns and curls up to lie down*)



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater
(Answers, for Teacher Reference)

4. The written text of a play or Readers Theater is called:

- A. a novel
- B. **a script**
- C. a dialogue
- D. a story

5. List three characteristics of Readers Theater:

[Look for student answers that contain three of the following characteristics: fiction, drama, players/characters, dialogue, stage directions, and/or script]

6. What is this Readers Theater mainly about? Use at least two details from the text to support your answer.

[Possible Answer:] It is about a boy named John and how he wants to get his dog into his tree house. His friends try to help him by thinking of simple machines that might lift the dog up. They decide that a pulley would be best, but they don't know how to make an elevator with a pulley.

7. According to the text, why would an inclined plane be a poor choice for getting Rover into the tree house?

[Possible Answer:] A ramp would have to be really long to reach the tree.



End of Unit 1 Assessment:
Reading and Answering Questions about Readers Theater
(Answers, for Teacher Assessment)

8. What is the meaning of the word **concerned** as it is used in the following section from the text:

Devon: Well, a pulley is the last one. Could that work?

John (*looking concerned*): What's a pulley? I don't want to hurt him!

Maria: A pulley is a wheel with a rope wrapped around it. Pulleys are how an elevator lifts people to the next floor.

John: Great! Anyone know how to make an elevator?

- A. excited
 - B. doubtful
 - C. knowing
 - D. **worried**
9. Which one of these details from the text best supports your answer to Question 8?
- A. "Could that work?"
 - B. **"I don't want to hurt him."**
 - C. "A pulley is a wheel with a rope wrapped around it."
 - D. "Great!"



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Overview



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 2: Scientific Research: Researching Simple Machines: How Do They Help Do Work?

In Unit 2 students read the extended science text *Simple Machines: Forces in Action* by Buffy Silverman (870L) to learn about simple machines while also examining the structure and text features of scientific writing. Several sections of this science text are structured as close-reading experiences, and students continue to learn to use context clues to determine the meaning of new words. They write routinely in order to explain how various simple machines work. Students also experience the scientific method in several simple experiments. They develop hypotheses, document steps in experiments, and synthesize their learning about how simple machines work in scientific conclusions. In the mid-unit assessment, students are asked to read an on-demand text about a simple machine, the screw, and answer text-dependent and multiple-choice questions. The end of unit assessment also has the students read a scientific text about a simple machine,

the wedge, and answer text-dependent and multiple-choice questions. In addition, the students read an experiment, answer text-dependent questions, and conduct the experiment. They are asked to explain in writing their observations and conclude about wedges and their impact on work from the experiment.

NOTE: The lessons in this unit are designed to meet ELA Reading Informational Text standards, specifically for reading scientific text. The unit is designed to complement, not replace, science instruction. In this unit, students do conduct several simple experiments, but in order to fully address key components of the state curriculum for K–4 science, students will need more experiences with simple machines. Students need additional science instruction and opportunities to be curious, explore the natural world, and have direct experience with common objects, materials, and living things in their environments.

Guiding Questions and Big Ideas

- **How do simple machines affect our lives?**
- **How can I use what I learn from research to form an opinion?**



Mid-Unit 2 Assessment	<p>Answering Questions about Screws</p> <p>This assessment centers on standards NYSP12 ELA CCLS RI.4.2, RI.4.3, W.4.8, and W.4.9. In this assessment, students read a new text about the screw and answer a series of multiple-choice and short-answer questions that assess their ability to identify main points of the scientific text using explicit details from the text.</p>
End of Unit 2 Assessment	<p>Part I: Reading and Answering Question about Wedges; and Part II: Reading and Answering Questions about Experiments</p> <p>This two-part assessment centers on standards NYSP12 ELA CCLS RI.4.3, RI.4.4, W.4.2, W.4.8, and W.4.9. During Part I, students will read about a new simple machine, wedges, from pages 12 and 13 in <i>Simple Machines: Forces in Action</i>. They will take notes using a graphic organizer and then answer text-dependent multiple-choice and short-answer questions. In Part II, students will read an experiment, answer text-dependent questions, then conduct the experiment and write explaining what they observed and conclude about how wedges impact work from the experiment.</p>



Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Science content that many teachers may be teaching during other parts of the day. These intentional connections are described below.

NYS Science Core Curriculum

- Science Learning Standard 4: The Physical Setting
 - Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.
- Key Idea 5
 - Energy and matter interact through forces that result in changes in motion.

Central Texts

1. Buffy Silverman, *Simple Machines: Forces in Action*, Do It Yourself series (New York: Heinemann, 2009), ISBN: 978-1-4329-2317-4.
2. Pamela Marx, *Take a Quick Bow!* (Culver City, CA: Good Year Books, 1997), ISBN: 978-1-59647-083-5. (NOTE: Only one copy required for teacher, then reproduced for students. The book explicitly states, “Only portions of this book intended for classroom use may be reproduced without permission in writing from the publisher.”)



This unit is approximately 3 weeks or 13 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Setting Purpose for a Deeper Study of Simple Machines	<ul style="list-style-type: none"> I can explain what a text says using specific details from the text. (RI.4.1) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) I can recall information that is important to a topic. (W.4.8) 	<ul style="list-style-type: none"> I can self-assess my progress toward the learning targets. I can identify what I already know about simple machines and what I want to learn. I can ask questions about simple machines. I can follow our class norms when I participate in a conversation. 	<ul style="list-style-type: none"> Tracking My Progress, End of Unit 1 recording form Simple Machines KWL anchor chart - Page 10 of Simple Machines Science journal 	<ul style="list-style-type: none"> Simple Machines KWL Concentric Circles protocol
Lesson 2*	Reading a Scientific Experiment: The Inclined Plane	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can describe the organizational structure in an informational text (chronology). (RI.4.5) I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2) I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4) 	<ul style="list-style-type: none"> I can explain what happens before, during, and after a scientific experiment. I can explain how the directions in a scientific experiment are a form of informational text that involves a procedure. I can document what I observe during a scientific experiment. I can construct a conclusion statement that describes what I learned about inclined planes. 	<ul style="list-style-type: none"> Simple Machines Science journal: Science Experiment note-catcher (page 11) 	<ul style="list-style-type: none"> Simple Machines KWL Vocabulary Strategies Scientific Method



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 3	Reading Scientific Text: Learning More about the Inclined Plane	<ul style="list-style-type: none"> I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> I can find the meaning of scientific and academic words as I read a text about the inclined plane. I can determine important information about inclined planes and how they help people do work. I can document what I learn about inclined planes in my own words. 	<ul style="list-style-type: none"> Students' Gist statements (homework from Lesson 2) Simple Machines Science journal: <ul style="list-style-type: none"> * Vocabulary note-catcher * Diagram Constructed response captions 	<ul style="list-style-type: none"> Vocabulary Strategies Scientific Method Inclined Plane
Lesson 4*	Reading a Scientific Experiment: The Lever	<ul style="list-style-type: none"> I can explain the main points in scientific text, using specific details in the text. (RI.4.3) I can describe the organizational structure in an informational text (chronology). (RI.4.5) I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2) I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4) 	<ul style="list-style-type: none"> I can explain what happens before, during, and after a scientific experiment. I can explain how the directions in a scientific experiment help me understand what a lever is and how it works. I can document what I observe during a scientific experiment. I can construct a conclusion statement that describes what I learned about levers. 	<ul style="list-style-type: none"> Simple Machines Science journal: Science Experiment note-catcher (page 13) 	<ul style="list-style-type: none"> Inclined Planes Vocabulary Strategies Scientific Method



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 5	Reading Scientific Text: Reading Closely about the Lever	<ul style="list-style-type: none">• I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)• I can determine the meaning of content words or phrases in an informational text. (RI.4.4)• I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)• I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)	<ul style="list-style-type: none">• I can find the meaning of scientific and academic words as I read a text about levers.• I can determine important information about levers and how they help people do work.• I can document what I learn about levers in my own words.	<ul style="list-style-type: none">• Simple Machines Science journal (page 14)• Vocabulary note-catcher• Diagram• Constructed response questions• Captions	<ul style="list-style-type: none">• Levers



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 6	Science Talk: Synthesizing What We Know about the Inclined Plane and Lever	<ul style="list-style-type: none"> I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) <ul style="list-style-type: none"> I can prepare myself to participate in discussions. I can draw on information to explore ideas in the discussion. I can follow our class norms when I participate in a conversation. I can ask questions that are on the topic being discussed. I can connect my questions and responses to what others say. I can identify the reason a speaker provides to support a particular point. (SL.4.3) I can identify evidence a speaker provides to support particular points. (SL.4.3) 	<ul style="list-style-type: none"> I can effectively participate in a Science Talk about simple machines. <ul style="list-style-type: none"> I can prepare for the Science Talk by using evidence from simple machines texts. I can ask questions so I am clear about what is being discussed. I can ask questions on the topic being discussed. I can follow our class norms when I participate in a conversation. 	<ul style="list-style-type: none"> Simple Machines Science journals (pages 9 and 15) Science Talk Criteria checklist 	<ul style="list-style-type: none"> Science Talk Norms Participating in a Science Talk Quiz-Quiz-Trade protocol Science Talk protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 7	Making Connections to Vocabulary and Mid-Unit Assessment: Interactive Word Wall and Reading and Answering Question about Screws	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> I can make connections between the meanings of vocabulary words related to simple machines. I can document what I learn about a simple machine in my own words. I can find the meaning of scientific and academic words related to a simple machine. I can determine important information about a simple machine and how it helps people do work. 	<ul style="list-style-type: none"> Mid-Unit 2 Assessment: Reading and Answering Question about Screws Tracking My Progress, Mid-Unit 2 recording form 	<ul style="list-style-type: none"> Interactive Word Wall directions Interactive Word Wall protocol
Lesson 8	Reading Scientific Text: Reading Closely about the Pulley	<ul style="list-style-type: none"> I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> I can find the meaning of scientific and academic words related to the pulley. I can determine important information about pulleys and how they help people do work. 	<ul style="list-style-type: none"> Simple Machines Science journal (page 16) Vocabulary note-catcher Diagram Constructed response questions 	<ul style="list-style-type: none"> Simple Machines KWL Vocabulary Strategies Pulleys



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 9	Reading Scientific Text: Reading Closely about the Wheel and Axle	<ul style="list-style-type: none"> • I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) • I can determine the meaning of content words or phrases in an informational text. (RI.4.4) • I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) • I can write for a variety of reasons. (W.4.10) • I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> • I can find the meaning of scientific and academic words related to the wheel and axle. • I can determine important information about wheels and axles and how they help people do work. • I can document what I learn about wheels and axles in my own words. 	<ul style="list-style-type: none"> • Simple Machines Science journal (page 17) • Vocabulary note-catcher • Diagram • Constructed response questions 	<ul style="list-style-type: none"> • Simple Machines KWL • Vocabulary Strategies • Wheels and Axles



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 10*	Reading a Scientific Experiment: The Pulley and Wheel and Axle	<ul style="list-style-type: none"> • I can explain the main points in scientific text, using specific details in the text. (RI.4.3) • I can describe the organizational structure in an informational text (chronology). (RI.4.5) • I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2) • I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> • I can explain what happens before, during, and after a scientific experiment. • I can explain how the directions in a scientific experiment help me understand what a pulley and wheel and axle are and how they work. • I can document what I observe during a scientific experiment. • I can construct a conclusion statement that describes what I learned about pulleys or wheels and axles. • I can follow our class norms when I participate in a conversation. 	<ul style="list-style-type: none"> • Simple Machines Science journal: Science Experiment note-catcher (pages 18 or 19) • Four Corners Teacher observations 	<ul style="list-style-type: none"> • Scientific Method • Conducting an Experiment



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 11	Science Talk: Synthesizing What We Know about Simple Machines	<ul style="list-style-type: none"> I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) <ul style="list-style-type: none"> I can prepare myself to participate in discussions. I can draw on information to explore ideas in the discussion. I can follow our class norms when I participate in a conversation. I can ask questions that are on the topic being discussed. I can connect my questions and responses to what others say. I can identify the reason a speaker provides to support a particular point. (SL.4.3) I can identify evidence a speaker provides to support particular points. (SL.4.3) 	<ul style="list-style-type: none"> Learning targets: I can effectively participate in a Science Talk about simple machines. <ul style="list-style-type: none"> I can prepare for the Science Talk by using evidence from simple machines texts. I can ask questions so that I am clear about what is being discussed. I can ask questions on the topic being discussed. I can follow our class norms when I participate in a conversation. 	<ul style="list-style-type: none"> Simple Machines Science journals (page 20) Science Talk Criteria checklist 	<ul style="list-style-type: none"> Science Talk Norms Quiz-Quiz-Trade protocol Science Talk protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 12	Connecting Key Vocabulary and End of Unit Assessment Part I: Reading and Answering Questions about Wedges	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9) 	<ul style="list-style-type: none"> I can make connections between the meaning of vocabulary words related to simple machines. I can document what I learn about a simple machine in my own words. I can find the meaning of scientific and academic words related to a simple machine. I can answer questions about simple machines and how they work using details from a scientific text. 	<ul style="list-style-type: none"> End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges Tracking My Progress, End of Unit 2, Part I recording form 	<ul style="list-style-type: none"> Interactive Word Wall Directions Interactive Word Wall protocol
Lesson 13	Connecting Key Vocabulary and End of Unit Assessment Part II: Reading and Answering Questions about Experiments	<ul style="list-style-type: none"> I can explain the main points in a scientific text, using specific details in the text. (RI.4.3) I can describe the organizational structure in an informational text (chronology). (RI.4.5) I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can determine the meaning of content words or phrases in an informational text. (RI.4.4) I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2) 	<ul style="list-style-type: none"> I can explain what happens before, during, and after a scientific experiment. I can document what I observe during a scientific experiment. I can construct a conclusion statement that describes what I learned about wedges. 	<ul style="list-style-type: none"> End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments Tracking My Progress, End of Unit 2, Part II recording form 	<ul style="list-style-type: none"> Scientific Method Conducting an Experiment Concentric Circles protocol

* In these lessons, students conduct similar experiments that may need to be spread over two days. Time in the calendar reflects these additional days.



Optional: Experts, Fieldwork, and Service

Experts:

- Interview people in the community who use simple machines in their daily work.

Fieldwork:

- bike shop, physical therapy department of a local hospital

Service:

- N/A

Optional: Extensions

- Interview people in your community with disabilities to see how simple machines help improve their ability to move and travel.

Preparation and Materials

- This unit includes several scientific experiments. Review Lessons 2, 4, 8, and 9 in advance for necessary materials. Materials for each lesson can be found in the following pages of the text *Simple Machines: Forces in Action* by Buffy Silverman:
- For Lesson 2: Materials listed for inclined plane experiment on page 8.
- For Lesson 4: Materials listed for lever experiment on page 26.
- For Lesson 10: Materials listed for pulley experiments on page 32 and wheel experiment on page 38. (Note: See Lessons 8 or 10 for suggestions for alternate materials and logistics.)



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2:

Recommended Texts



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 2 focuses on simple machines and how those machines help people. The list below includes texts with a range of Lexile text measures on this topic, with an emphasis on six specific simple machines. This provides appropriate independent reading for each student to help build content knowledge.

It is imperative that students read a high volume of texts at their reading level in order to continue to build the academic vocabulary and fluency demanded by the CCLS.

Common Core Band Level Text Difficulty Ranges:

(As provided in the NYSED Passage Selection Guidelines for Assessing CCSS ELA)

- Grades 2–3: 420–820L
- Grades 4–5: 740–1010L
- Grades 6–8: 925–1185L

Where possible, texts in languages other than English are also provided. Texts are categorized into three Lexile measures that correspond to Common Core Bands: below-grade band, within band, and above-grade band. Note, however, that Lexile® measures are just one indicator of text complexity, and teachers must use their professional judgment and consider qualitative factors as well. For more information, see Appendix 1 of the Common Core State Standards.

Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below band level (below 740L)			
<i>Ramps and Wedges</i>	Sian Smith (author)	Informational	450
<i>Los engranajes trabajan, las ruedas ruedan/Gears Go, Wheels Roll</i>	Mark Weakland (author)	Informational	520*
<i>Put Wheels and Axles to the Test</i>	Sally M. Walker and Roseann Feldmann (authors)	Informational	520
<i>Screws</i>	Lyn Sirota (author), Reginald Butler (illustrator)	Informational	580
<i>Inclined Planes</i>	Katie Marsico (author), Reginald Butler (illustrator)	Informational	600

*Lexile based on a conversion from Accelerated Reading level;

Lexile® is a trademark of MetaMetrics, Inc., and is registered in the United States and abroad. Copyright © 2012 MetaMetrics.



Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures below band level (below 740L)			
<i>From Washboards to Washing Machines: How Homes Have Changed</i>	Jennifer Boothroyd (author)	Informational	620
<i>Put Pulleys to the Test</i>	Sally M. Walker and Roseann Feldmann (authors)	Informational	620
<i>Get to Know Inclined Planes</i>	Jennifer Christiansen (author)	Informational	720
Lexile text measures within band level (740-1010L)			
<i>Twist, Dig, and Drill: A Book about Screws</i>	Michael Dahl (author), Denise Shea (illustrator)	Informational	740
<i>Get to Know Screws</i>	Paul C. Challen (author)	Informational	750
<i>Pulleys and Gears</i>	David Glover (author)	Informational	750*
<i>Screws</i>	Michael De Medeiros (author)	Informational	790*
<i>Wedges</i>	Tatiana Tomljanovic (author)	Informational	790*
<i>Inclined Planes</i>	Jennifer Howse (author)	Informational	840*
<i>Roll, Slope, and Slide: A Book about Ramps</i>	Michael Dahl (author), Denise Shea (Illustrator)	Informational	860
<i>Screws in Action</i>	Gillian Gosman (author)	Informational	860*
<i>Wheels and Axles in Action</i>	Gillian Gosman (author)	Informational	980

*Lexile based on a conversion from Accelerated Reading level.



Title	Author and Illustrator	Text Type	Lexile Measure
Lexile text measures above band level (over 1010L)			
<i>In the Renaissance</i>	Richard Platt (author), David Lawrence (illustrator)	Informational	1030
<i>Technology in the Ancient World</i>	Paul C. Challen et al. (authors)	Informational	1070
<i>The Inside & Out Guide to Mighty Machines</i>	Clint Twist (author)	Informational	1130



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 1

Setting Purpose for a Deeper Study of Simple Machines



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can explain what a text says using specific details from the text. (RI.4.1)

I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

I can recall information that is important to a topic. (W.4.8)

Supporting Learning Targets

- I can self-assess my progress toward the learning targets.
- I can identify what I already know about simple machines and what I want to learn.
- I can ask questions about simple machines.
- I can follow our class norms when I participate in a conversation.

Ongoing Assessment

- Tracking My Progress, End of Unit 1 recording form
- Simple Machines KWL anchor chart
- Page 10 of Simple Machines Science journal



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Tracking My Progress Reflection (10 minutes)B. Engaging the Reader and Writer and Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Building Background Knowledge: What We Already Know about Simple Machines (10 minutes)B. Building Background Knowledge: What We Want to Know about Simple Machines (10 minutes)C. Revisiting the Guiding Question: Concentric Circle Protocol (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Group Mingle (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue your independent reading book for this module at home.	<ul style="list-style-type: none">• The opening of this lesson serves as a bridge between Units 1 and 2; students reflect on their progress toward the Unit 1 targets. Then Unit 2 is launched in earnest.• In advance: Write the guiding question (“How do simple machines affect our lives?”) on chart paper, leaving room for students to post sticky notes around or under it.• For the Concentric Circles protocol, identify an open space large enough for two circles and student movement.• Review: Concentric Circles protocol in (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
hypothesis, prove, disprove, accuracy	<ul style="list-style-type: none">• Tracking My Progress, End of Unit 1 recording form (one per student)• Simple Machines Science journals—page 10: KWL chart (from Unit 1, Lesson 1)• Equity sticks• Simple Machines KWL anchor chart (new; co-created with students during Work Time A)• “The Machine” (pages 219–221 in <i>Take a Quick Bow!</i> by Pamela Marx)• <i>Simple Machines: Forces in Action</i> pages 4–5 (book; one per student)• Guiding Question chart• Writing paper



Opening	Meeting Students' Needs
<p>A. Tracking My Progress Reflection (10 minutes)</p> <ul style="list-style-type: none">• Discuss the learning target: "I can self-assess my progress toward the learning targets." Have students talk to a partner; remind them what it means to "self-assess." Have students share their thinking and clarify as necessary.• Congratulate students on their hard work on Unit 1. Distribute the Tracking My Progress, End of Unit 1. Remind students that successful learners keep track and reflect on their own learning. Point out that students have been doing this informally all year, during debriefs when they consider how they are making progress toward the learning targets.• If necessary, review how to complete this reflection form. Remind students that in Step 1, they explain what the target means to them. For example, the first target is: "I can use literary terms to describe parts of a story or drama." They should write what the target means "in their own words" by explaining that the target means to describe parts of a story or play using the correct vocabulary terms.• Point out the second step, and explain that this is similar to the thumbs-up, thumbs-sideways, or thumbs-down that they have used in previous lessons. They should also explain why they think they "need more help," "understand some," or are "on the way," and give examples. Consider giving students an example such as: "I circled that I need more help because I can't remember what the word <i>literary</i> means."• Collect students' self-assessments to guide instructional decisions during the next unit.	<ul style="list-style-type: none">• For students who struggle with language, consider giving a list of key academic and scientific words they might use in their reflections.
<p>B. Engaging the Reader and Writer and Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Tell students they will continue to increase their knowledge about simple machines in this unit by doing some research and will even get to conduct some science experiments.• Ask students to read the second learning target silently. Have them give a thumbs-up if they are clear on what they will be expected to do, a thumbs-sideways if they understand part but not all of what to do, and a thumbs-down if they are very unsure about what they should do.	



Work Time	Meeting Students' Needs
<p>A. Building Background Knowledge: What We Already Know about Simple Machines (10 minutes)</p> <ul style="list-style-type: none"> • Distribute the Simple Machines Science journals—page 10: KWL chart. Explain the KWL table to students if a KWL chart has not been used yet with your class (<i>K</i> = What we know or think we know: prior knowledge about the topic; <i>W</i> = What we want to know: our questions; and <i>L</i> = What we learned: answers to our questions or information that confirms/refutes our prior knowledge). Explain that for the next several days the class will record their knowledge, questions, and learning using this chart. Invite the students to take about 5 minutes to list all they already know about simple machines in the left K column. • Use equity sticks to cold call four to five students to share out whole group. Record students' comments (both accurate and inaccurate) in the K column on the Simple Machines KWL anchor chart. (For example, a student may share correct information such as: "A bicycle is a simple machine." Or they might inaccurately say: "A cell phone is a simple machine"). Tell students that during this unit, they will continue to learn about simple machines and will be looking for evidence from the text and their experiments to either confirm or revise their current knowledge. This chart will grow throughout this unit as a way to document the class's growth in scientific knowledge about simple machines. • Tell students that accuracy is important in scientific research. Scientists will make a guess, called a <i>hypothesis</i>, that is often based on what they think they know about a topic, but they always look for facts or data (either from reading or from their own research) to determine whether that guess is correct or not. They state a hypothesis before conducting an experiment. In other words, they make an educated guess about the results of the experiment based on what they know about a topic. • Explain that students now will work with a partner for about 5 minutes to determine whether the information they have listed in the K column is true or not by using "The Machine" (pages 219–221 in <i>Take a Quick Bow!</i>) as well as Simple Machines: Forces in Action pages 4–5. • Give directions: <ol style="list-style-type: none"> 1. Mark a Y if what you listed can be checked as correct. 2. Mark an N if what you listed is shown to be incorrect. 3. Put a ? if you did not find evidence in this text relating to a piece of information you listed. (You may need to read another text to find out.) 	<ul style="list-style-type: none"> • For students needing additional support, consider allowing students to draw their ideas, or notes when appropriate. • Students needing additional support may need to share in a partnership or triad in order to help them articulate their thinking.



Work Time (continued)	Meeting Students' Needs
<p>B. Building Background Knowledge: What We Want to Know about Simple Machines (10 minutes)</p> <ul style="list-style-type: none">• Tell students they will now think about their curiosity regarding simple machines. What do they want to learn about them? Explain that it is this process that scientists go through that guides their research and discovery of new things in the world of science. Without deep curiosity, scientists wouldn't have any motivation to conduct experiments or research a topic. Scientists often ask: "Why?" or "How come?" or "What if?"• Invite student partnerships to join another partnership to form a group of four. Each group of four will generate at least three questions that they <i>want</i> to know about simple machines. Each student will record the group's questions in their individual chart on page 10 of their Simple Machines Science journals. If students do not have much background knowledge about this topic, they may not have many questions at this time. This is okay, because the class will revisit and record more on this chart as they read other texts. Reiterate that they will be looking for the answers to these questions throughout the unit.	<ul style="list-style-type: none">• Consider partnering an ELL student with a student who speaks the same L1 for discussion of complex content, or partner an ELL with a native speaker of English. Interacting with the content in English can facilitate language acquisition for ELLs.



Work Time (continued)	Meeting Students' Needs
<p>C. Revisiting the Guiding Question: Concentric Circle Protocol (20 minutes)</p> <ul style="list-style-type: none">• Draw the students' attention to the Guiding Question chart. Distribute a piece of writing paper to each student. Ask them to take a few minutes to think and write about the guiding question:<ul style="list-style-type: none">* "How do simple machines affect our lives?"• Encourage them to concentrate on their thinking and how to express that in writing without worrying about spelling or handwriting. They are the only ones who will be reading them.• Ask the students to find a partner and number off by 1s and 2s (if there is an uneven number of students, triads are fine). Tell them to bring their papers and a pencil with them as they form two circles. Direct all 1s to form an inner circle (shoulder-to-shoulder), facing out. Then direct the 2s to stand in front of their partners.• Remind them of the Concentric Circles protocol directions. Ask the students to talk with their partners about how they think simple machines affect people's lives.• Before rotating the outside circle two people to the left, encourage the students to jot down any new thinking or ideas they discussed with their partner.• Rotate the circle and repeat the process twice more. Each time, ask the students to talk with their partners about how they think simple machines affect people's lives.• As the students are discussing the topic, circulate and listen for comments such as: "Simple Machines help people do heavy work more easily," or "Simple machines help people move heavy things with less effort."	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. Using the word "because" in the sentence frame helps all students support their thinking with evidence.• If there are an odd number of students in the Concentric Circles protocol, consider supporting students who struggle with verbalizing their thinking by creating triads.



Closing and Assessment	Meeting Students' Needs
<p>A. Group Mingle (5 minutes)</p> <ul style="list-style-type: none">Ask the students to review the learning target:<ul style="list-style-type: none">* "I can identify what I already know about simple machines and what I want to learn."Give directions:<ol style="list-style-type: none">Find a partner.Share information from your KWL chart: one thing you know about simple machines (feel free to add anything your partner says to your list).Share information from your KWL chart: one thing you want to know about simple machines (feel free to add anything your partner says to your list).Repeat this with two more people.	<ul style="list-style-type: none">Posting sentence frames can assist ELLs and other students needing additional support in contributing to classroom discussions.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Continue your independent reading book for this module at home. <p><i>Note: In preparation for deeper learning about simple machines, add new scientific terms and academic vocabulary to your class Word Wall (in addition to the class anchor charts) at the end of each lesson. Students must be surrounded with key vocabulary to make them more apt to use it in conversation, not just in writing about science. Add the vocabulary words: hypothesis, prove, disprove, accuracy.</i></p> <p><i>In Lesson 2 the students will conduct a simple experiment on inclined planes. Make sure to read the experiment in Simple Machines: Forces in Action (pages 8–9) for the list of materials and how to prepare them.</i></p> <p><i>During the experiment in Lesson 2, students will be asked to write a hypothesis before they conduct the experiment and a conclusion at the end describing what they learned about inclined planes. To ensure that this is truly an inquiry experience, cover up the bottom of page 9 by either taping a half-sheet of paper or several large sticky notes over that part of the page.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 1

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Tracking My Progress, End of Unit 1

Name:

Date:

Learning target: I can use literary terms to describe parts of a story or drama. (RL.4.5)

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 1

Name:

Date:

Learning target: I can describe the differences in structure of drama and prose. (RL.4.5)

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 1

Name: _____

Date: _____

Learning target: I can explain what a text says using specific details from the text. (RL.4.1)

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 2

Reading a Scientific Experiment: The Inclined Plane



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
I can describe the organizational structure in an informational text (chronology). (RI.4.5)
I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2)
I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4)

Supporting Learning Targets

- I can explain what happens before, during, and after a scientific experiment.
- I can explain how the directions in a scientific experiment are a form of informational text that involves a procedure.
- I can document what I observe during a scientific experiment.
- I can construct a conclusion statement that describes what I learned about inclined planes.

Ongoing Assessment

- Simple Machines Science journal: Science Experiment note-catcher (page 11)



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging Readers and Writers (5 minutes)B. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Explaining Procedures: Reading a Science Experiment (20 minutes)B. Rereading Scientific Text while Conducting an Experiment (15 minutes)C. Writing a Conclusion (10 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Read-aloud of Pages 6 and 7 of <i>Simple Machines: Forces in Action</i>: Learning More about the Inclined Plane (5 minutes)4. Homework<ol style="list-style-type: none">A. On a sticky note, write a gist statement for pages 6–7 of your <i>Simple Machines: Forces in Action</i> text. Write legibly and put your name on it because you'll be sharing this with the class tomorrow, and it will be posted on the class Inclined Plane anchor chart.B. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• This is an ELA lesson, not a science one. The purpose is to practice reading and applying understanding of scientific text.• This lesson is intended to align with science standards, but not to fully address them. Students will need more extensive experiences and instruction with simple machines, such as experiments and discovery, during other parts of the school day.• In Standard 4, Key Idea 5 of the NY State Science Standards, it's important for the students to know the role that gravity and friction play in the movement of objects. Each time the students conduct experiments in this unit, consider revisiting the scientific concepts of this standard.• For the first read, do NOT distribute the full text to students. Instead, use a document projector to show the text. This is important because the goal is for students to use inquiry to come to a conclusion of how an inclined plane works rather than simply reading about it. After conducting the experiment, students then write about their findings, and reread to verify their findings.• Before distributing the experiment to students, cover up the “How Does It Work?” on the bottom of page 9.• Create a chart to describe the steps of the Scientific Method described (see the supporting materials for examples).• Students will read <i>Simple Machines: Forces in Action</i> (pages 6–7) in depth in Lesson 3.• During this unit, students will often be working with a science partner. Consider assigning different partnerships for each simple machine so students experience working with different peers. Keep in mind the needs of your students, especially those who struggle with language and processing skills.• Post: Learning targets.



Lesson Vocabulary	Materials
experiment, observe, synthesize, findings, conclusion, procedure, hypothesis, corresponding	<ul style="list-style-type: none">• Simple Machines Science journals (page 11: Inclined Plane Experiment Notes)• Sticky notes (one per student)• Simple Machines KWL anchor chart (from Lesson 1)• <i>Simple Machines: Forces in Action</i> pages 8–9 (cover up the text box “How Does It Work?” on the bottom of page 9; see Teaching Note above, and also at the end of Lesson 1)• Document camera• Equity sticks• Vocabulary Strategies anchor chart (reviewed in Unit 1, Lesson 1)• Scientific Method anchor chart



Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers (5 minutes)</p> <ul style="list-style-type: none">• Remind students that in Lesson 1 they used a KWL chart to list what they already know about simple machines and what they want to learn about them. Explain that scientists ask questions about their field of study and conduct different kinds of research to find the answers to their questions.• Distribute the Simple Machines Science journals. Ask students to choose one question about simple machines they most want to learn about and then write that question on a sticky note. Ask students to read their questions one at a time as they add them to the class Simple Machines KWL anchor chart. Categorize students' questions as you post them, so repeating or similar questions are clustered together.	
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Invite the students to read the learning targets. Ask them to turn and tell a partner what they think they'll learn today. Listen for things such as: "We're going to do an experiment," or "I think we're going to do a science experiment with simple machines."• Ask the students if there are any words or phrases that are confusing. Clarify as needed.	



Work Time	Meeting Students' Needs
<p>A. Explaining Procedures: Reading a Science Experiment (20 minutes)</p> <ul style="list-style-type: none"> Project <i>Simple Machines: Forces in Action</i> pages 8–9 with a document camera. Note: Be sure to cover up the text box “How Does It Work?” on the bottom of page 9; see Teaching Note above. Do not distribute the texts to the students at this point. Ask students to notice the way this informational text is organized versus other informational texts they’ve read this year. Use equity sticks to cold call two to three students to share out whole group what they noticed. They may say things such as: “It’s not written in paragraphs. It’s written like a list that’s numbered,” or “It has different steps to follow like directions to a game.” Explain that they will conduct a scientific experiment today. Before they actually do the experiment, students need to read the directions to understand the <i>procedure</i>. Explain that a <i>procedure</i> is a series of steps someone takes to do something, such as a cook following a recipe. Ask the students if any of them ever helped someone cook something new and had to follow a recipe. A cook has to read the recipe to know what she or he will need to cook with (the ingredients) and then go all the way through it to find out how to put it all together (steps) before beginning. Tell them they will do something similar: they will read about the scientific experiment and then do it. Distribute <i>Simple Machines: Forces in Action</i> pages 8–9 to each student. Be sure that the bottom of page 9 is hidden. Ask students to notice the yellow box on page 8. Explain this is a list of the materials they will need to conduct this experiment. Ask them to read this list with a partner and make sure they know what the materials are (they may not know “twist tie” and “gravel”). If students don’t understand the metric conversions, point out the standard units of measure also listed. Tell students you’ll read the text aloud as they follow along. Instruct them to try to visualize what is being described, asking them: “What is it going to look like when you conduct this experiment?” Tell them that visualizing the steps they’ll take is a good way to understand the procedure and can explain what occurs in each step. Read the first four steps aloud. Ask the students: “What are we supposed to do with the rubber band? Put your fingers on the step number(s) that tell us what to do.” 	<ul style="list-style-type: none"> The experiment groups can be predetermined based on student readiness, learning styles, or groups can be heterogeneous. For discussion of complex content, consider partnering an ELL student with a student who speaks the same L1. Consider providing visual clues for the materials and steps in the experiment for ELLs and other students who struggle with language.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask one or two students to share what step they're pointing to and why. Listen for: "Step 2. We need to cut the rubber band in half," and "Step 3. We need to tie one end to a paper clip," and "Step 4. We need to hang rubber band from the top of a ruler until the bottom of the paper clip reaches nine centimeters."• Ask students to continue the process of reading silently, visualizing, and explaining each step in the procedure in the next six steps of the experiment as you read aloud. Read Steps 5 through 10.• Focus on the word <i>corresponding</i> (Step 10). Ask: "What might the word <i>corresponding</i> mean?" Review the Vocabulary Strategies anchor chart. Encourage students to use the first strategy: "reading on in the text and infer" to figure out the meaning of <i>corresponding</i>. Ask one or two students to share their definitions. Listen for responses similar to: "next to." Acknowledge that is a great inference. Explain that the root word of corresponding is <i>correspond</i>, which means "be equivalent or parallel." Knowing this, the adjective <i>corresponding</i> describes something that is the "equivalent (the same) or parallel (similar) to another thing." In the context of Step 10, the word <i>corresponding</i> describes the location of the tip of the paper clip and numbers on the ruler.• Ask students to reread Step 10 to themselves, substituting the words "next to" for "corresponding" to see if they better understand what the text says. Encourage students to add this word to the Vocabulary section of their Simple Machines Science journal if it helps them remember it. (They can do this when they finish the experiment or for homework.)• Ask students to turn and tell a partner to discuss:<ul style="list-style-type: none">* "How does the bag of gravel move? Where in the text are we given this information?"• Listen for answers such as: "Straight up and along an inclined plane."• Ask students to reread all 10 steps silently so that they have a solid understanding of the steps they will take during the experiment.• Ask the students to describe to a partner, in their own words, how the experiment will be conducted. The partner should listen for accuracy and clarity in the explanation. Note: This oral rehearsal will help them think through the process of the experiment and support them when they document what happens during the experiment.	



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading Scientific Text while Conducting an Experiment (15 minutes)</p> <ul style="list-style-type: none"> For the experiment, group students in groups of four to five. Ask them to turn to page 11 in their Science journal. Explain that scientists often use the Scientific Method to guide them through experiments. Draw students' attention to the Scientific Method anchor chart. Explain that the first thing they need to do as scientists is create a question that must be answered by conducting the experiment. Tell them that the question for this experiment is: "How can the inclined plane help make work easier?" Explain that according to the Scientific Method, the next thing they need to do as scientists is form a <i>hypothesis</i> for what they think will happen. Remind them that a <i>hypothesis</i> is an educated guess about what will happen in an experiment based on research. Remind them they have already conducted some research about simple machines when they read pages 4 and 5 in <i>Simple Machines: Forces in Action</i>, in Unit 1. Encourage students to think about the reading they have already done that would help them form a hypothesis. Ask the small experiment groups to discuss what a possible hypothesis might be and to write it in their Science journal. Invite the students to document the materials needed for the experiment in the Science journals and then begin the experiment. Tell them to make sure they record their observations after Steps 8 and 10. Remind students to keep the bottom of page 9 covered. Give students 10 minutes to conduct the experiment. Circulate and assist as needed. When students have procedural questions, push them back into the text to see if they can answer their own question: <ul style="list-style-type: none"> * "Where might you look for that answer?" * "What does the text tell you?" Listen for students talking about the amount of effort it takes to lift the bag of gravel. Give students specific positive feedback when you hear them using scientific vocabulary in their discussions, and encourage them to use this vocabulary as they write down their observations. They may make observations such as: "It takes less effort to lift a bag of gravel up an inclined plane because the rubber band didn't stretch very far," or "The rubber band stretched longer when I lifted the bad of gravel straight up. This showed me that it took a lot of effort to lift the bag that way." <p><i>Note: In Standard 4, Key Idea 5 of the NY State Science Standards, it's important for the students to know the role that gravity and friction play in the movement of objects. This point in the lesson may provide an opportunity to revisit those concepts.</i></p>	<ul style="list-style-type: none"> Consider allowing students to draw their observations, ideas, or notes when appropriate. This allows all students to participate in a meaningful way.



Work Time (continued)	Meeting Students' Needs
<p>C. Writing a Conclusion (10 minutes)</p> <ul style="list-style-type: none">• Explain that after scientists conduct an experiment, they <i>synthesize</i> their <i>findings</i> by writing a <i>conclusion</i> statement. Explain that <i>findings</i> are what they noticed happened as they conducted the experiment. This statement explains the main idea of what happened during the experiment and what they learned from it.• Help students connect to previous learning by explaining that a conclusion statement is similar to other types of synthesis statements they've written this year. In Module 2, they read texts about a trade and synthesized their learning in short gist statements. A conclusion statement in a science experiment asks the scientist to synthesize what they have learned about a topic through conducting a hands-on science experiment and discussions with their partners.• Point students to the last section of page 11 in their Science journals. Invite students to brainstorm with their experiment groups about a possible conclusion statement and to write it in their Science journal.• Next, ask students to unveil the bottom of page 9 in their texts. Ask them to read it as a group, checking to see if they reached the same conclusions as the author. If their findings were different from the author's, encourage them to NOT revise their hypothesis or their conclusion. Tell them that this happens to scientists. When different people do the same experiment and the results come out significantly different, this tells the scientists that the experiment needs to be conducted again to verify that the same materials were used and the same steps were followed. Instead of changing their conclusion, ask them to add to their conclusions by explaining how their conclusion is different from the author's.	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. Using the word "because" in the sentence frame helps all students support their thinking with evidence. For example: "The rubber band stretched (more/less) when pulling the bag up the ramp. This means _____."



Closing and Assessment	Meeting Students' Needs
<p>A. Read-aloud of Pages 6 and 7 of <i>Simple Machines: Forces in Action</i>: Learning More about the Inclined Plane (5 minutes)</p> <ul style="list-style-type: none">• Tell students now they get to learn even more about inclined planes. Read pages 6 and 7 of <i>Simple Machines: Forces in Action</i> aloud as students read silently in their heads.• After the read-aloud, give students a few minutes to discuss the gist with a partner.• Tell students their homework is to write a gist statement on a sticky note.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• On a sticky note, write a gist statement for pages 6–7 of your <i>Simple Machines: Forces in Action</i> text. Write legibly and put your name on it because you'll be sharing this with the class tomorrow, and it will be posted on the class Inclined Plane anchor chart.• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 2

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



The Scientific Method Anchor Chart

The Scientific Method
The Scientific Method is the process scientists go through as they ask and answer scientific questions. They do this by making observations and doing experiments.
Step 1: Ask a question
The first step is to form a question that can be answered. Good questions start with question words: <i>How, What, When, Who, Which, Why, or Where?</i> For example: “Which simple machine is the best one to help with this task?” “How many objects can be moved with a particular kind of simple machine?”
Step 2: Form a hypothesis
A hypothesis is an educated guess about the result of an experiment based on what you already know about a topic from reading and research. These can be worded like: “I think _____ will happen because _____.”
Step 3: Test your hypothesis by conducting an experiment
Scientists need to be careful observers of what happens during the experiment. Think about/read the steps to the experiment. “First _____. Next _____. Then _____.”
Step 4: Analyze the data and draw a conclusion
This is where scientists look at the results of the experiment. What happened in the experiment? Look to see if the question developed in Step 1 was answered.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 3

Reading Scientific Text: Learning More about the Inclined Plane



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can find the meaning of scientific and academic words related to the inclined plane.
- I can determine important information about inclined planes and how they help people do work.
- I can document what I learn about inclined planes in my own words.

Ongoing Assessment

- Students' gist statements (homework from Lesson 2)
- Simple Machines Science journal (page 12: Inclined Plane Research Notes)
 - Vocabulary note-catcher
 - Diagram
 - Constructed response captions



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader and Writer and Checking on Homework (5 minutes)Reviewing Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Shared Reading for New Vocabulary (20 minutes)Rereading to Visualize Scientific Processes: Part I (10 minutes)Rereading to Visualize Scientific Processes: Part II (15 minutes)Closing and Assessment<ol style="list-style-type: none">Writing a Scientific Caption to Synthesize Learning (5 minutes)Homework<ol style="list-style-type: none">Look for inclined planes around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the inclined planes, make a sketch of what you saw, or use words to describe what you saw.	<ul style="list-style-type: none">In advance: Make a class Inclined Planes anchor chart with three sections (see supporting materials).This lesson includes an activity that helps students visualize abstract scientific concepts. In advance, review Part B of Work Time carefully.Post: Learning targets.



Lesson Vocabulary	Materials
academic, scientific, interconnected, diagram, caption; inclined plane, force, effort, resistance, reduce, distance, slanted, height	<ul style="list-style-type: none">• Sticky notes—3 x 5 inches preferred (one per partnership)• Inclined Planes anchor chart (new; one for display)• Equity sticks• <i>Simple Machines: Forces in Action</i> pages 6–7 (book; one per student)• Simple Machines Science journal• Blank paper (one per pair of students)

Opening	Meeting Students' Needs
<p>A. Engaging the Reader and Writer and Checking on Homework (5 minutes)</p> <ul style="list-style-type: none">• Ask the students to mingle and share their gist statements with at least two other students. After each has shared their statement, tell them to explain why theirs is a good one. After they've shared with at least two or three people, give the students 1 to 2 minutes to revise their statements if they think they can improve it based on the conversations they had as they shared.• Ask students to add any revisions to their gist statement on their homework sticky note, or give them a new sticky note if they want to start fresh. Post the gist statements in the top section of the Inclined Planes anchor chart.• Ask the students what they notice about scientific text:<ul style="list-style-type: none">* “How is scientific text similar to or different from the social studies texts we have read about the Iroquois and Colonial America?”• Ask students to think then talk with a partner. Use equity sticks to cold call on two or three students. Some possible responses could be: “The social studies texts told a story about what happened in America. But this text just tells facts,” or “This text doesn’t take place anywhere special like New York or Williamsburg.”	



Opening (continued)	Meeting Students' Needs
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Invite the students to read the first learning target: “I can find the meaning of scientific and academic words related to the inclined plane.” Check to make sure they understand the difference between <i>scientific</i> and <i>academic</i> words.<ul style="list-style-type: none">– <i>scientific</i>: words used specifically in science-related texts and conversations– <i>academic</i>: words often seen in other texts and content areas and that are important to understanding the main ideas of the texts• Tell students in this module they’ll focus on two different types of words: <i>scientific</i> and <i>academic</i>. By knowing these types, students can determine vocabulary and understand the texts better. Remind them that informational text often has a glossary, a place that lists words and definitions. Explain to students they’ll keep track of important academic and scientific vocabulary in their Simple Machines Science journals so they can become better readers and writers of scientific texts.• Invite them to read the next two learning targets: “I can determine important information about inclined planes and how they help people do work,” and “I can document what I learn about inclined planes in my own words.” Ask students to identify any words or phrases that seem confusing. Write a synonym or explanation above the unfamiliar words. Then read the learning targets again for understanding. Some possibly confusing words or phrases are:<ul style="list-style-type: none">– <i>determine</i>: decide on; figure out– <i>in my own words</i>: not copied directly from the text; a summary of what I read• Ask the students to give a thumbs-up if they understand what they will be learning today, a thumbs-sideways if they are somewhat clear, and a thumbs-down if they are completely unsure. Clarify as needed.	<ul style="list-style-type: none">• Using learning targets helps students understand the reading’s purpose.• Providing visual cues or synonyms helps students understand the learning targets.



Work Time	Meeting Students' Needs
<p>A. Shared Reading for New Vocabulary (20 minutes)</p> <ul style="list-style-type: none"> • Tell students you will now read <i>Simple Machines: Forces in Action</i> pages 6–7 aloud again. Ask them to follow along and underline any unfamiliar words. (Students may mark in the text, highlight, or use evidence flags/sticky notes.) • Read the first paragraph on page 6. Ask students to identify unfamiliar words. Point out the bolded words: <i>ramp</i>, <i>inclined plane</i>, <i>work</i>, <i>simple machines</i>. Explain these are scientific words that are important to know to understand what an inclined plane is and does. • Define the phrase <i>inclined plane</i>. <ul style="list-style-type: none"> – Explain the word <i>inclined</i> means to slope or slant and comes from a Latin word meaning “bend.” – The word <i>plane</i>, in scientific terms, is not like an airplane. Instead, it means a flat surface and also comes from a Latin word meaning “flat surface.” – Therefore the term <i>inclined plane</i> means a flat surface that is slanted or slopes. • Ask students to turn to the vocabulary section of their Simple Machines Science journal and find the term <i>inclined plane</i> in the left column. Write the definition in the second column. • Direct student’s attention to the third column titled “This helps me know what this word means because ...” Explain when they entered words in their Vocabulary section in Unit 1, they ignored this column because they didn’t have enough information at that time about the words and terms. Now that they’re researching simple machines in more depth, this is an important resource. • For the third column, ask students to think about the following: <ul style="list-style-type: none"> – This is a space for them to describe the new words and terms so they’ll remember what they mean. This can be in words or sketches (some things students might write could be: “a slanted board” or “a wheelchair ramp” or they could draw a quick sketch of a slanted line). – Each student may write or draw something different in this column. • Explain the last column identifies how some words they’re learning are <i>interconnected</i>. Ask students to turn and tell a partner how <i>inclined plane</i> and <i>simple machine</i> are connected. All should say: “An inclined plane is one of the simple machines.” Ask them to write this response in the fourth column. 	<ul style="list-style-type: none"> • Students who struggle with language benefit from having individual dictionaries for reference throughout the module. • Deconstruction of complex vocabulary words or phrases in order to understand meaning helps all students with text comprehension. • Provide nonlinguistic symbols (e.g., two circles connected for <i>interconnected</i>) to assist ELLs and other struggling readers in making connections with vocabulary.



Work Time (continued)	Meeting Students' Needs
<p><i>Note: In the context of the scientific topic of simple machines, the word work has a very specific scientific meaning that is distinct from its "everyday" meaning.</i></p> <ul style="list-style-type: none">Acknowledge this was pretty obvious, but not all the words and phrases they're learning are connected to just one simple machine. For example, they read the word <i>work</i> in the play in Unit 1 and have already entered it in the Vocabulary section of their Science journal. Remind them that work is "the measure of energy or force that it takes to move something." Ask them if inclined planes help a person do work. If the answer is "yes," they should write "inclined plane" in the fourth column for the vocabulary word <i>work</i>. Also invite them to write or draw something in the third column that helps them remember what <i>work</i> is.Tell students they will have 15 minutes to continue reading the text with a partner. Write the following words on the board and ask students to look for them along with others they may identify as unfamiliar when they read:<ul style="list-style-type: none">– resistance– rampMake sure they include them in their Science journal.Remind students that some science terms in this text have already been entered in their Science journal. They need to think about these words (<i>effort</i> and <i>force</i>) and how they relate to the inclined plane.Ask them to repeat the process of identifying unfamiliar words and recording new scientific terms in their Simple Machines Science journal. Post the following directions:Find the meaning of the following words (<i>effort, force, resistance, ramp</i>) along other words you read that are unfamiliar or are important in understanding what inclined planes are by using your glossary or a classroom dictionary.<ol style="list-style-type: none">As you read pages 6–7 in <i>Simple Machines</i>, determine the meaning of each word.Look for the word in pages 2–6 of your Science journal and record the definition and fill in the rest of the columns.Reread pages 6–7 with your partner. Identify other words you think are important in understanding what an inclined plane is, how it works, and how it helps people do work.	<ul style="list-style-type: none">Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This allows students to have more meaningful discussions and clarify points in their L1.Identifying the number of facts that need to be found gives support to struggling learners. (See task cards in Module 2, Unit 2, Lesson 6.)



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Give students 15 minutes to read. <p><i>Note: Some academic words students may identify are: site, required, height, steep, and reduce.</i></p> <ul style="list-style-type: none">• Gather the class together. Ask partnerships to choose one word that's important for understanding inclined planes. Use the following steps to record new words in the middle section of the Inclined Planes anchor chart:<ol style="list-style-type: none">1. Call on one partnership at a time to share one word.2. Tell other students to listen carefully. If they hear a word that is also on their own list, they can cross out that word.3. Write the word on a sticky note. Add the note to the middle section of the anchor chart.• Repeat until all words are posted on the anchor chart.	
<p>B. Rereading to Visualize Scientific Processes: Part I (10 minutes)</p> <ul style="list-style-type: none">• Remind students that good readers often read an unfamiliar and complex text several times to understand the content deeply. Tell students to read this text again, this time on their own, focusing specifically on text-dependent questions.• Explain to students that together you will answer to the first question by analyzing the sentence structure of the excerpt to better understand the scientific concepts being described:<ul style="list-style-type: none">* "On page 7, the text says, 'If the distance along which you push a rock is twice as long, it takes half the force to do the same work and move the rock to the same height.' How does it help us understand the inclined plane?"• Explain to students that before we can understand the scientific concepts within a sentence, we need to look at the sentence more closely. Focus students on the picture on page 6 and the diagram on page 7 to help them make sense of the science concept being described.• Tell students to take a moment to deconstruct the sentence together. Distribute a piece of blank paper to each partnership. Ask students to fold it in half.	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">Ask students to read silently in their heads as you read aloud. Follow this sequence:<ol style="list-style-type: none">Read just the first half of the sentence: "If the distance along which you push a rock is twice as long ..."Ask students to turn and talk with their partner about what that part of the sentence is saying. Listen for: "The length of space the thing is being pushed is two times longer."Ask students to draw a picture on the left half of their paper that helps them understand this first part of the sentence.Ask students to hold the paper up when they're finished so you can check for understanding. Look for pictures that are similar to a slanted line that is long with a rock-shaped object on it with arrows or other indications of upward movement.Repeat the sentence deconstruction process with the second half of the sentence.<ol style="list-style-type: none">Read aloud as students read along silently: "... it takes half the force to do the same work and move the rock to the same height."Ask students to turn and talk with their partner about what that second part of the sentence means. Listen for responses like: "A person is going to have to do half the work to move the same rock to the same place."Ask students to draw a picture on the right half of their paper that helps them understand this second part of the sentence.Ask students to hold the paper up when they're finished so you can check for understanding. Look for pictures that show a person with an object in their hands moving up a long slanted line with the fraction "1/2" near it. Students could also include pictures of a person moving the same-sized object up a shorter slanted line, indicating it takes more effort.Ask students to share how the process of deconstructing a complex sentence helped them understand science concepts. Allow two to three students to share.	



Work Time (continued)	Meeting Students' Needs
<p>C. Rereading to Visualize Scientific Processes: Part II (15 minutes)</p> <ul style="list-style-type: none">• Focus students whole group. Ask them to turn to page 12 (Inclined Plane Research Notes) in their Simple Machines Science journal. Explain that they will read pages 6–7 in Simple Machines: Forces in Action one last time. This time they will look for specific information about the inclined plane.• Ask them to talk with a partner about what information they need to look for as they reread the text. Some responses you might hear could be, “We need to draw a diagram.” or “We need to describe what an inclined plane looks like and list some examples.” Clarify what a diagram is vs. an illustration (A diagram is a sketch, outline, or a plan that demonstrates how something works. An illustration has more detail and often has color.)• Acknowledge that they may be familiar enough with the text after reading it several times that they could already fill in some of parts of this note-catcher without even looking at the material again. Reiterate that scientists strive to confirm facts, both by doing experiments and by reading carefully. Rereading will help students find more evidence from the text to answer the question about how inclined planes help people do work.• Give students 10 minutes to reread pages 6–7 in the text, and then record information in the note-catcher on page 12 of their Science journal. Encourage them to use the process of deconstructing complex sentences if they are unsure of what the text is describing.• Circulate to listen in and support as needed. Make sure that students are clear about the type of information they need to find and are using evidence directly from the text. Probe with questions such as “How do you know?” or “Where in the text did you learn that?” in order to ensure they are using evidence from the text (instead of just their own schema).	



Closing and Assessment	Meeting Students' Needs
<p>A. Writing a Scientific Caption to Synthesize Learning (5 minutes)</p> <ul style="list-style-type: none">• Tell students that to synthesize their learning about inclined planes, they will write a caption for the graphic of an inclined plane on the cover of their Simple Machines Science journal. Remind them that they used captions when they read informational text about the Iroquois (in Module 1) and Colonial America (in Module 2). Captions are short (one to two sentences) texts that describe the importance of an image or graphic.• Give students 3 minutes to write their caption independently.	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. (i.e., "An inclined plane is _____ [description of how it looks]. Inclined planes help people move things by _____."
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Look for inclined planes around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the inclined planes, make a sketch of what you saw, or use words to describe what you saw. <p><i>Note: After each lesson, add new scientific terms and academic vocabulary to the class Word Wall (as well as any new notes on anchor charts). In order for students to build knowledge about this topic, they need to be surrounded by key vocabulary so they will be more apt to use it in conversation, not just in science writing. Add the words: inclined plane, effort, force, resistance, ramp, and interconnected. Some of the academic words the students may identify are: site, required, height, steep, and reduce.</i></p> <p><i>In Lesson 4, the students will conduct another simple experiment, this time with levers. In advance, read the experiment on pages 26–27 of Simple Machines: Forces in Action for the list of materials and how to prepare them.</i></p> <p><i>During the experiment in Lesson 4, students will write a hypothesis before they conduct the experiment (just as they did in Lesson 2). They will also write a conclusion at the end to synthesize what they learned about inclined planes. To ensure that this is truly an inquiry experience, cover up the "How Does It Work?" box on page 27. Do this by taping a piece of paper or a large sticky note over that part of the page.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 3

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Inclined Planes Anchor Chart
(For Teacher Reference)

(Example is not to scale—create this anchor chart in advance)

Inclined Planes
<p>Gist Statements:</p> <p>(Student sticky notes)</p>
<p>Important Vocabulary to Know:</p> <p>(Student sticky notes)</p>
<p>Examples of Inclined Planes in Our Lives:</p> <p>(Student sticky notes)</p>



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 4

Reading a Scientific Experiment: The Lever



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can explain the main points in scientific text, using specific details in the text. (RI.4.3)</p> <p>I can describe the organizational structure in an informational text (chronology). (RI.4.5)</p> <p>I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2)</p> <p>I can use a variety of strategies to determine the meaning of words and phrases. (L.4.4)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can explain what happens before, during, and after a scientific experiment.• I can explain how the directions in a scientific experiment help me understand what a lever is and how it works.• I can document what I observe during a scientific experiment.• I can construct a conclusion statement that describes what I learned about levers.	<ul style="list-style-type: none">• Simple Machines Science Journal: Science Experiment note-catcher (page 13)



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Checking Homework and Reviewing Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Explaining Procedures: Reading a Science Experiment (15 minutes)Guided Practice: Focusing on Key Vocabulary before Conducting an Experiment (10 minutes)Rereading Scientific Text while Conducting a Science Experiment (15 minutes)Writing a Conclusion (10 minutes)Closing and Assessment<ol style="list-style-type: none">Read-aloud of Pages 24–25 of <i>Simple Machines</i>: Learning More about the Lever (5 minutes)Homework<ol style="list-style-type: none">Write a gist statement for pages 24 and 25 in your <i>Simple Machines</i> text. You will be sharing this with the class tomorrow to post on the Levers anchor chart, which will also be introduced tomorrow.	<ul style="list-style-type: none">The structure of this lesson is similar to Lesson 2. The students read procedures and conduct a simple experiment about levers as an initial inquiry experience into what levers are and how they work.This is an ELA lesson, not a science lesson. The purpose is to practice reading and applying understanding of scientific text. This lesson is intended to align with science standards, but not to fully address them. Students will need more extensive experiences and instruction with simple machines, such as experiments and discovery, during other parts of the school day.As with Lesson 2, for the first read, do NOT distribute the full text to students. Rather, use a document projector to show the text. This is important, since the goal is for students to use inquiry to come to a conclusion of how a lever works rather than simply reading about it. After conducting the experiment, students will then write about their findings and reread to verify them.Review the Scientific Method anchor chart (created in Lesson 2).During Work Time B, some scientific vocabulary is defined for students since there is little context for these terms on pages 26–27. Students need a basic understanding of these terms to know how to conduct the experiment.Then, in Lesson 5, students will read <i>Simple Machines: Forces in Action</i> (pages 24–25) in depth. They'll spend more time on detailed definitions and understanding how these terms relate to the concept of simple machines.It was suggested in the Teaching Notes in Lesson 2 that science partners change for the study of each simple machine. Make sure students know who their new science partner is for Lessons 4 and 5.Post: Learning targets.



Lesson Vocabulary	Materials
experiment, procedure, force, effort (review); lever, fulcrum, lever arm, balance, mid-point, arm, adjust, consider	<ul style="list-style-type: none">• Sticky notes (three to five per triad)• Inclined Planes anchor chart (from Lesson 3)• <i>Simple Machines: Forces in Action</i> pages 26–27 (book; one per student)• Document camera• Equity sticks• Vocabulary Strategies anchor chart (reviewed in Unit 1, Lesson 1)• Simple Machines Science journal (page 13: Lever Experiment Notes)• Scientific Method anchor chart (from Lesson 2)



Opening	Meeting Students' Needs
<p>A. Checking Homework and Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Remind students of their homework: “Look for inclined planes around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the inclined planes, make a sketch of what you saw, or use words to describe what you saw.”• Invite students to get into triads to share and then record examples of inclined planes they found—one per sticky note. Ask a representative from each triad to post their sticky notes on the bottom section of the Inclined Planes anchor chart (from Lesson 3).• Ask the class what they noticed about inclined planes around them. Invite students to turn and talk to their triad groups. Listen for comments such as: “They’re everywhere, on sidewalks and doorways of buildings. I never knew the ramps were simple machines,” or “Now that I know what an inclined plane is, I see them all over the place,” or “Lots of people use inclined planes and probably don’t even know it.”• Invite the students to read the learning targets. Tell them these targets should be familiar to them from Lesson 2. Ask them to turn and tell a partner what they think they’ll learn based on the learning targets. Listen for things such as: “I think we’re going to do another science experiment, but this time it’s going to be with levers,” or “We’re going to do another experiment and write about what we see happening and what we learn about levers.”• Ask students if any words or phrases are confusing. Clarify as needed.	



Work Time	Meeting Students' Needs
<p>A. Explaining Procedures: Reading a Science Experiment (15 minutes)</p> <p><i>Note: Be sure to cover up the “How Does It Work?” text box on the top of page 27; see Teaching Notes. Do not distribute the texts to students at this point.</i></p> <ul style="list-style-type: none">• Project the “Make a Dime Balance” spread from <i>Simple Machines: Forces in Action</i> pages 26–27 with a document camera. Ask students to whisper into their hands the name of this kind of informational text. Tell students that on the count of three, they will “release” their answer to the rest of the class by whispering their “caught answer” as they turn their hands out. Count: “One, two, three!” You should hear: “It’s an experiment.”• Remind students this text is similar to the text they read in Lesson 2. Ask them to think, then turn and talk, about how this informational text is organized versus other informational texts they’ve read prior to this unit. Using equity sticks, cold call two or three students to share out. Listen for: “It’s not written in paragraphs. It’s written like a list that’s numbered,” or “It has different steps to follow, like directions in a game.”• Tell students that they will conduct another science experiment today. Remind them that before they actually do the experiment, they need to read the directions to understand the procedure. Review that the procedure of an experiment consists of the steps a scientist takes to conduct the experiment. Explain that the term <i>steps</i> means a sequence of actions.• Ask the students to sit with their pre-assigned science partner for today’s experiment. Distribute <i>Simple Machines: Forces in Action</i> to each student. Be sure that the “How Does It Work?” box on page 27 is covered up.• Ask them the following text-dependent questions:<ul style="list-style-type: none">* “Do you know what the materials are for this experiment?”* “What do you notice about this list versus the list from the inclined plane experiment you conducted in Lesson 2?”• Listen for: “There are a lot fewer materials to use during this experiment.” Tell students you’ll read the steps aloud. Remind them to try to visualize what is being described so they can better explain what happens in each step. Tell students this text has new vocabulary. Remind students about all the experiences they’ve had this year with reading complex texts that have unfamiliar vocabulary words and phrases. Ask:<ul style="list-style-type: none">* “What can you do to figure out the gist of what the experiment says, even though you may not know all the words?”	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Use equity sticks to call on two or three students to share their thinking. Listen for: “Read around the word to figure out what is being described,” or “Look at the pictures and diagrams to help figure out what the text is saying.” Refer to the Vocabulary Strategies anchor chart to reinforce strategies students are learning.• Read the eight experiment steps aloud as students follow along in their texts. Ask partners to turn and talk:<ul style="list-style-type: none">* “What is the gist of what we are going to do in this experiment?”• Tell them it’s fine if they don’t know what they’re supposed to do. They will read the steps at least two more times before they conduct the experiment.	



Work Time (continued)	Meeting Students' Needs
<p>B. Guided Practice: Focusing on Key Vocabulary before Conducting an Experiment (10 minutes)</p> <ul style="list-style-type: none"> • Tell students they will now hear the experiment read aloud again. Ask students to read along silently and identify unfamiliar or important-sounding words to better understand what a lever is and how it works. • Read aloud. Listen for students to identify these words: <i>fulcrum</i>, <i>lever arm</i>, <i>balance</i>, <i>midpoint</i>, <i>adjust</i>. • Work with students to briefly define these words so they know how to conduct the experiment. (Note: In Lesson 5, students will spend more time on detailed definitions and on understanding how each of these terms relates to the concept of simple machines.) <ul style="list-style-type: none"> – <i>fulcrum</i>: The Step 1 text states: “The water bottle will be the fulcrum on which your lever rests.” Focus students on the picture on page 26 to help them figure out that the fulcrum is the thing the ruler is balancing on and that it can move. Read the definition from the glossary to confirm this description. – <i>lever arm</i>: The Step 2 text says: “The ruler is the lever arm.” Ask the students to talk with their partners to brainstorm a brief explanation of what this means based on the picture and the description in the text. Ask them to share their thinking with another partnership. Listen for: “It’s the flat stick that is placed on top of the fulcrum.” – <i>mid-point</i>: Explain that <i>mid</i> means “being in the middle,” and <i>point</i> is a particular place on the lever. Ask students to tell their partners what <i>mid-point</i> means. Listen for: “The spot that is the middle of the lever.” – <i>balance</i>: Tell the students this means to have equal weight on each side of something. Ask the students to show you with their bodies what balance means. Look for students to act out something like stretching their arms out to the sides evenly. – <i>adjust</i>: Tell them that this means to arrange or move something into a proper position. • Invite students to take 10 minutes and do the following steps (write these on the white board or chart paper). <ol style="list-style-type: none"> 1. Reread the experiment aloud, one step at a time. Either take turns reading each step or read it all together. 2. After each step, stop to describe what you are being asked to do. • Circulate and listen to partner talk. Probe for understanding by asking: “What do you think is going to happen in this step? Why do you think that?” This will get them thinking about a possible hypothesis. 	<ul style="list-style-type: none"> • Consider giving ELLs and other students needing additional support visual clues for the key vocabulary words in this experiment. They may add these clues to the Vocabulary section in their Science journals.



Work Time (continued)	Meeting Students' Needs
<p>C. Rereading Scientific Text while Conducting a Science Experiment (15 minutes)</p> <ul style="list-style-type: none">• Remind students to keep the top right section of page 27 covered.• Ask students to turn to page 13 in their Simple Machines Science journal. Remind students that scientists often use the Scientific Method to guide them through experiments.• Review the Scientific Method anchor chart from Lesson 2. Ask students to think then tell their partners what the first thing is they need to do as scientists before conducting the experiment. Listen for comments like: “We need to ask a question so we can find the answer by doing the experiment.” Tell them the question for this experiment is: “How can the lever help make work easier?”• Now ask: “According to the Scientific Method, what is the next thing you need to do as scientists?” You should hear: “We need to write a hypothesis, or prediction, about what we think will happen.”• Ask partners to discuss what a possible hypothesis might be.• Ask students to write their hypothesis in their Science journal.• Also ask them to list the materials needed for the experiment. Remind them that as they are doing the experiment, they will need to record their observations after Steps 6, 7, and 8.• Give students 10 minutes to conduct the experiment.• Circulate and assist as needed. When students have procedural questions, push them back into the text to see if they can answer their own question by saying: “Where might you look for that answer?” or “What does the text tell you?”• Listen for students talking about their need to adjust the distance between the stacks of coins and the fulcrum to balance the lever. Ask probing questions that push them to connect the terms <i>effort</i> and <i>force</i>. For example: “If force is the ability to push, pull, or twist, what is the force in this experiment?” (the coins). Or “How would you describe the effort that is being used?”• Reinforce vocabulary: Point out to students when you hear them using scientific vocabulary in their discussions. Encourage them to use this as they write their observations.	



Work Time (continued)	Meeting Students' Needs
<p><i>Note: Ideally, students will realize it takes less effort to balance the lever if the coins (force) are farther away from the center (fulcrum). It's fine if they don't reach this complex conclusion on their own. They are still building their knowledge about levers. In Lesson 5, they will deepen their knowledge about levers as they read an informational text (Simple Machines page 24–25). They may make connections to this experiment as they read the new text.</i></p>	
<p>D. Writing a Conclusion (10 minutes)</p> <ul style="list-style-type: none">• Remind students after scientists conduct an experiment, they synthesize their findings by writing a <i>conclusion</i> statement. This statement explains the main idea of what happened during the experiment and what they learned because of it.• Point students to the last section of page 13 in their Science journals. Invite students to talk with their science partner about a possible conclusion statement, then write it in their Science journal. Inform them their statements most likely will be similar, but that they don't have to be if both people do not agree on the conclusion.• After students write their conclusion statements, ask them to unveil the “How Does It Work?” section of page 27 that has been covered. Invite students to read it aloud as partners, checking to see if they reached the same conclusions as the author did. Remind them if their findings were different from the author's to NOT revise their hypothesis or conclusion. Instead of changing the conclusion, ask them to add to their conclusions by explaining how their conclusion is different from the author's.	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. Using the word “because” in the sentence frame helps all students support their thinking with evidence. For example: “By changing the distance between the coins and the bottle, _____.”



Closing and Assessment	Meeting Students' Needs
<p>A. Read-aloud of Pages 24–25 of <i>Simple Machines: Learning More about the Lever</i> (5 minutes)</p> <ul style="list-style-type: none">• Tell students that in the next lesson, they will continue learning about levers. For homework, they will read pages 24 and 25 of <i>Simple Machines: Forces in Action</i>. Now, they will hear that text read aloud once.• Read pages 24 and 25 of <i>Simple Machines: Forces in Action</i> aloud as the students follow along in their texts.• After the read-aloud, give students a few minutes to discuss the gist with a partner.• Tell students that their homework is to reread pages 24 and 25 and write a gist statement on a piece of paper. Remind them that they will be asked to share this gist statement at the beginning of Lesson 5, just like they did with their gist statements about the inclined plane in Lesson 3. <p><i>Note: This is a first read. Read the text aloud without stopping or discussing. The goal is to give the students exposure, promote fluency, and provide a scaffold for their rereading for homework and the learning in Lesson 5.</i></p>	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Write a gist statement for pages 24 and 25 in your <i>Simple Machines</i> text. You will be sharing this with the class tomorrow to post on the Levers anchor chart, which will also be introduced tomorrow.	

There are no new supporting materials for this lesson.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 5

Reading Scientific Text: Reading Closely about the Lever



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can find the meaning of scientific and academic words as I read a text about levers.
- I can determine important information about levers and how they help people do work.
- I can document what I learn about levers in my own words.

Ongoing Assessment

- Simple Machines Science journal (page 14)
- Vocabulary note-catcher
- Diagram
- Constructed response questions
- Captions



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging the Reader and Writer and Checking on Homework (5 minutes)Reviewing Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Shared Reading for New Vocabulary (20 minutes)Rereading to Visualize Scientific Processes (20 minutes)Closing and Assessment<ol style="list-style-type: none">Writing a Scientific Caption to Synthesize Learning (10 minutes)Homework<ol style="list-style-type: none">Look for levers around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the levers, make a sketch of what you saw, or use words to describe what you saw.	<ul style="list-style-type: none">The structure of this lesson is similar to Lesson 3. The students will reread pages 24–25 in <i>Simple Machines: Forces in Action</i> more deeply, analyzing new scientific vocabulary words and locating specific text-dependent information about levers. However, in this lesson, students first work independently of the teacher. They then discuss their thinking as a class with the teacher facilitating the analysis of the work.In advance: Make a Levers anchor chart with three sections (see model in supporting materials).Post: Learning targets.



Lesson Vocabulary	Materials
load Review: work, effort, force, lever, fulcrum	<ul style="list-style-type: none">• Levers anchor chart (newly created)• Sticky notes (one per student)• <i>Simple Machines: Forces in Action</i> pages 24–25 (book; one per student)• Simple Machines Science journal (page 14: Lever Research Notes)• Equity sticks• Blank paper (one piece for each pair of students)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader and Writer and Checking on Homework (5 minutes)</p> <ul style="list-style-type: none">• Remind students that their homework was: "Write a gist statement for pages 24 and 25 in your <i>Simple Machines</i> text. You will be sharing this with the class tomorrow to post on the Levers anchor chart, which will also be introduced tomorrow.." Ask students to mingle and share their gist statements with at least two other students. After each has shared their statement, tell them to explain why they think theirs is a good one. After they've shared with at least two or three people, give the students 1 or 2 minutes to revise their statements if they think they can make it better based on their conversations.• Ask them to write their final gist statement and names on a sticky note. Post the gist statements in the top section of the Levers anchor chart.	
<p>B. Reviewing Learning Target (5 minutes)</p> <ul style="list-style-type: none">• Invite students to read the first learning target: "I can find the meaning of scientific and academic words related to the lever." Review the difference between <i>scientific</i> and <i>academic</i> words.<ul style="list-style-type: none">– <i>scientific</i>: words used specifically in science-related texts and conversations– <i>academic</i>: words often seen in other texts and content areas and that are important to understanding the main ideas of the texts.• Remind them that knowing the difference between these types of words will help them determine the importance of vocabulary and therefore they'll understand the text better. Remind students they will keep track of important academic and scientific vocabulary in their Simple Machines Science journals so they become better readers and writers of scientific texts.• Invite them to read the next two learning targets: "I can determine important information about levers and how they help people do work," and "I can document what I learn about levers in my own words." Ask students to give a thumbs-up if they understand the learning today, a thumbs-sideways if they are somewhat clear, and a thumbs-down if they are completely unsure. Clarify as needed.	<ul style="list-style-type: none">• Using learning targets helps students understand the purpose for the reading.• Providing visual cues or synonyms helps students understand the learning targets.



Work Time	Meeting Students' Needs
<p>A. Shared Reading for New Vocabulary (20 minutes)</p> <ul style="list-style-type: none"> • Distribute <i>Simple Machines: Forces in Action</i> pages 24–25 and the Simple Machines Science journals. Tell students they will reread pages 24–25. Ask students to join their science partners from the experiment in Lesson 4. Explain the partnerships will read the text together (taking turns or choral reading) and underline unfamiliar or difficult words. (Students may mark in the text, highlight, or use evidence flags/sticky notes.) Remind them that a word might be unfamiliar to someone if he or she can't sound it out or if he or she doesn't know what it means. Acknowledge that some of the words may be somewhat familiar from the experiment in Lesson 4. • Give the students 3 to 5 minutes to read pages 24–25 and annotate key vocabulary words. • Then draw their attention to the bolded words: <i>lever</i>, <i>fulcrum</i>, and <i>load</i>. Remind students that you discussed the basic definitions of these words in the last lesson, before they did the experiment. Explain that now they will record the definitions in their Science journals as well as personal clues for remembering what these words mean. • Explain that these are scientific words and it will be important to know what they mean and how they connect to simple machines to understand what a lever is and does. Ask students to find these key vocabulary words in the Vocabulary section of their Science journals. • Ask students to review the definitions for these three words based on the text and what they learned by conducting the experiment in Lesson 4. They need to write their definitions in the second column of the Vocabulary section of their Science journals. • Give the students 5 minutes to complete this task. • Gather students together and ask them to form groups of four (two partnerships) to share their definitions. Encourage them to explain why they think their definitions are accurate descriptions of the meaning of the words. Invite them to revise their definitions based on what they discuss with their peers if it improves their work. • Distribute three sticky notes to each group of four. Ask them to write one word on each sticky note along with the group's definition. Each group will have a representative share their definitions with the class. Use the following steps to record new words to the middle section of the Levers anchor chart: 	<ul style="list-style-type: none"> • Students who struggle with language benefit from having their own individual dictionaries for reference throughout the module. • Deconstruction of complex vocabulary words or phrases to understand meaning helps all students with comprehension of text. • Provide nonlinguistic symbols (e.g., two circles connected for <i>interconnected</i>) to assist ELLs and other struggling readers in making connections with vocabulary.



Work Time (continued)	Meeting Students' Needs
<ol style="list-style-type: none">1. Ask a representative from each group to share the same word and its definition.2. As a class discuss the similarities of the different definitions of the same word.3. Encourage students to revise the definitions in their Science journals if they think it would improve their understanding of the word.4. Group all similar sticky notes in the middle section of the anchor chart together.5. Repeat the process until all words are posted on the anchor chart. <ul style="list-style-type: none">• Ask: "How are the words <i>force</i>, <i>effort</i>, and <i>work</i> each connected to levers? Make sure to use evidence from the text to support your thinking."• Invite them to look back into the text as they turn and talk with their science partners.• Use equity sticks to cold call two to three students to share. Listen for comments such as: "A lever helps move a load by applying force either by pushing or pulling," or "It takes less effort to move a load if you use a lever."• Give students 10 minutes to do the following:<ol style="list-style-type: none">1. Add their new understanding of how <i>work</i>, <i>effort</i>, and <i>force</i> are connected to levers in the Vocabulary section of their Science journals (fourth column).2. Complete the last two columns for <i>lever</i>, <i>fulcrum</i>, and <i>load</i> so they remember what the words mean and how they connect to simple machines.3. Add any other words they have identified as unfamiliar that they think will help them understand levers more clearly. These can be academic words (i.e., <i>apply</i>, <i>consists</i>, <i>trade-off</i>).	



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading to Visualize Scientific Processes (20 minutes)</p> <ul style="list-style-type: none">• Remind students that throughout this module, they are thinking about the big question: “How do simple machines affect our lives?” In order to answer this big question, they need to think about how each simple machine helps people do work. Tell students that in a moment, they will reread the text with this in mind.• Reorient students to page 14 in their Simple Machines Science journal. Tell students they will need to record the same type of information about the lever as they did about the inclined plane in Lesson 3.• Before students reread, review some key points:<ul style="list-style-type: none">– Remind students that good readers often read an unfamiliar and complex text several times.– As with the inclined plane text, they may be familiar enough with the lever text after reading it two times that they could fill in some of the parts of this note-catcher without even looking at the text.– Reiterate that scientists strive to confirm facts.– Remind students that rereading will help them find more evidence from the text to answer the question about how inclined planes help people do work.• Ask the following question to focus students' rereading:<ul style="list-style-type: none">* “How do levers help people do work? Use evidence from the text to support your answer.”• Before the students begin reading, distribute a piece of blank paper to each partnership. Ask students to fold it in half.• Ask students to read silently to themselves as you read aloud. Draw their attention to the first paragraph on page 25, specifically where it states: “If the fulcrum is the same distance between both people on the seesaw, you will be stuck.” Remind them of how a reader can deconstruct sentences to help them understand complex scientific content. Review the steps they learned in Lesson 3 and explain that the same process can be used in analyzing a complex paragraph.	



Work Time (continued)	Meeting Students' Needs
<ol style="list-style-type: none">1. Ask them to reread just that first sentence: "If the fulcrum is the same distance between both people on the seesaw, you will be stuck."2. Ask students to turn and talk with their partner about the sentence. Listen for: "If the fulcrum is in the middle between two loads, nothing will move," or "If one person is heavier than another on a seesaw, and the bar [fulcrum] is in the middle, the lighter person won't be able to go up."3. Ask students to draw a picture on the left half of their paper that helps them understand this first part of the sentence.4. Ask students to hold the paper up when they're finished so you can check for understanding. Look for pictures that are similar to a slanted line with a point (fulcrum) in the middle with an object at the bottom end and a larger object at the top end. <ul style="list-style-type: none">• Repeat the paragraph deconstruction process with the next sentence.<ol style="list-style-type: none">1. Read aloud as students read silently in their heads: "But if the heavier person moves closer to the fulcrum and you move further from the fulcrum, you will be able to lift your load with less effort."2. Ask students to turn and talk with their partner about that part of the sentence. Listen for responses similar to: "If the lighter load is further away from the fulcrum, then the heavy load can be lifted."3. Ask students to draw a picture on the right half of their paper that helps them understand this first part of the sentence.4. Ask students to hold the paper up when they're finished so you can check for understanding. Look for pictures that show the smaller load further away from the fulcrum than the heavier load. The line will be either straight or the heavier load will be at the top of a slanted line.• Give students 15 minutes to complete the task of rereading pages 24–25 in <i>Simple Machines: Forces in Action</i> and taking notes on page 14 in their Science journals. Encourage them to use the process of deconstructing complex sentences and paragraphs if they are unsure of what the text is describing.• Circulate to listen in and support as needed. To deepen students' analysis, ask questions such as: "What does the author want you to understand about levers?" or "How could the author have been more clear about explaining what levers are and how they work?" Make sure they connect their comments back to the text.	



Closing and Assessment	Meeting Students' Needs
<p>A. Writing a Scientific Caption to Synthesize Learning (10 minutes)</p> <ul style="list-style-type: none">As a way of synthesizing their learning about levers, ask students to write a <i>caption</i> for the graphic of a lever on the cover of their Simple Machines Science journal. Remind them that captions are short (one to two sentences) texts that describe the importance of an image or graphic.	<ul style="list-style-type: none">Using sentence frames can help ELLs articulate their learning. (e.g. "A lever is _____ [description of how it looks]. Inclined planes help people move _____ [description of "thing"] things by _____.")
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Look for levers around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the levers, make a sketch of what you saw, or use words to describe what you saw. <p><i>Note: After each lesson, add new scientific terms and academic vocabulary to your class Word Wall in addition to the work you did with the class anchor charts. In order to help students build knowledge about this topic, students need to be surrounded by key vocabulary so that they will be more apt to use it in conversation, not just science writing. Add the words: lever, fulcrum, load. Some of the academic words the students may identify are: apply, consists, trade-off.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 5

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Levers Anchor Chart
(For Teacher Reference)

(Example is not to scale—create this anchor chart in advance)

Levers
<p>Gist Statements:</p> <p>(Student sticky notes)</p>
<p>Important Vocabulary to Know:</p> <p>(Student sticky notes)</p>
<p>Examples of Levers in Our Lives:</p> <p>(Student sticky notes)</p>



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 6

Science Talk: Synthesizing What We Know about the Inclined Plane and Lever



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)</p> <p>I can identify the reason a speaker provides to support a particular point. (SL.4.3)</p> <p>I can identify evidence a speaker provides to support particular points. (SL.4.3)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">I can effectively participate in a Science Talk about simple machines.<ul style="list-style-type: none">I can prepare for the Science Talk by using evidence from the <i>Simple Machines</i> texts.I can build on others' ideas when responding to their statements and questions.I can ask questions on the topic being discussed.I can follow our class norms when I participate in a conversation.	<ul style="list-style-type: none">Simple Machines Science journals (pages 9 and 15)Science Talk Criteria checklist



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging Readers and Writers and Checking Homework (5 minutes)Vocabulary Review: Quiz-Quiz-Trade (10 minutes)Work Time<ol style="list-style-type: none">Science Talk: Reviewing Learning Targets (5 minutes)Science Talk: Reflecting and Setting Goals (5 minutes)Preparing Evidence and Questions for the Science Talk (10 minutes)Conducting the Science Talk (20 minutes)Closing and Assessment<ol style="list-style-type: none">Debrief (5 minutes)Homework<ol style="list-style-type: none">Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">This lesson is similar to Unit 1, Lesson 3. In this lesson, students will participate in another Science Talk. This time, they will be asked to refer to more notes and texts in order to gather evidence to support their thinking during the talk than they did in Unit 1.Students will need specific feedback from their previous Science Talk (Unit 1, Lesson 3). Write feedback on the bottom section of page 9 in students' Simple Machines Science journals. Focus the feedback on the learning target emphasized in that lesson: "I can prepare for the Science Talk by gathering evidence from scientific texts about simple machines." Also give suggestions to any students who may need more coaching to follow the class norms. Keep feedback focused, brief, and encouraging. For example, say: "I noticed that you recorded three pieces of evidence from the text on your form. Great! During the next science talk, be sure to mention the text during the class discussion," or "I noticed you were able to use evidence from the text when sharing your ideas during the Science Talk. Good work! One thing you should focus on for our next Science Talk is waiting for your turn to speak."Review: Quiz-Quiz-Trade (in Vocabulary Strategies) and Science Talk protocol (see Appendix).Post: Learning targets.



Lesson Vocabulary	Materials
force, effort, work, effectively, simple machine, inclined plane, lever, participate, evidence, norms	<ul style="list-style-type: none">• Sticky notes• Levers anchor chart (created in Lesson 5)• Simple Machines Science journals (pages 9 and 15)• Vocabulary word cards (for teacher use; one card per student for Quiz-Quiz Trade)• Equity sticks• Science Talk Norms anchor chart (created in Unit 1, Lesson 3)• <i>Simple Machines: Forces in Action</i> pages 6–7 and 24–25 (book; one per student)• Participating in a Science Talk anchor chart (created in Unit 1, Lesson 3)• Science Talk Criteria checklist (for teacher reference)

Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers and Checking Homework (5 minutes)</p> <ul style="list-style-type: none">• Remind students of their homework: “Look for levers around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the levers, make a sketch of what you saw, or use words to describe what you saw.”• Invite students to get into triads to share and record examples of levers they found—one per sticky note. Then ask a representative from each triad to post their sticky notes on the bottom section of the class Levers anchor chart (from Lesson 5).• Ask the class what they noticed about levers around them. Invite students to turn and talk to their triad groups. Listen for comments such as: “In our tool box at home I saw a lot of tools—a hammer, screw driver, wrench—that could be levers,” or “Now that I know what a lever is, I see them all over the place,” or “Lots of people use levers and probably don’t even know it.”	



Opening (continued)	Meeting Students' Needs
<p>B. Vocabulary Review: Quiz-Quiz Trade (10 minutes)</p> <ul style="list-style-type: none">• Tell students today they will have another Science Talk about the question: “How do simple machines affect our lives?” Explain that now they have read and experimented with inclined planes and levers, they should have new thoughts or ideas related to this question. Explain that today they will prepare for their Science Talk by reviewing the vocabulary that they have collected related to simple machines. Remind students they have been recording vocabulary words into their Simple Machine Science journals and that the class has also been building a Word Wall with these terms.• Explain you would like them to do a short activity called Quiz-Quiz-Trade to help build their understanding of these words. Post the following directions for Quiz-Quiz-Trade:<ol style="list-style-type: none">1. Find a partner.2. Read definition—read your word’s definition to your partner. Allow him or her to guess the word or ask for a hint.3. Give a hint—if your partner needs a hint, say one thing that helps you remember the meaning of this word. Allow your partner to guess and share your word.4. Switch—have your partner read his or her definition and let you guess or receive a hint.5. Trade cards and find a new partner. Repeat Steps 2 through 5.• Ask students to read directions and clarify or model process if necessary. Distribute Vocabulary word cards.• Give students 8 minutes to quiz and trade.• Collect the Vocabulary word cards (which will be used in a different way in Lesson 7).	<ul style="list-style-type: none">• Consider supporting ELL students by providing individual copies of sentence frames for use during Science Talk.



Work Time	Meeting Students' Needs
<p>A. Science Talk: Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> Share the general learning target for the Science Talk: "I can effectively participate in a Science Talk about simple machines." Remind students that they have discussed the meaning of this learning target the last time the class held a Science Talk (in Unit 1). Ask them to turn to a partner and explain this target in their own words. Use equity sticks to cold call a few students to share their explanations. Based on their previous experience with Science Talks, they should share information about the purpose, process, and norms the class discussed in Unit 1, Lesson 3. They may refer to the Science Talk Norms anchor chart (Unit 1, Lesson 3). Tell students to help them "effectively participate," they will focus on the following specific learning targets: <ol style="list-style-type: none"> "I can prepare for the Science Talk by using evidence from the <i>Simple Machines</i> texts." "I can build on others' ideas when responding to their statements and questions." "I can ask questions on the topic being discussed." "I can follow our class norms when I participate in a conversation." Remind students of the first target: "I can prepare for the Science Talk by using evidence from the <i>Simple Machines</i> texts." Tell students this target should be familiar to them. Briefly review with students why it is important for scientists to base their discussions on evidence. Next, focus on the following learning targets: "I can build on others' ideas when responding to their statements and questions" and "I can ask questions about the topic being discussed." Have students Think-Pair-Share about what they think is important in these targets. Explain to students that good discussions help you to think about topics in a new way. To help them expand their understanding about simple machines, they need to ask questions and build on one another's ideas about how simple machines affect peoples' lives. Next to these targets, write a few sentence stems to help students during the upcoming discussion. For example: <ul style="list-style-type: none"> – "I wonder if _____? I wonder why _____?" and "I agree and I also think _____." – "I disagree because _____," and "That's a good question. I think _____." 	<ul style="list-style-type: none"> To further support students with goal setting, consider giving them a sentence starter, such as: "My goal for today's Science Talk is to _____." Consider printing out these sentence frames for ELL students to use in preparation for the discussion.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">Finally, point out the last learning target: "I can follow our class norms when I participate in a conversation." Remind students that a Science Talk is a discussion about big or important questions scientists have. While scientists discuss these big questions with one another, it is important for them to create a set of rules, or norms, that they will all follow so that everyone's ideas can be heard and considered. Tell students they will reflect on the norms they created during their last Science Talk, and set some goals for today.	
<p>B. Science Talk: Reflecting and Setting Goals (5 minutes)</p> <ul style="list-style-type: none">Post the Science Talk Norms anchor chart and review as a class. Ask each student to turn to a partner and point out one norm the class might need to focus on after their last Science Talk. Have pairs share and discuss or clarify norms as necessary.Return students' Simple Machines Science journals (page 9 with teacher feedback from Unit 1, Lesson 3). Ask students to review the feedback and do their own reflection. Then ask students to write a goal for themselves (based on teacher feedback, the norms, or today's learning targets) in the last section on page 9 of their journals.	



Work Time (continued)	Meeting Students' Needs
<p>C. Preparing Evidence and Questions for the Science Talk (10 minutes)</p> <ul style="list-style-type: none">• Post and ask the Science Talk question (same as from Unit 1, Lesson 3): “How do simple machines affect our lives?”• Have students look over the evidence they recorded during the last Science Talk on page 9 of their Simple Machines Science journal. Explain they have learned quite a bit more about simple machines. Ask students to Think-Pair-Share: “What is something new you now know about simple machines that you might want to mention in today’s Science Talk?”• Tell students they will now have time to consider their new thinking on this question and what evidence they need to gather from the text and their notes. Be sure students have access to their text: <i>Simple Machines: Forces in Action</i> pages 6–7 and 24–25. Ask students to turn to page 15 in their Simple Machines Science journal to the Preparing for a Science Talk recording form. Tell students you would like them to now consider their new thinking on this question and what evidence they will need to gather from the text. Review the recording form briefly if needed.• Direct students to reread pages 6–7 and 24–25, and gather new evidence on page 15 in their journals.• Give students 8 minutes to reread and gather evidence for the Science Talk. Circulate to confer as necessary, and remind students to use specific evidence from text to support their thinking.	<ul style="list-style-type: none">• Allow ELLs and other students to use pictures and symbols as necessary on their recording forms.• To further support students, consider allowing some students to talk with a partner or write down what they would like to share during the Science Talk in advance.• For students who need an extension, consider having them reread the experiments conducted on pages 8–9 and pages 26–27 and then gather evidence from these sections of the text.
<p>D. Conducting the Science Talk (20 minutes)</p> <ul style="list-style-type: none">• Gather students whole group in a circle. Remind them to bring their journals. Display the Science Talk protocol for the class to see. Briefly review the Participating in a Science Talk anchor chart (from Unit 1, Lesson 3) with students, and answer any questions.• Direct students to begin the Science Talk. Use the Science Talk Criteria checklist (started in Unit 1, Lesson 3) or begin a new one with the new blank form in this lesson’s supporting materials to monitor student progression toward the learning targets. Quickly redirect and support students as needed, but avoid leading the conversation. Remind students that their questions and comments should be directed to one another, not the teacher.	



Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Ask students to return to their seats. Invite them to reread the goals they wrote on the bottom of page 9 in their Simple Machines Science journals. Have them reflect on the following questions with a partner: “What progress did you make on your Science Talk goal today? What can you continue to work on?” Encourage students to base their discussion on their written goals and this lesson’s learning targets. Listen for students to state their goals and reference the learning targets as they share.• Collect students’ Simple Machines Science journals. Use page 15 and the Science Talk Criteria checklist to assess individual student progress towards SL.4.1.• Inform students they will get to demonstrate their knowledge about simple machines and their abilities to read and write like scientists on an assessment during the next two lessons. Tell them they will use their skills as scientific readers and writers in a similar way as they did when they researched inclined planes and levers, but this time, they will read about a simple machine the class hasn’t talked much about. Build students up regarding this opportunity to “show what you know.”	<ul style="list-style-type: none">• Some students may need to reflect verbally with a partner before writing.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">•



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 6

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Vocabulary Word Cards (Front)

Directions for teacher: Type in six additional words and definitions that your class has recorded on the Word Wall or in the Vocabulary section of the Simple Machines Research journal into the following template and make enough copies so that each student will have a card (most likely two or more sets).

Words	
force	
effort	
work	
simple machine	
inclined plane	
lever	



Vocabulary Word Cards (Back)

Directions for teacher: Type in six additional words and definitions that your class has recorded on the Word Wall or in the Vocabulary section of the Simple Machines Research journal into the following template and make enough copies so that each student will have a card (most likely two sets).

Words	
force: physical quantity that denotes ability to push, pull, or twist	
effort: force needed to use a simple machine	
work: measure of energy used to move an object	
simple machine: machine with few or no moving parts that lets people use less effort to move something	
inclined plane: simple machine with a slanted surface used to raise or lower objects	
lever: simple machine that consists of a bar pivoting from a fulcrum	



Science Talk Criteria Checklist

Learning Targets:

I can effectively participate in a Science Talk about simple machines.

I can follow our class norms when I participate in a conversation.

I can prepare for the conversation by using evidence from simple machine texts.

I can ask questions so I am clear about what is being discussed.

I can ask questions on the topic being discussed.

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



Science Talk Criteria Checklist

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 7

Making Connections to Vocabulary and Mid-Unit Assessment: Interactive Word Wall and Reading and Answering Questions about Screws



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
- I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
- I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can make connections between the meanings of vocabulary words related to simple machines.
- I can document what I learn about a simple machine in my own words.
- I can find the meaning of scientific and academic words related to a simple machine.
- I can determine important information about a simple machine and how it helps people do work.

Ongoing Assessment

- Mid-Unit 2 Assessment: Reading and Answering Questions about Screws
- Tracking My Progress, Mid-Unit 2 recording form



Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Connecting Key Vocabulary: Interactive Word Wall (15 minutes)B. Mid-Unit Assessment: Answering Questions about Screws (30 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Tracking My Progress (10 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• In advance: Students will be in groups of four to participate in the Interactive Word Wall portion of this lesson. Be sure to make enough complete sets of the Vocabulary word cards (from Lesson 6) so each group can have a complete set.• To prepare for the Interactive Word Wall activity, write the directions listed in the supporting materials of this lesson on a piece of chart paper or on the white board.• Review: Interactive Word Wall protocol (see Appendix).• Post: Learning targets.



Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Lesson Vocabulary	Materials
scientific, academic, screw, determine, effort, force, inclined plane, lever, work (all review from Lessons 1–6)	<ul style="list-style-type: none">• Vocabulary word cards (from Lesson 6, one set per group of four)• Chart paper• Document camera• Interactive Word Wall Symbols (one set per group of four; see supporting materials)• Equity sticks• Mid-Unit 2 Assessment: Reading and Answering Questions about Screws (one per student)• <i>Simple Machines: Forces in Action</i> pages 18–19 (book; one per student)• Tracking My Progress, Mid-Unit 2 recording form (one per student)• Mid-Unit 2 Assessment: Reading and Answering Questions about Screws (answers, for teacher reference)• 2-Point Rubric: Writing from Sources/Short Response (for teacher reference)



Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post the following learning target: "I can make connections between the meanings of vocabulary words related to simple machines." Read the target aloud to students, and ask them to turn to a partner to discuss what this target means. Have a few pairs share out.• Remind students they have been working on making connections to vocabulary words in their Simple Machines Science journals in the last column in the Vocabulary section. Tell them that today they will practice making similar connections using all of the multiple vocabulary words in an activity called Interactive Word Wall. This will help them develop a deeper understanding of the scientific concepts related to simple machines and help prepare them for their mid-unit assessment.• Post the remaining learning targets: "I can document what I learn about a simple machine in my own words," "I can find the meaning of scientific and academic words related to a simple machine," and "I can determine important information about a simple machine and how it helps people do work."• Tell students these targets should look familiar because they have used similar targets when reading about the inclined plane and lever. Tell them that in their assessment they will read about another simple machine and answer questions using evidence from the text. Have students give a quick thumbs-up, thumbs-sideways, or thumbs-down to show if they understand each target. Clarify as necessary.	<ul style="list-style-type: none">• To review concepts and how they are interconnected, refer to the fourth column of Vocabulary section of students' Science journal.



Work Time	Meeting Students' Needs
<p>A. Connecting Key Vocabulary: Interactive Word Wall (15 minutes)</p> <ul style="list-style-type: none">• Tell students they will use the Vocabulary word cards they used in the previous lesson for Quiz-Quiz-Trade (Lesson 6) to participate in an activity called Interactive Word Wall. Explain that the purpose of this activity is to help them make connections between the meanings of vocabulary words related to simple machines.<ol style="list-style-type: none">1. Place students in groups of four. Post the following directions for Interactive Word Wall on chart paper or the board:2. Place Vocabulary word cards and arrows face up in the middle of your group space.3. Take turns selecting one word to connect with another.4. Explain your connection to the group each time you take a turn.5. It is fine to move words or connect more than one word with another.6. Continue taking turns until you have connected every word to some other word.• Briefly model for students how to make and explain a connection. Use the document camera (or magnets on the board) to model something like the following: "I am going to connect the word <i>inclined plane</i> to the word <i>work</i> because it makes the work of moving something heavy like a box up into a truck easier." Emphasize each step of the directions, and be sure that students understand that words can be connected in multiple ways.• Distribute a set of Vocabulary word cards with Interactive Word Wall symbols to each group. Give groups 10 minutes to make connections. If they finish early, encourage them to start again and try to make new connections with their words.• Ask each group to share one connection they made between words and why. Ask: "Why is it important for readers to make connections between words? How does it help us become better readers?" Have groups discuss briefly. Then use equity sticks to cold call a few students to share out.• Collect Vocabulary word cards and have students prepare their desk for the assessment.	<ul style="list-style-type: none">• For ELLs and other students needing additional support, consider predetermining the words and giving students time to discuss with a partner what they will say during a protocol-based conversation.



Work Time (continued)	Meeting Students' Needs
<p>B. Mid-Unit 2 Assessment: Answering Questions about Screws (30 minutes)</p> <ul style="list-style-type: none">• Distribute the Mid-Unit 2 Assessment: Reading and Answering Questions about Screws and the text <i>Simple Machines: Forces in Action</i> pages 18–19. Remind students of the importance of reading the text several times. Point out the directions at the top of the assessment:<ol style="list-style-type: none">1. Read pages 18–19 in the text <i>Simple Machines: Forces in Action</i> for the gist.2. Reread the text, and take notes using the graphic organizer below.3. Reread the text, and answer the questions below the graphic organizer.• Clarify directions as needed.• Give students 25 minutes to work. Circulate to observe test-taking strategies, and record observations for future instruction. For example, are students going back to the text to look for answers? Do they appear to be reading the text completely before beginning the assessment? Are they annotating the text for their assessment? This information can be helpful in preparing students for future assessments and standardized tests.• If students finish this assessment early, have them continue reading in their independent reading books for this unit.	<ul style="list-style-type: none">• Allow ELLs additional time to complete their assessment. They will receive extra time on the New York State assessment.



Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Making Connections to Vocabulary and Mid-Unit Assessment:
Interactive Word Wall and Reading and Answering Questions about Screws

Closing and Assessment	Meeting Students' Needs
<p>A. Tracking My Progress (10 minutes)</p> <ul style="list-style-type: none">• Ask students to reflect on the following learning targets and then record their progress using the Tracking My Progress, Mid-Unit 2 recording form.<ul style="list-style-type: none">* “I can document what I learn about a simple machine in my own words.”* “I can find the meaning of scientific and academic words related to a simple machine.”* “I can determine important information about a simple machine and how it helps people do work.”• Collect the Tracking My Progress recording form, and review before tomorrow’s lesson. This will help you determine which students need further support as the class moves into the second half of the unit. Consider conferring with students in the coming days to check for understanding or elicit their opinions on how to best support them in their comprehension of scientific texts.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 7

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Interactive Word Wall

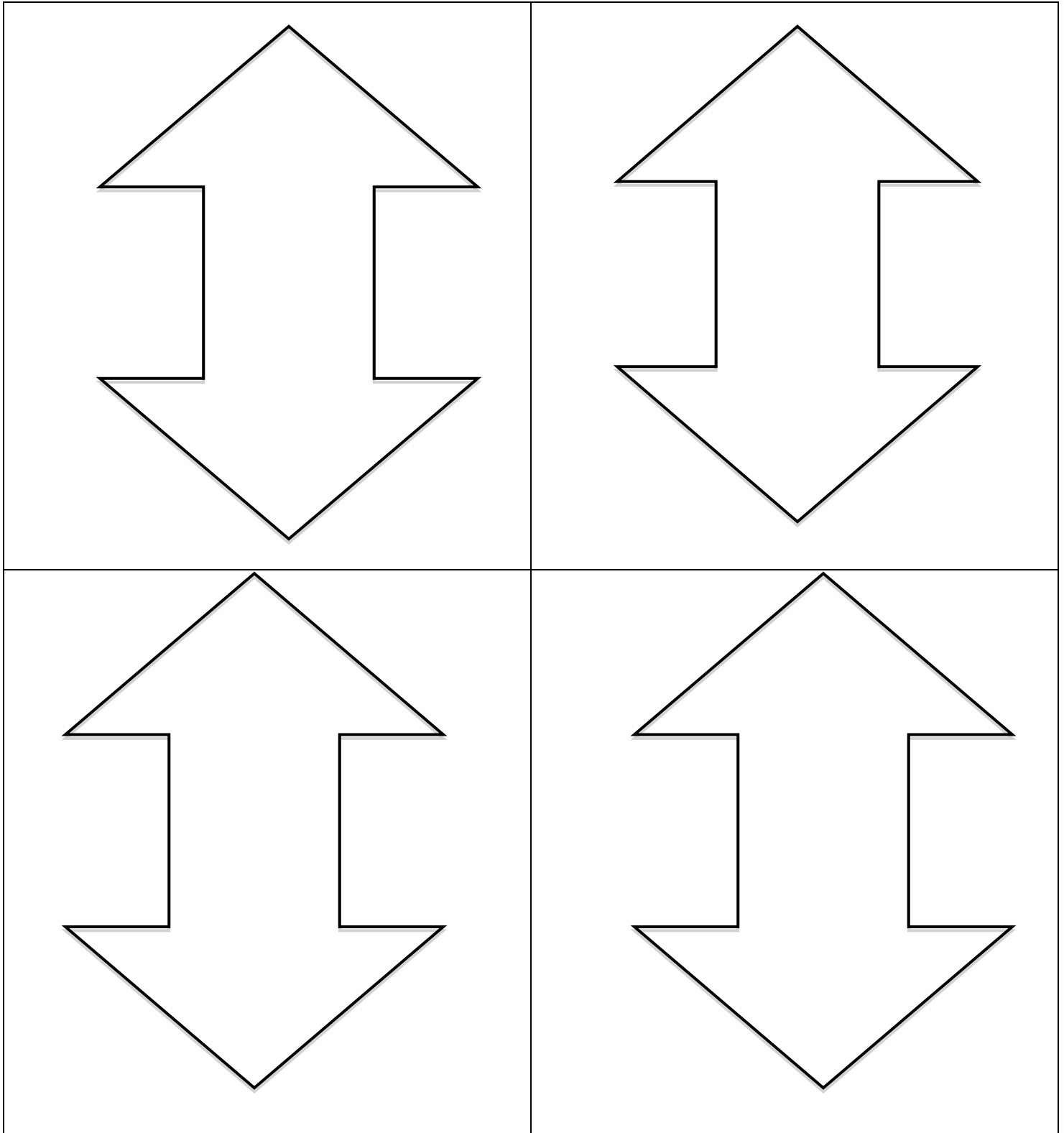
Teacher Directions: *Write these directions on a piece of chart paper or on the board before beginning this lesson with students.*

Interactive Word Wall directions:

1. Place Vocabulary word cards and arrows face up in the middle of your group space.
2. Take turns selecting one word to connect with another.
3. Explain your connection to the group each time you take a turn.
4. It is fine to move words or connect more than one word with another.
5. Continue taking turns until you have connected every word to some other word.

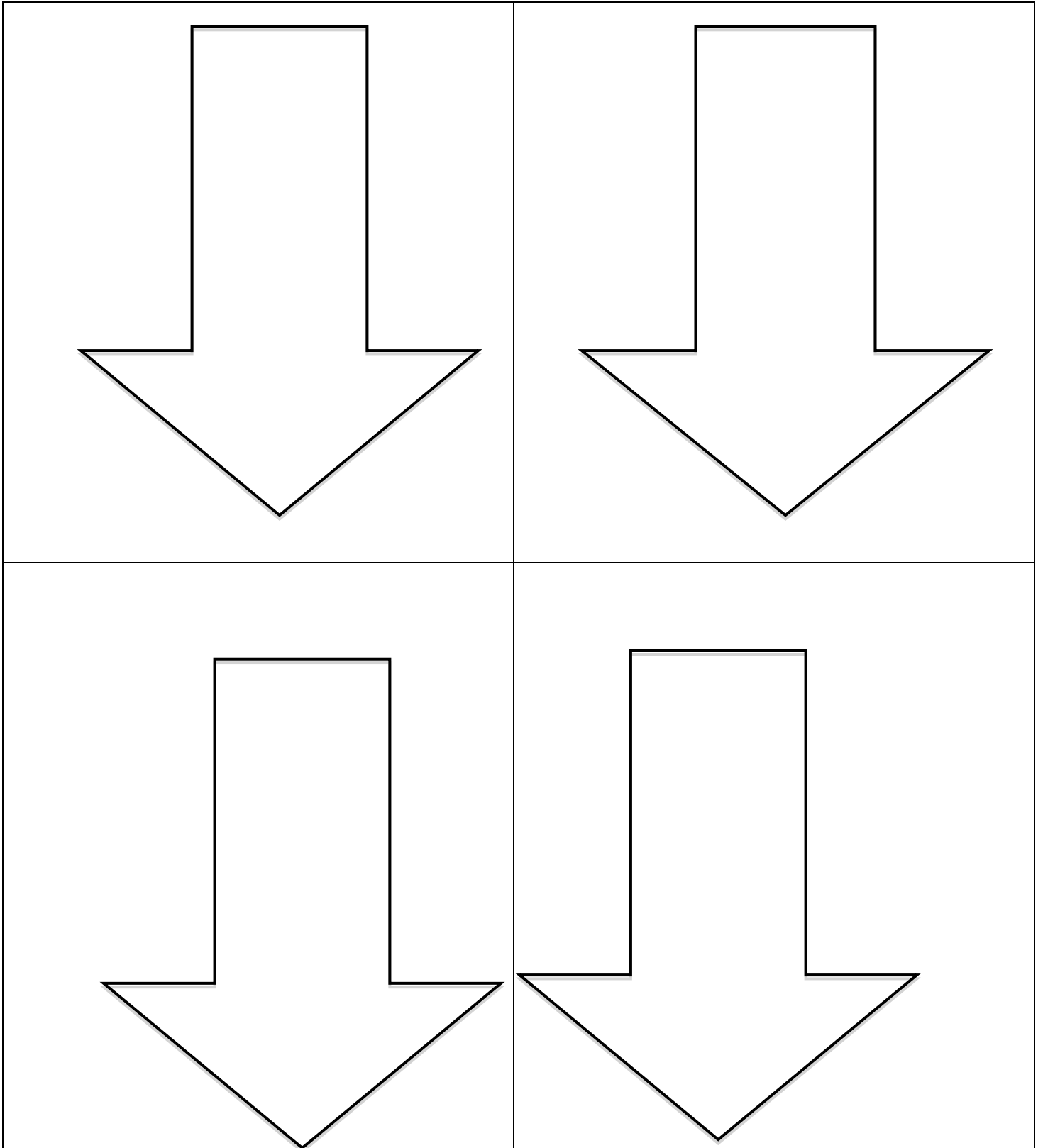


Interactive Word Wall Symbols





Interactive Word Wall Symbols





Mid-Unit 2 Assessment:
Reading and Answering Questions about Screws

Name: _____

Date: _____

Directions:

1. Read pages 18–19 in the text *Simple Machines: Forces in Action* for the gist.
2. Reread the text and take notes using the graphic organizer below.
3. Reread the text and answer the questions below the graphic organizer.

Read and Record:

What a screw looks like:	Type of work it helps a person do:	Examples of a screw:



Mid-Unit 2 Assessment:
Reading and Answering Questions about Screws

Read and Answer:

1. According to the text, a screw is:
 - A. a type of lever.
 - B. made of an inclined plane wrapped around a cylinder.
 - C. a complex machine.
 - D. the most common simple machine in everyday life.
2. How does the diagram on **page 18** help the reader understand the screw?
 - A. It gives the reader information on the different types of screws.
 - B. It demonstrates how it affects force and effort.
 - C. It shows the uses of a screw.
 - D. It shows the parts of a screw.
3. What is the meaning of the word *threads* as it is used in this text on page 18?
 - A. thin strands of cotton
 - B. clothes
 - C. long thin screws
 - D. continuous ridges that spirals around a screw
4. Where in the text can you find the answer to Question 3?
 - A. the glossary
 - B. in a diagram
 - C. in the paragraph on page 14
 - D. it is not defined in this text

Mid-Unit 2 Assessment:
Reading and Answering Questions about Screws

5. Which of the following words has a similar meaning to the word *increased* in this sentence on page 19: “Less effort is needed to cut into the wood because of the *increased* distance that the threads travel.”
- A. longer
 - B. upward
 - C. downward
 - D. shorter
6. Which of the following lines from **page 19** of the text best supports the answer to question 5?
- A. “Less effort is needed to cut into the wood ...”
 - B. “You can demonstrate how turning a screw a long distance lessens the effort ...”
 - C. “... the lid travels a short distance up or down”
 - D. “... the threads of the screw cut down into a plank of wood”

Read the following paragraph from **page 19** the text and answer the questions below:

“An inclined plane lessens the **effort** needed to lift or lower something by increasing the distance over which the **work** is done. A screw allows work to be done in the same way—with less effort. The threads of a screw turn around and around as they cut into wood or other materials. Less effort is needed to cut into the wood because of the increased distance that the threads travel.” —p.19 *Simple Machines: Forces in Action* by Buffy Silverman

7. According to this paragraph above, a screw works in a similar way to which simple machine?
- A. lever
 - B. pulley
 - C. inclined plane
 - D. wheel and axle



Mid-Unit 2 Assessment:
Reading and Answering Questions about Screws

8. How does a screw affect work? Use details from the text to support your explanation.



Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning target: I can document what I learn about a simple machine in my own words.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning target: I can find the meaning of scientific and academic words related to a simple machine.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, Mid-Unit 2

Name: _____

Date: _____

Learning target: I can determine important information about a simple machine and how it helps people do work.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Mid-Unit 2 Assessment:

Reading and Answering Questions about Screws
(Answers, for Teacher Reference)

Standards Assessed:

Graphic Organizer (W.4.8); Questions 1, 3, 4, 5, and 6 (RI.4.4); Questions 2, 7, and 8 (RI.4.3);
Question 8 (W.4.9)

Directions:

1. Read pages 18–19 in the text *Simple Machines: Forces in Action* for the gist.
2. Reread the text and take notes using the graphic organizer below.
3. Reread the text and answer the questions below the graphic organizer.

Read and Record: [possible responses]

What the screw looks like:	Type of work it helps a person do:	Examples of a screw:
<ul style="list-style-type: none">• An inclined plane wrapped around a cylinder• An inclined plane wrapped around a central shaft• An inclined plane wrapped like a spiral	<ul style="list-style-type: none">• Holds things together by cutting into them• Drills holes• Pulls air in and pushes it out	<ul style="list-style-type: none">• screw• lid of a jar• auger or drill• fan blades



Mid-Unit 2 Assessment:
Reading and Answering Questions about Screws
(Answers, for Teacher Reference)

Read and Answer:

1. According to the text, a screw is:
 - A. a type of lever.
 - B. **made of an inclined plane wrapped around a cylinder.**
 - C. a complex machine.
 - D. the most common simple machine in everyday life.

2. How does the diagram on page 18 help the reader understand the screw?
 - A. It gives the reader information on the different types of screws.
 - B. It demonstrates how it impacts force and effort.
 - C. It shows the uses of a screw.
 - D. **It shows the parts of a screw.**

3. What is the meaning of the word *threads* as it is used in this text on page 18?
 - A. thin strands of cotton
 - B. clothes
 - C. long thin screws
 - D. **continuous ridges that spirals around a screw**

4. Where in the text can you find the answer to Question 3?
 - A. **the glossary**
 - B. in a diagram
 - C. in the paragraph on page 14
 - D. it is not defined in this text.



Mid-Unit 2 Assessment:

Reading and Answering Questions about Screws
(Answers, for Teacher Reference)

5. Which of the following words has a similar meaning to the word *increased* in this sentence on page 19: “Less effort is needed to cut into the wood because of the *increased* distance that the threads travel.”
- A. **longer**
 - B. upward
 - C. downward
 - D. shorter
6. Which of the following lines from **page 19** of the text best supports the answer to Question 5?
- A. “Less effort is needed to cut into the wood ...”
 - B. **“You can demonstrate how turning a screw a long distance lessens the effort ...”**
 - C. “... the lid travels a short distance up or down”
 - D. “... the threads of the screw cut down into a plank of wood”

Read the following paragraph from **page 19** the text and answer the questions below:

“An inclined plane lessens the **effort** needed to lift or lower something by increasing the distance over which the **work** is done. A screw allows work to be done in the same way—with less effort. The threads of a screw turn around and around as they cut into wood or other materials. Less effort is needed to cut into the wood because of the increased distance that the threads travel.” —p.19 *Simple Machines: Forces in Action* by Buffy Silverman

7. According to this paragraph above, a screw works in a similar way to which simple machine?
- A. lever
 - B. pulley
 - C. **inclined plane**
 - D. wheel and axle



Mid-Unit 2 Assessment:

Reading and Answering Questions about Screws
(Answers, for Teacher Reference)

8. How does a screw affect work? Use details from the text to support your explanation.

[Possible Answer] A screw makes work easier because it takes less effort to move something. If you need to take the lid off a jar of peanut butter, the screw on the lid makes it easier to get it off. You have to move the lid a longer distance as you turn it around, but it is a lot easier than trying to pull it straight off.

[Use the following rubric to score this question.]



2-Point Rubric: Writing from Sources/Short Response¹
(For Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

2-point Response	The features of a 2-point response are:
	<ul style="list-style-type: none">• Valid inferences and/or claims from the text where required by the prompt• Evidence of analysis of the text where required by the prompt• Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt• Complete sentences where errors do not impact readability
1-point Response	The features of a 1-point response are:
	<ul style="list-style-type: none">• A mostly literal recounting of events or details from the text as required by the prompt• Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Incomplete sentences or bullets
0-point Response	The features of a 0-point response are:
	<ul style="list-style-type: none">• A response that does not address any of the requirements of the prompt or is totally inaccurate• No response (blank answer)• A response that is not written in English• A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 8

Reading Scientific Text: Reading Closely about the Pulley



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
- I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
- I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can find the meaning of scientific and academic words related to the pulley.
- I can determine important information about pulleys and how they help people do work.

Ongoing Assessment

- Simple Machines Science journal (page 16: Pulley Research Notes)
- Vocabulary note-catcher
- Diagram
- Constructed Response



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging Readers and Writers: Revisiting the KWL Chart (10 minutes)Reviewing Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Partner Reading: Reading a Scientific Text about the Pulley Closely (25 minutes)Connecting Key Vocabulary (15 minutes)Closing and Assessment<ol style="list-style-type: none">Share: Single versus Double Pulleys (5 minutes)Homework<ol style="list-style-type: none">Write a caption for the pulley diagram on the front of your Science journal. Make sure to describe how a pulley helps people do work.	<ul style="list-style-type: none">The structure of this lesson is similar to Lessons 3 and 5. Students learn about pulleys, focusing on how the pulley is similar to and different from other simple machines.In the second half of this unit, students continue to read about simple machines and conduct experiments, but they do this more independently. Therefore, unlike in the first half of the unit, students read closely (in Lessons 8 and 9) BEFORE doing the experiment (in Lesson 10). This helps them see how they are developing as readers. They can learn a lot about simple machines before doing the experiment in Lesson 10.Work Time A and B in this lesson is primarily partner work. Some students may need more support. Consider pulling partnerships together for additional support in processing content and/or defining the meanings of unfamiliar words.In advance: Make a Pulleys anchor chart with three sections. (See model in supporting materials.)Post: Learning targets.



Lesson Vocabulary	Materials
<p>pulley, reduce, increase, decrease, antonyms; complicated, laborers, distance</p> <p>Review: force, load, effort</p>	<ul style="list-style-type: none">• KWL anchor chart (from Lesson 1)• Simple Machines Science journals (from Lesson 1)• <i>Simple Machines: Forces in Action</i> pages 30–31 (book, one per student)• Sticky note (one per partnership)• Vocabulary Strategies anchor chart (reviewed in Unit 1, Lesson 1)• Sticky notes (one per student)• Blank paper (one per student)• Pulleys anchor chart (newly created; for teacher reference)



Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers: Revisiting the KWL Chart (10 minutes)</p> <ul style="list-style-type: none">• Post the KWL anchor chart. Remind students that in Lesson 1 of this unit, they used this chart to write down what they knew about simple machines and any questions they had. They've learned a lot since that lesson; it's time to revisit and revise the KWL chart.• Distribute the Simple Machines Science journals and ask the students to turn to page 10.• Ask students to do the following:<ol style="list-style-type: none">1. Review the information that they listed in the "I KNOW ..." column to check for accuracy.2. Mark the information Y or N if they have learned that, yes (Y), it is accurate, or no (N), it is inaccurate, from all they have read and experienced so far in this unit. Tell them not to write any new information in this column.3. List new learning in the last "I LEARNED ..." column. Point out they are asked to not only identify the information they have learned, but also where they learned it—the source. For example:<ul style="list-style-type: none">– Information: A lever is made up of a bar that tilts on a special point called a fulcrum.– Source: <i>Simple Machines</i>, page 24 (Students could abbreviate the title of the book as <i>SM</i>.)• Give students 5 minutes to record as much new learning as they can. Tell them they will revisit this chart again after Lesson 9.• Cold call two or three students to share one piece of information they've learned and where they learned it. Add this information to the KWL anchor chart.	
<p>B. Reviewing Learning Target (5 minutes)</p> <ul style="list-style-type: none">• Invite the students to read the learning targets. Ask them to show they understand what they will be learning by touching their noses. If they are unsure of what the learning targets say, ask them to scratch their heads. Clarify as needed.	



Work Time	Meeting Students' Needs
<p>A. Partner Reading: Reading a Scientific Text about the Pulley Closely (25 minutes)</p> <ul style="list-style-type: none"> Explain students will read a text about pulleys with their science partner from Lesson 4. Distribute <i>Simple Machines: Forces in Action</i> pages 30–31 and one sticky note per partnership and ask students to turn to page 30. Review the process of closely reading a text that they have experienced during this unit. <ol style="list-style-type: none"> Read the entire text. Discuss what the gist of the text is and write it on a sticky note. Read the text again to identify key scientific vocabulary. Refer to the Vocabulary Strategies anchor chart for strategies to use in determining the meaning of unfamiliar words. Identify vocabulary in the Vocabulary section of the Simple Machines Science journal. Make sure to locate: <i>pulley, reduce, decreased, increased, force, load, effort, distance</i>. Read the text again, determining important information and using evidence from the text to support your thinking. Remind students of the process of deconstructing complex sentences and paragraphs to better understand challenging scientific content (Lessons 3 and 5). Encourage them to use the diagrams on page 30 to help them understand the difference between single and double pulleys as they read. Explain that they will work together to complete the first two sections of the Pulley Research Notes on page 16 in their Simple Machines Science journal. Remind students they've done this process twice before, so today they are going to do it more on their own. Tell them that they will work with a new science partner. Also tell them you are available for support. As pairs work, circulate and assist as needed. Ask questions to help push the students back to the text to cite evidence that supports their thinking. For example: "Where in the text does it say that?" or "Are you sure? How do you know?" Give students specific praise when they cite textual evidence. 	<ul style="list-style-type: none"> For students needing additional support, consider the following: <ul style="list-style-type: none"> Pull small groups of students who have similar skills/needs. Provide sentence stems for the gist statements to help students who struggle with language. Students needing additional supports may benefit from partially filled-in graphic organizers. (See task cards in Module 2, Unit 2, Lesson 6.) Consider partnering an ELL with a student who speaks the same L1 when discussion of complex content is required. This lets students have more meaningful discussions and clarify points in their L1. Students who struggle with language benefit from having their own individual dictionaries for reference throughout the module.



Work Time (continued)	Meeting Students' Needs
<p>B. Connecting Key Vocabulary (15 minutes)</p> <ul style="list-style-type: none"> Ask students what the word <i>interconnected</i> means. Remind them that they learned about that word in Lesson 3 when they read about the inclined plane. Ask them to turn and talk with a partner. Once they have a definition in mind, they should put a thumbs-up sign in front of their chest. When all students have indicated they have a definition ready to share, ask them to lift their faces to the ceiling and on the count of three, whisper their definition “to the universe.” Count: “One, two, three!” You should hear: “Joined together.” Write the following words on the white board or chart paper: <i>distance</i>, <i>increase</i>, <i>decrease</i>, <i>effort</i>. Ask students to look back in their Science journals to review what these words mean. <ul style="list-style-type: none"> distance: the measure of space between two points increase: make greater decrease: make less effort: the force needed to use a simple machine Ask students to pair up, and assign each pair one of the three passages. Each partnership will do the following: <ol style="list-style-type: none"> Review a page in <i>Simple Machines: Forces in Action</i> together by choral reading. <ul style="list-style-type: none"> inclined plane (“Historic Planes” and “Distance versus Effort”), page 7 lever (“Effort and Load”), page 25 pulley (“Easy Lifting” and “Powerful Pulleys”), page 31 Work together to answer the question: “How are distance and effort interconnected for your simple machine? Use evidence from the text to support your answer.” Write your answer on a large sticky note. Model this process using the screw. Ask students to turn to page 19 in <i>Simple Machines: Forces in Action</i>. Read the first paragraph aloud as the students read silently. Focus on the last sentence: “Less effort is needed to cut into the wood because of the increased distance that the threads travel.” Think aloud how the terms distance and effort are used. For example: “The text is saying that the threads of a screw turn over and over—a longer distance, but with little more effort than trying to force the lid to close by pushing down on it with great force.” 	<ul style="list-style-type: none"> Using sentence frames can help ELLs articulate their learning.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Give the students 15 minutes to read the identified pages in <i>Simple Machines: Forces in Action</i> and answer the text-dependent question.• Circulate and offer support as needed.	
Closing and Assessment	Meeting Students' Needs
<p>A. Share: Single versus Double Pulleys (5 minutes)</p> <ul style="list-style-type: none">• Distribute a piece of blank paper to each student. Ask them to reread the first paragraph on page 31 and draw a picture that represents the difference between a single pulley and a double pulley. Encourage them to look at the diagrams on page 30 for help. Inform them they will need to be able to explain this scientific concept to another student.• Give the students 3 minutes to reread the text and create their visual representation.• Ask them to find a partner to share their diagrams and how the pulleys are different.	<ul style="list-style-type: none">• Providing word banks for students who struggle with language will give them additional support in answering complex questions.



Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Look for pulleys around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the pulleys, make a sketch of what you saw, or use words to describe what you saw.• Write a caption for the pulley diagram on the front of your Simple Machines Science journal. Make sure to describe how a pulley helps people do work. <p><i>Note: Lesson 10 (two lessons from now) includes two experiments. Half of the class will do an experiment about pulleys; the other half will do an experiment about the wheel and axle. They then share what they learned with peers who performed the other experiment. In advance, review procedures and prepare materials: see pages 32 to 33 of Simple Machines: Forces in Action for the pulley experiment and pages 38 to 39 for the wheel and axle one. If it's not possible to gather all of the experiment materials, consider these alternatives:</i></p> <p><i>Pulley:</i></p> <ul style="list-style-type: none">– If empty thread spools are not available, try either empty toilet paper rolls or cut a wooden dowel, such as a closet rod, into two-inch sections. Wrap rubber bands around each end of the dowel/roll to keep the string of the pulley from slipping off.– If small buckets are not available, try plastic cups with string handles.– For a fixed point on which to hang the pulleys, use the leg of a desk chair on its side on a flat surface (i.e., table or desk). To be sure that the chair does not fall off the flat surface, use some kind of anchor weight (i.e., heavy books, one of the students holding it with their hands, or tie the chair down) holding it securely on the surface. <p><i>Wheel and Axle:</i></p> <ul style="list-style-type: none">– If roller skates are not available, try any smaller toy on wheels (i.e., cars, trucks). Make sure the toys weigh enough to cause friction when on their sides. Consider securing a small bag of gravel to the wheeled object.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 8

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Pulleys Anchor Chart
(For Teacher Reference)

(Example is not to scale—create this anchor chart in advance)

Pulleys
<p>Gist Statements:</p> <p>(Student sticky notes)</p>
<p>Important Vocabulary to Know:</p> <p>(Student sticky notes)</p>
<p>Examples of Pulleys in Our Lives:</p> <p>(Student sticky notes)</p>



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 9

Reading Scientific Text: Reading Closely about the Wheel and Axle



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
- I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
- I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
- I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can find the meaning of scientific and academic words related to the wheel and axle.
- I can determine important information about wheels and axles and how they help people do work.
- I can document what I learn about wheels and axles in my own words.

Ongoing Assessment

- Simple Machines Science journal
- Vocabulary note-catcher
- Diagram
- Constructed Response



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging Readers and Writers (10 minutes)Reviewing Homework and Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Partner Reading: Reading a Scientific Text Closely (20 minutes)Connecting Key Vocabulary (10 minutes)Closing and Assessment<ol style="list-style-type: none">Synthesizing Learning about the Wheel and Axle (5 minutes)Debrief: Synthesizing about Simple Machines in Three Words (10 minutes)Homework<ol style="list-style-type: none">Write a caption for the wheel and axle diagram that is on the front of your Science journal. Make sure to describe the importance of a wheel and axle in helping people do work.	<ul style="list-style-type: none">The structure of this lesson is similar to Lessons 3 and 5. But in this lesson, students work more independently. Students learn about wheels and axles, focusing on how the wheel and axle are similar to and different from other simple machines.In the second half of this unit, students continue to read about simple machines and conduct experiments, but they will be doing this more independently. Therefore, in Lessons 8 and 9, they read closely first before doing the experiment to have a deeper understanding of the simple machine. They will conduct experiments on these simple machines in Lesson 10. This lesson will be slightly different from Lessons 2 and 4 because the two experiments will be happening simultaneously, but the note-catchers will be similar to ones they've used before.Work Time A and B in this lesson is primarily partner work and some students may need additional support. Consider pulling several partnerships together for additional support in processing content and/or defining the meanings of unfamiliar words.In advance: Write the names of simple machines on strips of paper—one for each student. You will need something to put the strips in so the students can randomly choose one to act out.Post: Learning targets.



Lesson Vocabulary	Materials
<p>Review: force, effort, work, lever, fulcrum, distance, increase, decrease</p> <p>New: wheel and axle, friction, faucet, shaft</p>	<ul style="list-style-type: none">• Simple Machines strips of paper (one per student; see Teaching Notes)• Sticky notes (2-3 per triad)• Pulleys anchor chart (from Lesson 8)• <i>Simple Machines: Forces in Action</i> pages 36 and 37 (book; one per student)• Sticky notes (one per partnership)• Vocabulary Strategies anchor chart (reviewed in Unit 1, Lesson 1)• Simple Machines Science journals (one per student)• Index cards (one per student)• Blank paper (one per student)



Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers (10 minutes)</p> <ul style="list-style-type: none">• Invite students to stand and gather in groups of four, making sure there is enough room to move their arms and legs and not interfere with anyone else (it's fine to have groups of five if there is an uneven number of students in the class). Explain they have been reading a lot about simple machines and have learned about four of them: inclined plane, lever, screw, and pulley. Ask them to think about what it might look like if people used these simple machines to help them do work.• Explain that each person in the groups will choose a slip of paper that has the name of one of the simple machines they've learned about so far. Each person will have 10 seconds to use pantomime, which means no speaking or noise, to show how the simple machine works. The rest of the group has to guess what simple machine it is.• Circulate and have students choose a Simple Machines strip of paper. Remind them not to show anyone what's on their paper. Give them 1 minute to think about what they are going to do. Then invite them to begin.	<ul style="list-style-type: none">• Acting out a complex concept supports the kinesthetic learning style. If some students are uncomfortable with this activity, have them be "the director" instead of "an actor."
<p>B. Reviewing Homework and Learning Target (5 minutes)</p> <ul style="list-style-type: none">• Remind students of the homework from Lesson 8, "Look for pulleys around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the pulleys, make a sketch of what you saw, or use words to describe what you saw."• Invite students to get into triads to share and then record examples of pulleys they found—one per sticky note. Ask a representative from each triad to post their sticky notes on the bottom section of the Pulleys anchor chart (from Lesson 8).• Ask the class what they noticed about pulleys around them. Invite students to turn and talk to their triad groups. Listen for comments such as: "I didn't see as many pulleys as I have other simple machines, but I did see them on the blinds that are hung on our windows," or "I saw some men washing windows on a big building. The board they were standing on was controlled by pulleys."• Invite the students to read the learning targets. Ask them to show they understand what they will learn by touching their noses. If they are unsure of what the learning targets say, ask them to scratch their heads. Clarify as needed.	



Work Time	Meeting Students' Needs
<p>A. Partner Reading: Reading a Scientific Text Closely (20 minutes)</p> <ul style="list-style-type: none"> Explain that today's lesson is going to be very similar to Lesson 8. They will read a text about the wheel and axle with their science partner. Distribute <i>Simple Machines: Forces in Action</i> and 1 sticky note per partnership and ask them to turn to pages 36, 37, and 39. Review the process of close text reading that they experienced during this unit. <ol style="list-style-type: none"> Read the text all the way through. Discuss what the gist of the text is and write it on a sticky note. Read the text again to identify key scientific vocabulary. Refer to the Vocabulary Strategies anchor chart for strategies to use in determining the meaning of unfamiliar words. Enter identified vocabulary in the Vocabulary section of the Simple Machines Science journal. Make sure to include: <i>wheel and axle, friction, work, force, and effort</i>. Read the text again, determining important information and using evidence from the text to support your thinking. Remind students of the process of deconstructing complex sentences and paragraphs to better understand challenging scientific content (Lessons 3, 5, and 8). Explain that students have done this process several times before. As in Lesson 8, they will do it more independently. Explain that they will work together to complete the Wheel and Axle Research Notes on page 17 in their Simple Machines Science journal. Tell them that they'll work with the same science partner from Lesson 8. Also tell them you will be available for support. Circulate and assist as needed. You can push their thinking by asking questions such as: "Where in the text does it say that?" or "Are you sure? How do you know?" These types of questions help push the students back to the text to cite evidence that supports their thinking. 	<ul style="list-style-type: none"> For students needing additional support, consider the following: <ul style="list-style-type: none"> Pull small groups of students who have similar skills/needs. Provide sentence stems for the gist statements to help students who struggle with language. Students needing additional supports may benefit from partially filled-in graphic organizers. (See task cards in Module 2, Unit 2, Lesson 6.) Consider partnering an ELL with a student who speaks the same L1, when discussion of complex content is required. This lets students have more meaningful discussions and clarify points in their L1. Students who struggle with language benefit from having their own individual dictionaries for reference throughout the module.



Work Time (continued)	Meeting Students' Needs
<p>B. Connecting Key Vocabulary (10 minutes)</p> <ul style="list-style-type: none">Review with the students what the term <i>interconnected</i> means (joined together). Remind them about the vocabulary analysis they did in Lesson 8 with the words <i>distance</i>, <i>increase</i>, <i>decrease</i>, and <i>effort</i>. Ask them to look in their Simple Machines Science journals for the definitions of these four words.Ask each partnership to reread pages 36 and 37 in <i>Simple Machines</i> and find evidence to help answer the question: “How are distance and effort interconnected for your simple machine?”Remind them that this is the same question they answered for four other simple machines in Lesson 8. Ask each partnership to write their answer on an index card.Give students 5 to 7 minutes to reread pages 36 and 37 and answer the text-dependent question.Gather students together and ask the partnerships to mingle and find another partnership. Invite them to share their answers. Ask them to share with two more partnerships. After each sharing, encourage the students to revise their answers if they feel they could improve based on what their peers shared.	<ul style="list-style-type: none">Using sentence frames can help ELLs articulate their learning.



Closing and Assessment	Meeting Students' Needs
<p>A. Synthesizing Learning about the Wheel and Axle (5 minutes)</p> <ul style="list-style-type: none">• Distribute a piece of blank paper to each student. Ask them to reread the first paragraph on page 37 and draw a picture that represents how the wheel and axle works like the lever. Inform them they will need to be able to explain this scientific concept to another student.• Give the students 3 minutes to reread the text and create their visual representation. Ask them to find a partner to share their diagrams and how the wheel and axle works.	
<p>B. Debrief: Synthesizing about Simple Machines in Three Words (10 minutes)</p> <ul style="list-style-type: none">• Ask students to think about all they have learned about simple machines in this unit. Invite them to skim the notes they took in their Science journals. Acknowledge that they've learned and experienced a lot. Explain that their challenge is to try to sum up the big idea of their learning about simple machines in three words. Explain it doesn't need to be a complete sentence. It just needs to convey an important idea about simple machines. (If your students participated in Module 2A, it may help to give them an example of this type of three-word synthesis for life in colonial America: "together they survived" or "constantly hard work" or "freedom to live.").• Invite them to get into small groups of four or five. Give them 1 to 2 minutes to think silently to themselves about their three words. Tell them to show a silent thumbs-up to their group when they are ready to share.• Give students a few minutes to share their three-word synthesis statements.• Then invite two or three students to share out a three-word synthesis they heard in their group.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Look for wheels and axles around you (at school or at home). Record examples to share in our next lesson. Either take pictures of the wheels and axles, make a sketch of what you saw, or use words to describe what you saw.• Write a caption for the wheel and axle diagram that is on the front of your Science journal. Make sure to describe the importance of a wheel and axle in helping people do work. <p><i>Note: Lesson 10 includes two experiments. For details regarding preparations, see Notes at the end of Lesson 8 or the start of Lesson 10.</i></p>	

There are no new supporting materials for this lesson.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 10

Reading a Scientific Experiment: The Pulley and Wheel and Axle



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can explain the main points in scientific text, using specific details in the text. (RI.4.3)
I can describe the organizational structure in an informational text (chronology). (RI.4.5)
I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2)
I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can explain what happens before, during, and after a scientific experiment.
- I can explain how the directions in a scientific experiment help me understand what a pulley and wheel and axle are and how they work.
- I can document what I observe during a scientific experiment.
- I can construct a conclusion statement that describes what I learned about pulleys or wheels and axles.
- I can follow our class norms when I participate in a conversation.

Ongoing Assessment

- Simple Machines Science journal: Science Experiment note-catcher (pages 18 or 19)
- Four Corners Teacher observations



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Reader and Writer: Mix and Mingle and Reviewing Learning Targets (5 minutes) 2. Work Time <ol style="list-style-type: none"> A. Reviewing Procedures: Reading a Science Experiment (15 minutes) B. Rereading Scientific Text while Conducting a Science Experiment (15 minutes) C. Writing a Conclusion (10 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Forming an Opinion: Four Corners strategy (15 minutes) 4. Homework <ol style="list-style-type: none"> A. Continue reading in your independent reading book for this unit at home. 	<ul style="list-style-type: none"> • In this lesson, the class divides into two experiment groups. Each group conducts a different experiment—one on the pulley and one on the wheel and axle. These groups can either be strategically or randomly chosen, depending on the needs of your students. • Further divide students into smaller groups of three or four students within each experiment. This is because experiments are best conducted with smaller groups of students so everyone can participate. Plan these smaller groups in advance. • In advance: Prepare materials for both experiments. See pages 32–33 for the pulley experiment and pages 38–39 for the wheel and axle experiment in <i>Simple Machines: Forces in Action</i>. Some suggestions for alternate materials and logistics: • Pulley: <ul style="list-style-type: none"> – If empty thread spools are not available, try either empty toilet paper rolls or cutting a wooden dowel, such as a closet rod, into two-inch sections. Wrap rubber bands around each end of the dowel/roll to keep the string of the pulley from slipping off. – If small buckets are not available, try plastic cups with string handles. – A possible fixed point on which to hang the pulleys could be the leg of a desk chair on its side on a flat surface (i.e., table or desk). To ensure that the chair does not fall off the flat surface, there would need to be some kind of anchor weight (i.e., heavy books, one of the students holding it, or tie the chair down) holding it securely on the surface. • Wheel and Axle: <ul style="list-style-type: none"> – If roller skates are not available, try any smaller toy on wheels (i.e., cars, trucks). Make sure that the toys weigh enough to cause friction when on their sides. Consider securing a small bag of gravel to the wheeled object. • As in Lessons 2 and 4, for the first read, be sure to cover up the “How Does It Work?” box on pages 33 and 38 before students conduct the experiments.



Agenda	Teaching Notes (continued)
	<ul style="list-style-type: none">• To prepare for the debrief, create four signs, one for each of the simple machines the students have learned about in depth (inclined plane, lever, pulley, wheel and axle). In advance, post one sign in each corner of the room.• Review the steps of the Scientific Method (first described in Lesson 2).• Review Mix and Mingle (Unit 1, Lesson 4).• Post: Learning targets.

Lesson Vocabulary	Materials
Review: force, effort, work, load New: spool	<ul style="list-style-type: none">• Simple Machines Science journal (one per student)• Conducting an Experiment anchor chart• <i>Simple Machines: Forces in Action</i> pages 32–33 and 38 (book; one per student)• Scientific Method anchor chart (from Lesson 2)• Document camera• Four Corners (for teacher reference; see supporting materials)• Equity sticks



Opening	Meeting Students' Needs
<p>A. Engaging the Reader and Writer: Mix and Mingle and Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Tell students that in a moment they will share the captions they wrote on the cover of their Simple Machines Science journal for the pulley and wheel and axle, as well as any examples of a wheel and axle they found around them.• Remind students that they used Mix and Mingle discussion (in Unit 1, Lesson 4) to practice sharing their opinions about whether fiction is a good teacher of facts. Say that Mix and Mingle is similar to Think-Pair-Share, but instead of sharing with a single partner they get to move around and share their thinking with several peers.• Review the following directions for the Mix and Mingle:<ol style="list-style-type: none">1. Stand up and find a partner.2. Share your captions for the pulley and wheel and axle with each other. Be sure to explain why your captions clearly describe how these simple machines are important in helping people do work. Be respectful speakers and listeners.3. Thank your partner and find another partner.4. Share any examples of a wheel and axle you found around you.• Address any clarifying questions about Mix and Mingle.• Give students 4 minutes to participate in the Mix and Mingle. Listen to students' conversations for scientifically accurate facts about the pulley and wheel and axle. (For example, some students may say that the pulley helps people lift very heavy loads—the heavier the load, the more pulleys need to be used. Or they may say that the wheel and axle help people move heavy loads from one place to the next easily by not causing friction.)• Tell students that today the class will conduct two experiments: one on the pulley and one on the wheel and axle. Each student will conduct just one of the two experiments.• Tell students the process they follow today are similar to how they conducted the experiments on the inclined plane and lever in Lessons 2 and 4. Invite them to read the learning targets. Remind them these are the same learning targets they've had for each of the experiments they conducted in this unit. Ask if they have any questions about the learning targets. Clarify as needed.• Tell students they are getting really good at reading about and conducting science experiments, so today they'll work with less teacher support. They should rely on their group. Reassure them that you will still circulate and support as needed, but encourage them to "step up" to more independence today.	



Work Time	Meeting Students' Needs
<p>A. Reviewing Procedures: Reading a Science Experiment (15 minutes)</p> <ul style="list-style-type: none">• Tell students they will do an experiment either on the pulley or on the wheel and axle. The class will be divided into two groups. Each large group will be broken into smaller “experiment groups” of three to four students.• Ask students to move to their predetermined experiment groups. Review the process of preparing to conduct an experiment. Post the Conducting an Experiment anchor chart.• Invite the students to silently read to themselves the four steps they need to follow to prepare to conduct the experiment. Then ask each experiment group to read the steps aloud together.<ol style="list-style-type: none">1. Read the list of materials needed for the experiment.2. Read through the entire procedure for conducting the experiment. Try to visualize what is being described in each step.3. Reread the steps, pausing after each step to discuss with your partners what you are being asked to do.4. If there are vocabulary words that are unfamiliar, refer to the Vocabulary Strategies anchor chart, focusing on the first strategy “reading on in the text and infer” to figure out the meaning of the word(s).• Address any clarifying questions.• Distribute the Simple Machines Science journals and <i>Simple Machines: Forces in Action</i>.<ul style="list-style-type: none">– Ask the pulley groups to turn to pages 32–33 in the text.– Ask the wheel and axle groups to turn to page 38 in the text.• Give students 5 minutes to complete the four steps listed on the Conducting an Experiment anchor chart.	<ul style="list-style-type: none">• The smaller experiment groups can be predetermined based on student readiness or learning styles, or they could be heterogeneous. Alternatively, they could be randomly grouped. It will depend on what is best for your students' needs.• Consider partnering an ELL student with a student who speaks the same L1 for discussion of complex content.• The experiment on the wheel and axle is not as complex as the experiment on the pulley. Consider assigning students who struggle with language or complex concepts to the wheel and axle experiment.



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading Scientific Text while Conducting a Science Experiment (15 minutes)</p> <ul style="list-style-type: none">• Remind students to keep the “How Does It Work?” box on the bottom half of page 33 and the bottom left section of page 38 covered.• Ask students to turn to page 18 in their Science journals for the pulley experiment and page 19 for the wheel and axle experiment. Remind students that scientists often use the Scientific Method to guide them through experiments. Review the Scientific Method anchor chart from Lesson 2. Remind them that the question for each of the experiments they have conducted in this unit is: “How can this simple machine make work easier?”• Ask students to tell their experiment group the next thing they need to do before conducting the experiment. You should hear: “We need to write a hypothesis, or prediction about what we think is going to happen.”• Ask the experiment groups to discuss:<ul style="list-style-type: none">* “What might be a possible hypothesis?”• Ask students to write their hypothesis in their Science journals.• Also ask them to list the materials needed for the experiment.• Give students 10 minutes to conduct the experiment.• Circulate and assist as needed. When students have procedural questions, push them back into the text to see if they can answer their own question: “Where might you look for that answer?” or “What does the text tell you?”• Pulley Experiment: Ask probing questions that push them to connect the terms <i>effort</i> and <i>force</i>. For example:<ul style="list-style-type: none">* “If force is the ability to push, pull, or twist, what is the force in this experiment?” (Answer: It’s pulling down on the string in order to lift the pail up.)* “How would you describe the effort that is being used?” (Answer: It takes less effort to lift a heavy pail up if you use force to pull down in a pulley.)	<ul style="list-style-type: none">• To further support students add visual cues to your anchor chart or provide copies of the chart for certain students to use at their desk.• Consider allowing students to draw their observations, ideas, or notes when appropriate. This allows all students to participate in a meaningful way.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Wheel and Axle Experiment: Ask probing questions that push them to connect the terms <i>effort</i> and <i>force</i>. For example:<ul style="list-style-type: none">* “If force is the ability to push, pull, or twist, what is the force in this experiment?” (Answer: It’s pulling on the rubber band).* “How would you describe the effort that is being used?” (Answer: If a load is pulled on wheels, it reduces the friction, which makes the effort easier. The less friction, the easier it is to move a load.)• Reinforce vocabulary: Point out to students when you hear them using scientific vocabulary in their discussions. Encourage them to use it as they write their observations.	
<p>C. Writing a Conclusion (10 minutes)</p> <ul style="list-style-type: none">• Remind students that the last step in the Scientific Method is to analyze the data and draw a conclusion. This means that they need to synthesize their findings by writing a <i>conclusion</i> statement. This statement explains the main idea of what happened during the experiment and what they learned from it. Tell them in the next lesson they will share their conclusions with students from the other experiment as a way of teaching them what they learned. Reinforce that writing is one way scientists share their new learning with the scientific community.• After students have written their conclusion, ask them to unveil the “How Does It Work?” box on pages 33 and 38 that has been covered. Invite students to read it, checking to see if they reached the same conclusions as the author did. If their findings were different from the author’s, tell them to NOT change their hypothesis or their conclusion. Ask them to add to their conclusions by explaining how their conclusion is different from the author’s.• Remind them to hold on to their writing; they will share these conclusions at the start of Lesson 11.	



Closing and Assessment	Meeting Students' Needs
<p>A. Forming an Opinion: Four Corners (15 minutes)</p> <ul style="list-style-type: none">• Ask the students to gather in the middle of the room with their Science journals.• Use a document camera to show students the directions for the Four Corners. Read the protocol description aloud as the students follow along silently. To check for understanding, ask two or three students to explain the protocol in their own words.• Conduct the protocol.• Debrief the protocol by using equity sticks to cold call students. Ask questions such as:<ul style="list-style-type: none">* “Was it easy or hard for you to choose one simple machine? Why?”* “If you moved corners, what made you change your mind?”* “Did you find it easy or challenging to form an opinion and articulate why you chose the simple machine that you did? Why?”	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. Using the word “because” in the sentence frame helps all students support their thinking with evidence. For example: “I chose _____ simple machine because I think it benefits people by _____.”
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: For Lesson 11, students will need specific feedback from their last Science Talk (Lesson 6). Write feedback on the bottom section of page 15 in students' Simple Machines Science journals. Focus the feedback on the learning targets that were emphasized in that lesson: “I can prepare for the Science Talk by using evidence from scientific texts,” “I can ask questions about the topic being discussed,” and “I can build on others' ideas when responding to their statements and questions.” Also give suggestions to any students who may need more coaching in order to follow the class norms. Keep feedback focused, brief, and encouraging.</i></p>	<ul style="list-style-type: none">•



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 10

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Conducting an Experiment Anchor Chart

1. Read the list of materials needed for the experiment.
2. Read through the entire procedure for conducting the experiment. Try to visualize what is being described in each step.
3. Reread the steps, pausing after each step to discuss with your partners what you are being asked to do.
4. If there are vocabulary words you don't know, refer to the Vocabulary Strategies anchor chart. Focus on the first strategy "reading on in the text and infer" to figure out the meaning of the word(s).

Four Corners
(For Teacher Reference)

Purpose: Four Corners provides students with a structure to engage in conversation with their peers about a topic. They are asked to form opinions and state their reasoning to support their opinion.

Procedure:

1. Post a sign in each corner of the room with the name of one simple machine (inclined plane, lever, pulley, and wheel and axle).
2. Ask the students to choose which simple machine they think is the most beneficial to people in their everyday lives. They must choose one corner.
3. Once they have decided on their simple machine, instruct them to move to that corner.
4. Give the students 2 to 3 minutes to talk as a “corner group” about why they chose that particular simple machine. Encourage them to use the notes in their Science journals to support their opinions.
5. They need to choose a spokesperson to report to the whole group the top two reasons why they think that simple machine is the most beneficial based on the texts they’ve read and the experiments they have conducted (1 minute per corner).
6. Each “corner group” shares their two reasons.
7. After each group has shared, give the students an opportunity to change if they wish. Make sure to ask them what made them change their minds.

Option: The Caucus

- If students can’t choose one corner, give them the option of standing in the middle of the room.
- As the corners are discussing why they chose that particular simple machine, the students in the middle are discussing why they couldn’t choose one.
- After each corner has shared the reasons their simple machine is the most beneficial, the students in the middle can move to a corner if they have made a decision.
- If there are any students left in the middle, each corner group has 1 minute to use evidence from the texts and experiments to convince the “undecided” to join their corner.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 11

Science Talk: Synthesizing What We Know about Simple Machines



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

I can identify the reason a speaker provides to support a particular point. (SL.4.3)

I can identify evidence a speaker provides to support particular points. (SL.4.3)

Supporting Learning Targets

- I can effectively participate in a Science Talk about simple machines.
 - a. I can prepare for the Science Talk by using evidence from the *Simple Machines* texts.
 - b. I can build on others' ideas when responding to their statements and questions.
 - c. I can ask questions on the topic being discussed.
 - d. I can follow our class norms when I participate in a conversation.

Ongoing Assessment

- Simple Machines Science journals (page 20: Preparing for a Science Talk)
- Science Talk Criteria checklist



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Vocabulary Review: Quiz-Quiz-Trade (10 minutes)B. Science Talks: Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Science Talks: Reflecting and Setting Goals (10 minutes)B. Preparing Evidence and Questions for the Science Talk (10 minutes)C. Conducting the Science Talk (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Debrief (5 minutes)4. Homework<ol style="list-style-type: none">A. Share with someone at home what you are learning about simple machines and how they help us in our everyday lives.	<ul style="list-style-type: none">• This lesson follows the same structure as Lesson 6. Students have now built significant background knowledge about simple machines and how they affect force, effort, and work.• Since their last Science Talk in Lesson 6, students have researched the pulley and wheel and axle. In this Science Talk, students should be pushed to synthesize their learning about simple machines and support their thinking with additional evidence from pages 30–31 and 38–39 of the text <i>Simple Machines: Forces in Action</i> by Buffy Silverman.• Students will need specific feedback from their previous Science Talk (Lesson 6). Write feedback on the bottom section of page 15 in students' Simple Machines Science journals. Focus the feedback on the learning targets that were emphasized in that lesson: "I can prepare for the Science Talk by using evidence from scientific texts," "I can ask questions about the topic being discussed," and "I can build on other's ideas when responding to their statements and questions."• Review: Quiz-Quiz-Trade (in Vocabulary Strategies) and Science Talk protocols (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
increase, decrease, distance, pulley, wheel and axle, screw, participate, evidence, norms (review from previous lessons)	<ul style="list-style-type: none">• Vocabulary word cards (for teacher use; one card per student for Quiz-Quiz Trade)• Equity sticks• Science Talk Norms anchor chart (created in Unit 1, Lesson 3)• Simple Machines Science journals (one per student)• <i>Simple Machines: Forces in Action</i> pages 6–7 and 24–25 (book; one per student)• Preparing for a Science Talk recording form (in Simple Machines Science journals)• Participating in a Science Talk anchor chart (from Unit 1, Lesson 3)• Science Talk Criteria checklist



Opening	Meeting Students' Needs
<p>A. Vocabulary Review: Quiz-Quiz-Trade (10 minutes)</p> <ul style="list-style-type: none">• Tell students that to prepare for their Science Talk they will review vocabulary related to simple machines in another round of Quiz-Quiz-Trade. Explain to students that you have added words to the Vocabulary word cards based on the words they collected since studying the pulley and wheel and axle.• Post and review the following directions for Quiz-Quiz-Trade:<ol style="list-style-type: none">1. Find a partner.2. Read definition—read your word's definition to your partner. Allow him or her to guess the word or ask for a hint.3. Give a hint—if your partner needs a hint, say one thing that helps you remember the meaning of this word. Allow your partner to guess and share your word.4. Switch—have your partner read his or her definition and let you guess or receive a hint.5. Trade cards, and find a new partner. Repeat Steps 2 through 5.• Ask students to read directions and clarify or model process if necessary. Distribute Vocabulary word cards.• Give students 10 minutes to quiz and trade.• Collect the Vocabulary word cards (which will be used again in Lesson 12 for another round of Interactive Word Wall).	



Opening (continued)	Meeting Students' Needs
<p>B. Science Talks: Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Begin by sharing just the general learning target for the Science Talk: “I can effectively participate in a Science Talk about simple machines.” Remind students that they have discussed this learning target at the last Science Talk (in Lesson 6). Ask them to turn to a partner and explain this target in their own words.• Use equity sticks to cold call a few students to share their explanations. Listen for students to share information preparing for the Science Talk by gathering evidence, asking questions, building on other’s ideas, and following the norms. As students mention each of these, post the corresponding learning targets and discuss and clarify:<ul style="list-style-type: none">a. I can follow our class norms when I participate in a conversation.b. I can prepare for the conversation by using evidence from simple machine texts.c. I can ask questions so I am clear about what is being discussed.d. I can ask questions on the topic being discussed.• Tell students that in today’s Science Talk they should strive to meet each of these learning targets. Tell them they will get to see feedback on these targets from their last Science Talk, which will help them figure out what to focus on today.	<ul style="list-style-type: none">• Consider supporting ELL students by providing individual copies of sentence frames for use during the Science Talk.• To provide further support to students during the Science Talk, consider posting or printing out sentence stems to help students during the discussion. For example: “I wonder if _____? I wonder why _____?” and “I agree and I also think _____. I disagree because _____” and “That’s a good question. I think _____.”



Work Time	Meeting Students' Needs
<p>A. Science Talks: Reflecting and Setting Goals (10 minutes)</p> <ul style="list-style-type: none">• Post the Science Talk Norms anchor chart and review as a class. Ask students to turn to a partner and point out one norm they think the class will need to focus on after their last Science Talk. Have pairs share and discuss or clarify norms as necessary.• Return students' Simple Machines Science journals and have them turn to page 15 with teacher feedback from Lesson 6. Ask students to review the goals they set during the last Science Talk. Post the following directions for students to reflect and set goals:<ol style="list-style-type: none">1. Review your previous goal (and the feedback).2. Reflect on whether or not you met your goal. Base this on the feedback you received.3. Turn to a partner and share your goal and if you think you met the goal or are still making progress.4. Write a revised goal for this Science Talk on page 20 in your Simple Machines Science journal.• Give students 5 minutes to discuss and revise their goals. Confer with pairs who may need extra support reflecting and setting goals.	



Work Time (continued)	Meeting Students' Needs
<p>B. Preparing Evidence and Questions for the Science Talk (10 minutes)</p> <ul style="list-style-type: none">• Post the Science Talk question (same as from Unit 1, Lesson 3, and Unit 2, Lesson 6): “How do simple machines affect our lives?”• Explain that students have learned quite a bit more about simple machines. Have students look over the evidence they recorded during the last Science Talk. Ask students to Think-Pair-Share: “What is something new you now know about simple machines that you might want to mention in today’s Science Talk?”• Tell students they will now have time to consider their new thinking on this question and what evidence they need to gather from the text and their notes. Be sure students have access to their text: Simple Machines: Forces in Action pages 6–7 and 24–25 and have them turn to page 20 in their Simple Machines Science journal to the next Preparing for a Science Talk recording form.• Give students 10 minutes to prepare their evidence. Circulate to confer as needed. Commend students who are using specific evidence; remind students how important it is to have evidence to support their thinking.	<ul style="list-style-type: none">• Allow ELLs and other students to use pictures and symbols as necessary on their recording forms.• Consider supporting students to extend their thinking by also rereading the experiments conducted on pages 8–9 and 26–27.
<p>C. Conducting the Science Talk (20 minutes)</p> <ul style="list-style-type: none">• Gather students whole group in a circle. Remind them to bring their Simple Machines Science journal. Display the Science Talk protocol for students to see. Briefly review the Participating in a Science Talk anchor chart with students, and answer any clarifying questions.• Direct students to begin the Science Talk. Use the Science Talk Criteria checklist to monitor student progression toward the learning targets. Quickly redirect and support students as needed, but avoid leading the conversation. Remind students their questions and comments should be directed to one another, not the teacher.	<ul style="list-style-type: none">• Consider allowing some students to talk with a partner or write what they would like to share during the Science Talk in advance.



Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Ask students to return to their seats. Invite them to reread the goal they wrote on the back of their recording form. Have them reflect on their goal and write their thoughts on the reflection section of page 20 in their Simple Machines Science journal.• Inform students they can demonstrate their knowledge about simple machines and their abilities to read and write like scientists in an assessment during the next two lessons. Tell them that they will use their skills as scientific readers and writers like when they researched inclined planes, levers, pulleys, and wheels and axles, but this time, they will read about another simple machine the class hasn't talked much about. Build students up regarding this opportunity to "show what you know."	<ul style="list-style-type: none">• Some students may need to reflect verbally with a partner before writing.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Share with someone at home what you are learning about simple machines and how they help us in our everyday lives. <p><i>Note: In Lessons 12 and 13, students will complete an on-demand assessment based on reading about wedges in pages 12–15 from Simple Machines: Forces in Action. This is a two-part assessment. In Part 1, students will read and answer questions about wedges and how they help do work. In Part 2, students will read, conduct an experiment, and write about their findings.</i></p> <p><i>To prepare for Part 2 of the assessment (which takes place in Lesson 13), gather the experiment materials listed on page 14 of Simple Machines: Forces in Action.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 11

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Vocabulary Word Cards (Front)

Directions for teacher: These word cards should be added to the word cards from Lesson 6 of this unit. Be sure to type in any additional words your class may have added to the Word Wall or their vocabulary lists.

Words	
increase	
decrease	
distance	
pulley	
wheel and axle	
screw	



Vocabulary Word Cards (Back)

Directions for teacher: These word cards should be added to the word cards from Lesson 6 of this unit. Be sure to type in any additional words your class may have added to the Word Wall or their vocabulary lists.

Definitions	
increase: make greater	
decrease: make less	
distance: the measure of space between two points	
pulley: simple machine made of a wheel with a rope or chain wrapped around it and used to lift objects	
wheel and axle: simple machine with a large wheel connected to a central shaft that moves together	
screw: simple machine made of an inclined plane wrapped around a shaft	



Science Talk Criteria Checklist

Learning Targets:

I can effectively participate in a Science Talk about simple machines.

I can follow our class norms when I participate in a conversation.

I can prepare for the conversation by using evidence from simple machine texts.

I can ask questions so I am clear about what is being discussed.

I can ask questions on the topic being discussed.

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



Science Talk Criteria Checklist

Student name	Norms	Prepare with evidence	Ask questions to clarify understanding	Connect questions to what others say	Teacher comments



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 12

Connecting Key Vocabulary and End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)
I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)
I can determine the meaning of content words or phrases in an informational text. (RI.4.4)
I can choose evidence from informational texts to support analysis, reflection, and research. (W.4.9)

Supporting Learning Targets

- I can make connections between the meaning of vocabulary words related to simple machines.
- I can document what I learn about a simple machine in my own words.
- I can find the meaning of scientific and academic words related to a simple machine.
- I can answer questions about simple machines and how they work using details from a scientific text.

Ongoing Assessment

- End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges
- Tracking My Progress, End of Unit 2, Part 1 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Connecting Key Vocabulary: Interactive Word Wall (15 minutes)B. End of Unit 2 Assessment: Answering Questions about Wedges (35 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Tracking My Progress, End of Unit 2 Assessment, Part I (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• This end of unit assessment has two parts. In this lesson, Part I, students will read and answer questions about the wedge. Then in Lesson 13, Part II, they will read, conduct, and write about an experiment with wedges.• Also in this lesson, students participate in another round of Interactive Word Wall (similar to Lesson 7) using the Vocabulary word cards from Lesson 11.• Before distributing the text <i>Simple Machines: Forces in Action</i> to students, use a large sticky note or small strip of paper to cover up the “How Does It Work?” box on the top half of page 15.• Review: Interactive Word Wall protocol (see Appendix).• Post: Learning targets.



Lesson Vocabulary	Materials
<p>decrease, distance, effort, force, inclined plane, increase, lever, pulley, wheel and axle, work (review from previous lessons)</p> <p>Do not pre-teach specific vocabulary in the assessment text.</p>	<ul style="list-style-type: none"> • Interactive Word Wall directions (from Lesson 7) • Document camera • Vocabulary word cards (from Lesson 11; one complete set per group of four) • Interactive Word Wall symbols (from Lesson 7; one set per group) • End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges (one per student) • <i>Simple Machines: Forces in Action</i> pages 12–13 (book; one per student) • Tracking My Progress, End of Unit 2, Part I recording form (one per student) • End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges (answers, for teacher reference) • 2-Point Rubric: Writing from Sources/Short Response (for teacher reference)

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> • Post the first learning target: “I can make connections between the meaning of vocabulary words related to simple machines.” Read the target aloud to students and ask them to turn to a partner to discuss its meaning. Have a few pairs share out. Tell students that this target should be familiar to them since it was used the last time they participated in an Interactive Word Wall activity. If necessary, remind students that when they “make connections between the meaning of vocabulary,” they explain the meanings of words are related to one another. • Explain that also in today’s lesson, they will complete Part I of a two-part assessment. They will read more about the sixth simple machine (the wedge). Then, in the next lesson, for Part II, they will read, conduct, and write about an experiment with wedges. Post the remaining learning targets: “I can document what I learn about a simple machine in my own words,” “I can find the meaning of scientific and academic words related to a simple machine,” and “I can answer questions about simple machines and how they work using details from a scientific text.” Tell students that these targets should look familiar from previous lessons. Have students give a quick thumbs-up, thumbs-sideways, or thumbs-down to show that they understand each target. Clarify as necessary. 	



Work Time	Meeting Students' Needs
<p>A. Connecting Key Vocabulary: Interactive Word Wall (15 minutes)</p> <ul style="list-style-type: none">• Tell students they will use the cards from the previous lesson for Quiz-Quiz-Trade (Lesson 11) to participate in another round of Interactive Word Wall. Remind students they have done this before (Lesson 7). Review the purpose of this activity: to help them develop a deeper understanding of the scientific concepts related to simple machines and help to prepare them for their end of unit assessment.• Post the Interactive Word Wall directions and review with students. Using the document camera (or with magnets on the board), briefly review with students how to make a connection between words using the Vocabulary word cards and the Interactive Word Wall symbols.• Divide students into groups of four (it's fine to have groups of three or five if there is an uneven number of students). Distribute a set of Vocabulary word cards (with additional words from Lesson 11) and Interactive Word Wall arrows to each group.• Give groups 10 minutes to make connections. If they finish early, encourage them to start again and try to make new connections with their words.• Ask each group to share a connection they made and why. Listen for students to explain the trade-off of using simple machines: Effort is decreased but distance is increased. Listen for: "We connected the word <i>pulley</i> with the words <i>effort</i> and <i>decrease</i>, because the pulley decreases the amount of effort needed to lift something up." Collect Vocabulary word cards and have students prepare their desk for the assessment.	<ul style="list-style-type: none">• Consider allowing students to draw a diagram or picture to explain their connections.



Work Time (continued)	Meeting Students' Needs
<p>B. End of Unit 2 Assessment: Answering Questions about Wedges (35 minutes)</p> <ul style="list-style-type: none">• Distribute the End of Unit 2 Assessment, Part I: Reading and Answering Questions about Wedges and the text <i>Simple Machines: Forces in Action</i>. Remind students it's important to read the text several times.• Point out the directions at the top of the assessment:<ol style="list-style-type: none">1. Read pages 12–13 in the text <i>Simple Machines: Forces in Action</i> for the gist.2. Reread the text and take notes using the graphic organizer below.3. Reread the text and answer the questions following the graphic organizer.• Clarify if needed.• Invite students to begin. Circulate to observe test-taking strategies and record observations for future instruction. For example, are students going back to the text to look for answers? Do they appear to be reading the text completely before beginning the assessment? Are they annotating the text or their assessment? This information helps when preparing students for future assessments and standardized tests.	



Closing and Assessment	Meeting Students' Needs
<p>A. Tracking My Progress, End of Unit 2 Assessment, Part I (5 minutes)</p> <ul style="list-style-type: none">• Ask students to reflect on the following learning target and then record their progress using the Tracking My Progress, End of Unit 2, Part I recording form: "I can answer questions about simple machines and how they work using details from a scientific text."• Collect Tracking My Progress sheets for additional assessment. Congratulate students on their research about all six simple machines. Remind students that tomorrow they will complete Part II of the assessment, during which they will read, conduct, and write about an experiment with wedges. This will be similar to the experiments they have conducted on inclined planes, levers, pulleys, and the wheel and axle.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: For Part II of this assessment, students will read and answer questions about an experiment using wedges (pages 14 and 15 of Simple Machines: Forces in Action). As with the experiments in Lessons 2, 4, and 10, be sure to use a large sticky note or small strip of paper cover up the "How Does It Work?" box on the top half of page 15.</i></p> <p><i>Before Lesson 13, prepare the necessary materials for the experiment. If materials are limited, consider having students conduct the experiment with a partner or in small groups and then asking them to answer questions individually.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 12

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges

Name: _____

Date: _____

Directions:

1. Read pages 12–13 in the text *Simple Machines: Forces in Action* for the gist.
2. Reread the text and take notes using the graphic organizer below.
3. Reread the text and answer the questions below the graphic organizer.

Read and Record:

What a wedge looks like:	Type of work it helps a person do:	Examples of a wedge:



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges

Read and Answer:

1. According to the text, the main function of a wedge is to:
 - A. lift heavy loads
 - B. push things apart
 - C. pull things together
 - D. raise something higher

2. Which of the following lines from the text describes HOW a wedge works?
 - A. “A doorstop is a wedge used to hold things.”
 - B. “You can push a thin wedge a longer distance than a thick wedge ...”
 - C. “When the axe hits the log, the force is pushed from above to the sides and splits the log apart.”
 - D. “You have a wedge inside you—your teeth!”

3. Which is an example of a wedge doing work?
 - A. teeth biting into something
 - B. your mouth opening and closing
 - C. a closed door
 - D. a knife sitting in the sink

4. What evidence from the text best supports the answer to Question 3 above?
 - A. “A doorstop is a wedge ...”
 - B. “The wedge is a simple machine that is used to push things apart.”
 - C. “You can split an apple using your jaw muscles.”
 - D. “You can push a thin wedge a longer distance than a thick wedge ...”



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges

5. Which of the following words has a similar meaning to the word *narrower* as it is used in the text: “The sharper the point or *narrower* the edge of the wedge, the less effort it takes to push an object apart.”
- A. thinner
 - B. limited
 - C. taller
 - D. stricter
6. Using the scientific meaning of the word *work*, which of the following describes work being done?
- A. a baby crawling
 - B. reading a book
 - C. a knife in the sink
 - D. hammering a nail into wood
7. How is the wedge related to the inclined plane? Use evidence from the text to support your explanation.



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges

8. How does a screw affect work? Use details from the text to support your explanation.



Tracking My Progress, End of Unit 2 Assessment, Part I

Name: _____

Date: _____

Learning target: I can answer questions about simple machines and how they work using details from a scientific text.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges
(Answers, for Teacher Reference)

Standards Assessed:

Graphic Organizer (W.4.8); Questions 1, 2, 3, and 4 (RI.4.3); Questions 5 and 6 (RI.4.4); Questions 7 and 8 (W.4.9); and (RI.4.3)

Directions:

1. Read pages 12–13 in the text *Simple Machines: Forces in Action* for the gist.
2. Reread the text and take notes using the graphic organizer below.
3. Reread the text and answer the questions below the graphic organizer.

Read and Record: [possible responses]

What a wedge looks like:	Type of work it helps a person do:	Examples of a wedge:
<ul style="list-style-type: none">• Two inclined planes joined back to back• A triangle that is narrow at one end and wider at the other• Wide on one end, thin on the other	<ul style="list-style-type: none">• Helps push things apart• Chopping wood• Cutting food• Biting into something• Holding a door open	<ul style="list-style-type: none">• axe• nail• knife• teeth• doorstop



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges
(Answers, for Teacher Reference)

Read and Answer:

1. According to the text, the main function of a wedge is to:
 - A. lift heavy loads
 - B. **push things apart**
 - C. pull things together
 - D. raise something higher

2. Which of the following lines from the text describes HOW a wedge works?
 - A. “A doorstop is a wedge used to hold things.”
 - B. “You can push a thin wedge a longer distance than a thick wedge ...”
 - C. **“When the axe hits the log, the force is pushed from above to the sides and splits the log apart.”**
 - D. “You have a wedge inside you—your teeth!”

3. Which is an example of a wedge doing work?
 - A. **teeth biting into something**
 - B. your mouth opening and closing
 - C. a closed door
 - D. a knife sitting in the sink

4. What evidence from the text best supports the answer to Question 3 above?
 - A. “A doorstop is a wedge ...”
 - B. **“The wedge is a simple machine that is used to push things apart.”**
 - C. “You can split an apple using your jaw muscles.”
 - D. “You can push a thin wedge a longer distance than a thick wedge ...”



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges
(Answers, for Teacher Reference)

5. Which of the following words has a similar meaning to the word *narrower* as it is used in the text: “The sharper the point or *narrower* the edge of the wedge, the less effort it takes to push an object apart.”
- A. **thinner**
 - B. limited
 - C. taller
 - D. stricter
6. Using the scientific meaning of the word *work*, which of the following describes work being done?
- A. a baby crawling
 - B. reading a book
 - C. a knife in the sink
 - D. **hammering a nail into wood**



End of Unit 2 Assessment, Part I:
Reading and Answering Questions about Wedges
(Answers, for Teacher Reference)

Use the rubric below to score the answers to the following. Be sure students' explanations are scientifically accurate and based on the text.

7. How is the wedge related to the inclined plane? Use evidence from the text to support your explanation.

[Possible Answer] The wedge is made of two inclined planes joined back-to-back. The wedge is made to move and the inclined plane is not. They both make work easier by making it take less effort.

8. How does a screw affect work? Use details from the text to support your explanation.

[Possible Answer] The wedge is used to push things apart. When you push on a wedge you can cut into something easier, like teeth cutting into an apple. If you have to take a bite of an apple, you can use your teeth to do the work. It takes less effort than trying to pull off a chunk with your fingers.



2-Point Rubric: Writing from Sources/Short Response¹
(For Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

2-point Response	The features of a 2-point response are:
	<ul style="list-style-type: none">• Valid inferences and/or claims from the text where required by the prompt• Evidence of analysis of the text where required by the prompt• Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt• Complete sentences where errors do not impact readability
1-point Response	The features of a 1-point response are:
	<ul style="list-style-type: none">• A mostly literal recounting of events or details from the text as required by the prompt• Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Incomplete sentences or bullets
0-point Response	The features of a 0-point response are:
	<ul style="list-style-type: none">• A response that does not address any of the requirements of the prompt or is totally inaccurate• No response (blank answer)• A response that is not written in English• A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 13

Connecting Key Vocabulary and End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can explain the main points in a scientific text, using specific details in the text. (RI.4.3)</p> <p>I can describe the organizational structure in an informational text (chronology). (RI.4.5)</p> <p>I can determine the meaning of academic words or phrases in an informational text. (RI.4.4)</p> <p>I can determine the meaning of content words or phrases in an informational text. (RI.4.4)</p> <p>I can write informative/explanatory texts that convey ideas and information clearly. (W.4.2)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can explain what happens before, during, and after a scientific experiment.• I can document what I observe during a scientific experiment.• I can construct a conclusion statement that describes what I learned about wedges.	<ul style="list-style-type: none">• End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Reviewing the Scientific Method: Concentric Circles (10 minutes)B. End of Unit Assessment, Part II: Answering Questions about Experiments (35 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Tracking My Progress (10 minutes)4. Homework<ol style="list-style-type: none">A. Make some observations and record a list of types of work that you see on your way home or at home that you think could be made easier with a simple machine.B. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• In Part II of the End of Unit 2 Assessment, students read and answer questions about an experiment, then conduct and write about the results of an experiment.• In advance: Prepare materials for students to conduct the experiment (<i>Simple Machines: Forces in Action</i>, page 14). If materials are limited, consider having students conduct the experiment with a partner or in small groups and then asking them to answer questions individually.• Consider what your classroom expectations are for conducting this experiment during the assessment, as many students will likely be reading or writing while others conduct the experiment.• Before distributing the text <i>Simple Machines: Forces in Action</i> to students, use a large sticky note or strip of paper to cover up the “How Does It Work?” box on the top half of page 15.• Post: Learning targets.



Lesson Vocabulary	Materials
scientific process, hypothesis, observations, conclusion (review from previous lessons)	<ul style="list-style-type: none">• Equity sticks• Scientific Method anchor chart (from Lesson 2)• End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments (one per student)• <i>Simple Machines: Forces in Action</i> pages 14–15 (with top of page 15 covered) (book; one per student)• Tracking My Progress, End of Unit 2, Part II recording form (one per student)• End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments (answers, for teacher reference)• 2-Point Rubric: Writing from Sources/Short Response (for teacher reference)

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post and review the following learning targets: “I can explain what happens before, during, and after a scientific experiment,” “I can document what I observe during a scientific experiment,” and “I can construct a conclusion statement that describes what I learned about wedges using scientific vocabulary.” Tell students today they get to show what they know about reading, conducting, and writing about experiments and they will do this with the wedge.• Have students Think-Pair-Share on the following prompt:<ul style="list-style-type: none">* Based on your experience reading, conducting, and writing about experiments, what do these targets mean? Give evidence from the experiments we have conducted on simple machines so far.• Ask pairs to share their specific examples with the class. Listen for students to say things like: “When we experimented with the inclined plane, we observed _____ and wrote this in our notes,” or “In our experiment with the pulley, we read _____.”	



Work Time	Meeting Students' Needs
<p>A. Reviewing the Scientific Method: Concentric Circles (10 minutes)</p> <ul style="list-style-type: none">• Tell students they are going to review the scientific method by discussing questions in Concentric Circles, much like they did with the guiding question in Lesson 1.• Ask the students to find a partner and number off 1 and 2 (if there is an odd number of students, triads are fine). Direct all 1s to form an inner circle (shoulder-to-shoulder) facing out. Then direct the 2s to stand in front of their partners.• Remind them of the Concentric Circles protocol directions from Lesson 1. Ask the students to discuss the following question: “Why do scientists conduct experiments?”• Give students 2 minutes to share. Then use equity sticks to cold call a few pairs and have them share their thinking.• Have the outside circle move two people to the left to discuss the remaining questions. Have students move as you present them with each new question.<ul style="list-style-type: none">* “What is a hypothesis?”* “Why is careful observation and recording important in an experiment?”* “What makes a good experiment conclusion?”• As the students are discussing the topic, circulate and listen for students to reference information on the Scientific Method anchor chart.• Have students gather together as a whole group. Post the Scientific Method anchor chart. Review the steps with students. Ask them to think about these steps as they complete their assessment.	<ul style="list-style-type: none">• Using sentence frames can help ELLs articulate their learning. Using the word “because” in the sentence frame helps all students support their thinking with evidence.• When using the Concentric Circles protocol in a class with an odd number of students, consider creating triads to support students who struggle with verbalizing their thinking.



Work Time (continued)	Meeting Students' Needs
<p>B. End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments (35 minutes) <i>Note: Students need to keep the top of page 15 in Simple Machines: Forces in Action covered while they are answering Questions 1 through 9 of this assessment.</i></p> <ul style="list-style-type: none">• Have students prepare to take the assessment by clearing their table/desk. Distribute the End of Unit 2 Assessment, Part II: Reading and Answering Questions about Experiments. Review the directions at the top of the assessment and point out where students should stop and conduct the experiment.• Explain to students where to perform the experiment when they are ready. Be sure to share the expectations for this portion of the assessment, as some students will likely still be reading and answering questions when others begin the experiment. If students are to share or take turns with materials, let them know expectations for this as well.• Once students are clear on the directions for the assessment distribute the text <i>Simple Machines: Forces in Action</i> pages 14 and 15. Remind students to keep the top of page 15 covered until they have answered Questions 1 through 9.• Let students begin. Circulate to support them as they transition to conducting the experiment and writing about the results.	<ul style="list-style-type: none">• Allow ELLs additional time to complete their assessment. They will receive extra time on the New York State assessment.



Closing and Assessment	Meeting Students' Needs
<p>A. Tracking My Progress (10 minutes)</p> <ul style="list-style-type: none">• Ask students to complete the Tracking My Progress, End of Unit 2, Part II recording form. Collect students' assessments and Tracking My Progress sheets. Compare students' reflections on the learning targets to their performance on this assessment to inform future instruction.• If students finish early, have them continue their independent reading from this module.• Congratulate students for working so hard to learn to read scientific text independently. Note their growing knowledge about simple machines; they will get to apply this as writers during Unit 3.	<ul style="list-style-type: none">• For students who struggle with language, consider giving them a list of key academic and scientific words they might use in their reflections.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Make some observations and record a list of types of work that you see on your way home or at home that you think could be made easier with a simple machine.• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 2: Lesson 13

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments

Name: _____

Date: _____

Directions:

1. Read page 14 in *Simple Machines: Forces in Action*.
2. Answer Questions 1 through 7 about the text. Then stop.
3. Conduct the experiment and record your observations for Question 8.
4. Write your conclusion for Question 9.
5. Uncover the “How Does It Work?” box of the text and answer Questions 10 and 11.

1. What is the best description of this text?
 - A. It compares and contrasts different wedges.
 - B. It presents a problem that can be solved using a wedge.
 - C. It explains how a wedge affects work.
 - D. It gives ordered steps for a procedure using different wedges.
2. Which of the following is NOT a characteristic of this text?
 - A. diagrams
 - B. dialogue
 - C. numbered steps
 - D. bulleted list
3. What is the purpose of the yellow box at the top of page 14?

End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments

4. The diagram at the bottom of page 14 helps the reader to visualize which step in the experiment?

5. How many times is the reader asked to record measurements?

- A. twice
- B. five times
- C. three times
- D. once

6. In Step 4, the reader is asked to:

- A. Record the distance.
- B. Use the skinny wedge.
- C. Use the fat wedge.
- D. Use a ruler.

7. Reread the text and write your **hypothesis**: What do you think is going to happen? Use evidence from the text to support your prediction.

STOP HERE: Conduct the experiment now. Then answer the remaining questions.



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments

Use vocabulary from this word bank to help you answer the questions below.

effort	force
experiment	wedge
simple machine	work

8. **Observations:** As you conduct this experiment, what do you see happening?

9. **Conclusion:** Describe what you have learned about the wedge and how it works.



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments

***Uncover the top of page 15 in the text and read the “How Does It Work?” section. Then answer the following questions.**

10. Which explanation of how a wedge affects a force is supported by the text?
- A. Pushing down on a wedge increases the force.
 - B. Pushing down on a wedge does not affect the force.
 - C. Pushing down on a wedge changes the direction of the force to sideways.
 - D. Pushing down on a wedge changes the direction of the force upwards.
11. According to the text, how is the distance between the blocks affected by using the thin versus the thick wedges?
- A. Thick wedges take more effort than thin wedges, but move the blocks a greater distance.
 - B. Thin and thick wedges both move the blocks an equal distance.
 - C. Thick wedges do not move the blocks.
 - D. Thick wedges don't work as well as thin wedges.



Tracking My Progress, End of Unit 2, Part II

Name: _____

Date: _____

Learning target: I can explain what happens before, during, and after a scientific experiment.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 2, Part II

Name:

Date:

Learning target: I can document what I observe during a scientific experiment.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



Tracking My Progress, End of Unit 2 Assessment, Part II

Name: _____

Date: _____

Learning target: I can construct a conclusion statement that describes what I learned about wedges.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments
(Answers, for Teacher Reference)

Standards assessed:

Questions 1, 2, 3, and 4 (RI.4.5); Questions 5, 6, 10, and 11 (RI.4.3); Questions 7, 8, and 9 (W.4.2).

Directions:

1. Read page 14 in *Simple Machines: Forces in Action*.
2. Answer Questions 1 through 7 about the text. Then stop.
3. Conduct the experiment and record your observations for Question 8.
4. Write your conclusion for Question 9.
5. Uncover the “How Does It Work?” box of the text and answer the remaining Questions 10 and 11.

1. What is the best description of this text?
 - A. It compares and contrasts different wedges.
 - B. It presents a problem that can be solved using a wedge.
 - C. It explains how a wedge affects work.
 - D. **It gives ordered steps for a procedure using different wedges.**
2. Which of the following is NOT a characteristic of this text?
 - A. diagrams
 - B. **dialogue**
 - C. numbered steps
 - D. bulleted list

3. What is the purpose of the yellow box at the top of page 14?

[Possible Answer] It tells the materials needed for the experiment.



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments
(Answers, for Teacher Reference)

4. The diagram at the bottom of page 14 helps the reader to visualize which step in the experiment?

[Possible Answers] Step 2, Step 4, or Steps 2 and 4

5. How many times is the reader asked to record measurements?

- A. **twice**
- B. five times
- C. three times
- D. once

6. In Step 4, the reader is asked to:

- A. Record the distance.
- B. Use the skinny wedge.
- C. **Use the fat wedge.**
- D. Use a ruler.

End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments
(Answers, for Teacher Reference)

Use the attached rubric to score the following questions.

7. Reread the text and write your **hypothesis**: What do you think is going to happen? Use evidence from the text to support your prediction.

[Possible Responses]

- **Both wedges will push the blocks apart.**
- **The thick wedge will push the blocks farther apart than the thin wedge.**
- **It will be harder to push the blocks apart with the thick wedge.**

8. **Observations**: As you conduct this experiment, what do you see happening?

[Possible Answer] When I used put a force down on the blocks using the skinny wedge the blocks moved _____ inches apart. When I put a force down using the fat wedge the blocks moved _____ inches apart.

9. **Conclusion**: Describe what you have learned about the wedge and how it works.

[Possible Answer] In this experiment I learned that the wedge is a simple machine that pushes things apart. I found that fat wedges move things more than skinny wedges, but I had to push harder. I think this means you need to use more effort with fat wedges and less with skinny wedges, but they can both help you do work.



End of Unit 2 Assessment, Part II:
Reading and Answering Questions about Experiments
(Answers, for Teacher Reference)

***Uncover the top of page 15 in the text and read the “How Does It Work?” section.
Then answer the following questions.**

10. Which explanation of how a wedge affects a force is supported by the text?
- A. Pushing down on a wedge increases the force.
 - B. Pushing down on a wedge does not affect the force.
 - C. **Pushing down on a wedge changes the direction of the force to sideways.**
 - D. Pushing down on a wedge changes the direction of the force upwards.
11. According to the text, how is the distance between the blocks affected by using the thin versus the thick wedges?
- A. **Thick wedges take more effort than thin wedges, but move the blocks a greater distance.**
 - B. Thin and thick wedges both move the blocks an equal distance.
 - C. Thick wedges do not move the blocks.
 - D. Thick wedges don't work as well as thin wedges.



2-Point Rubric: Writing from Sources/Short Response¹
(For Teacher Reference)

Use the below rubric for determining scores on short answers in this assessment.

2-point Response	The features of a 2-point response are:
	<ul style="list-style-type: none">• Valid inferences and/or claims from the text where required by the prompt• Evidence of analysis of the text where required by the prompt• Relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Sufficient number of facts, definitions, concrete details, and/or other information from the text as required by the prompt• Complete sentences where errors do not impact readability
1-point Response	The features of a 1-point response are:
	<ul style="list-style-type: none">• A mostly literal recounting of events or details from the text as required by the prompt• Some relevant facts, definitions, concrete details, and/or other information from the text to develop response according to the requirements of the prompt• Incomplete sentences or bullets
0-point Response	The features of a 0-point response are:
	<ul style="list-style-type: none">• A response that does not address any of the requirements of the prompt or is totally inaccurate• No response (blank answer)• A response that is not written in English• A response that is unintelligible or indecipherable

¹From New York State Department of Education, October 6, 2012.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Overview



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 3: Culminating Project: Sharing Opinions: The Most Helpful Simple Machine

In this unit students will use their research on simple machines to form an opinion and write an editorial. This editorial will state the student's opinion on which simple machine he or she believes helps people the most. Students will read and analyze two editorials as mentor texts in order to study author's craft, specifically how to identify opinions in writing and how authors use reasons with evidence to support their opinions. Students will then plan for their editorials by revisiting their

notes in their Simple Machine science journals and the central text *Simple Machines: Forces in Action* by Buffy Silverman to develop reasons for their opinions and gather evidence to support these reasons. Students will then draft their editorials and revise their work based on a series of lessons in which students examine the characteristics of opinion writing.

Guiding Questions And Big Ideas

- **How do simple machines affect our lives?**
- **How do readers and writers form and support opinions?**
- *Simple machines affect force, effort, and work.*



Mid-Unit 3 Assessment	<p>Reading and Answering Questions about Editorials</p> <p>This assessment centers on standards NYSP12 ELA CCLS RI.4.8 and RI.4.4. Learning targets are: “I can explain how an author uses reasons and evidence to support particular points in a text,” and “I can determine the meaning of academic words or phrases in an informational text.” Students will read and answer questions about an opinion piece—an editorial—with a particular focus on author’s craft. They will then answer text-dependent multiple choice and short answer questions.</p>
End of Unit 3 Assessment	<p>(Part I) Planning and Drafting an Editorial (Part II) Revising to Create a Polished Editorial</p> <p>This two-part assessment centers on standard NYSP12 ELA CCLS W.4.1: “I can write an opinion piece that supports a point of view with reasons and information.” In this on-demand assessment, students will select another simple machine (different from that on their performance task) to write an editorial about why this new simple machine could be the most helpful in daily life. In Part I, students will select their new simple machine and plan for their writing by rereading the text <i>Simple Machines: Forces in Action</i> by Buffy Silverman and revisiting notes in their Simple Machines science journals to develop reasons for their opinion and gather evidence to support these reasons. Then they will complete a draft of their editorial. In Part II, students will revise to create a polished editorial based on the Simple Machine Editorial rubric created in this module.</p>



Content Connections

This module is designed to address English Language Arts standards. However, the module intentionally incorporates Science content that many teachers may be teaching during other parts of the day. These intentional connections are described below.

NYS Science Core Curriculum

- Science Learning Standard 4: The Physical Setting
 - Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.
- Key Idea 5
 - Energy and matter interact through forces that result in changes in motion.

Central Texts

1. Buffy Silverman, *Simple Machines: Forces in Action*, Do It Yourself series (New York: Heinemann, 2009); ISBN: 978-1-4329-2317-4
2. Expeditionary Learning, “No More Junk in Our Schools,” written for instructional purposes.
3. Expeditionary Learning, “Who Cares about Polar Bears?” written for instructional purposes.



This unit is approximately 3-4 weeks or 17-19 sessions of instruction.

Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 1	Reading Editorials, Part I: Determining Authors' Opinions	<ul style="list-style-type: none"> I can write an editorial stating my opinion about which simple machine benefits people the most in their everyday lives. (W.4.1) I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) 	<ul style="list-style-type: none"> I can determine an author's opinion in a text. I can write a gist statement about an editorial. I can form an opinion about simple machines for my editorial. 	<ul style="list-style-type: none"> Exploring Opinions as Readers and Writers anchor chart (added notes) 	<ul style="list-style-type: none"> Exploring Opinions as Readers and Writers anchor chart (from Unit 1, Lesson 4) Simple Machines Chalk Talk charts Chalk Talk protocol
Lesson 2	Reading Editorials, Part II: How Authors Support Their Opinions with Reasons and Evidence	<ul style="list-style-type: none"> I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) 	<ul style="list-style-type: none"> I can write a gist statement about an editorial. I can determine an author's opinion in an editorial. I can explain how authors support their opinions with reasons and evidence. 	<ul style="list-style-type: none"> Exploring Opinions as Readers and Writers anchor chart Reading and Analyzing an Editorial graphic organizer 	<ul style="list-style-type: none"> Exploring Opinions as Readers and Writers (added to)
Lesson 3	Reading as Writers: Identifying Characteristics of Editorials	<ul style="list-style-type: none"> I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) 	<ul style="list-style-type: none"> I can explain how authors support their opinions with reasons and evidence. 	<ul style="list-style-type: none"> Entrance/exit ticket 	<ul style="list-style-type: none"> Exploring Opinions as Readers and Writers (Added to) Back-to-Back and Face-to-Face protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 4*	Mid-Unit Assessment: Reading and Answering Questions about Editorials	<ul style="list-style-type: none"> I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) 	<ul style="list-style-type: none"> I can explain how an author uses reasons and evidence to support an opinion. 	<ul style="list-style-type: none"> Mid-Unit 3 Assessment: Reading and Answering Questions about Editorials Tracking My Progress, Mid-Unit 3 recording form 	<ul style="list-style-type: none"> Concentric Circles
Lesson 5	Preparing to Write: Identifying Characteristics of Editorials and Determining Reasons to Support Our Opinions about Simple Machines	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can recall information that is important to a topic. (W.4.8) I can sort my notes into categories. (W.4.8) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can identify the characteristics of an editorial. I can create reasons for my opinion on simple machines based on scientific text, my notes, and my observations. I can identify which reasons are supported by the text and which are supported by my observations. I can effectively collaborate with my Simple Machine Expert Group. 	<ul style="list-style-type: none"> Simple Machine Opinion charts (one for each simple machine studied: wedge [for modeling], inclined plane, lever, pulley, and wheel) 	<ul style="list-style-type: none"> Editorial Characteristics and Planning chart Simple Machine T-charts Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 3)
Lesson 6	Planning to Write Editorials: Grouping Reasons with Evidence That Supports My Opinion	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can recall information that is important to a topic. (W.4.8) I can sort my notes into categories. (W.4.8) 	<ul style="list-style-type: none"> I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. I can group together reasons with related evidence in my editorial. 	<ul style="list-style-type: none"> Simple Machine Editorial graphic organizer Simple Machines Editorial rubric 	<ul style="list-style-type: none"> Simple Machine Editorial rubric chart Exploring Opinions as Readers and Writers anchor chart (from Lesson 3) Editorial Characteristics and Planning chart (from Lesson 5) Simple Machine T-charts Mix and Mingle protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 7	Drafting an Editorial about a Simple Machine	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) <ul style="list-style-type: none"> I can group together reasons with related evidence in my editorial. I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can effectively participate in a conversation with my peers and adults. (SL.4.1) 	<ul style="list-style-type: none"> I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. I can group together reasons with related evidence in my editorial. I can give kind, helpful, and specific feedback to my critique partner. 	<ul style="list-style-type: none"> Simple Machine Editorial graphic organizers Drafts of Simple Machine Editorials 	<ul style="list-style-type: none"> Critique Protocol anchor chart Editorial Characteristics and Planning chart (review) Simple Machines rubric anchor chart Peer Critique protocol
Lesson 8	Revising for Ideas: Interesting Introductions	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can write an introduction in my editorial that explains simple machines and states my opinion clearly. I can give kind and helpful feedback to my writing partner. 	<ul style="list-style-type: none"> List of Introductions 	<ul style="list-style-type: none"> Interesting Introductions Bold Beginnings (review from Module 2, Unit 3, Lesson 12) Simple Machines Editorial rubric chart (added to)



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 9	Revising for Word Choice: Scientifically Accurate Vocabulary	<ul style="list-style-type: none"> I can express ideas using carefully chosen words. (L.4.3) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) 	<ul style="list-style-type: none"> I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial. 	<ul style="list-style-type: none"> List of key vocabulary words Revised draft Exit ticket 	<ul style="list-style-type: none"> Simple Machines Editorial rubric chart (added to)
Lesson 10	Peer Critique: Scientific Accuracy of Ideas and Vocabulary	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can give kind, helpful, and specific feedback to my writing partner. I can critique the ideas of my writing partner's editorial for scientific accuracy. 	<ul style="list-style-type: none"> Feedback and reflection notes 	<ul style="list-style-type: none"> Steps for Revising My Editorial anchor chart Critique Protocol anchor chart (review) Simple Machine Editorial Rubric chart (review) Peer Critique protocol
Lesson 11	Revising for Organization: Catchy Conclusions	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can develop a conclusion that summarizes my point of view about simple machines in my editorial. I can give specific, kind, and helpful feedback to my writing partner. 	<ul style="list-style-type: none"> List of conclusions 	<ul style="list-style-type: none"> Peer Critique Norms (review from Module 2, Unit 3)



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 12	Revising for Sentence Fluency: Compound Sentences	<ul style="list-style-type: none"> I can use conventions to send a clear message to my reader. (L.4.2) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can write sentences that link thoughts together with conjunctions to explain reasons that support my opinion. I can give kind and helpful feedback to my writing partner. 	<ul style="list-style-type: none"> Revised drafts 	<ul style="list-style-type: none"> Compound Sentences Simple Machines Editorial rubric chart (added to)
Lesson 13	Reviewing Conventions and Editing Peers' Editorials	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use the writing process to produce clear and coherent writing (with support). (W.4.5) I can use conventions to send a clear message to my reader. (L.4.1, L.4.2, L.4.3) 	<ul style="list-style-type: none"> I can check my peers' work for correct capitalization. I can check my peers' work for correct spelling. I can check my peers' work for correct punctuation at the end of sentences. I can check my peers' work for complete sentences. 	<ul style="list-style-type: none"> Conventions anchor charts Simple Machine Editorials (second drafts annotated for edits) Exit tickets 	<ul style="list-style-type: none"> Simple Machines rubric anchor chart (added to) Chalk Talk protocol



Lesson	Lesson Title	Long-Term Targets	Supporting Targets	Ongoing Assessment	Anchor Charts & Protocols
Lesson 14	Publishing Simple Machine Editorials	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can use grammar conventions to send a clear message to a reader or listener. (L.4.1, L.4.2) With support, I can use technology to publish a piece of writing. (W.4.6) 	<ul style="list-style-type: none"> I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. I can correct conventions based on editing notes in my editorial and online reference resources. I can publish a typed version of my simple machine editorial. 	<ul style="list-style-type: none"> Simple Machine Editorial (final copy) 	<ul style="list-style-type: none"> Steps for Publishing My Editorial chart Simple Machines rubric anchor chart (reviewed)
Lesson 15	End of Unit Assessment Part I: Planning and Drafting an Editorial	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can produce writing that is appropriate to task, purpose, and audience. (W.4.4) 	<ul style="list-style-type: none"> I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. I can plan, draft, and revise an editorial in the course of two lessons. 	<ul style="list-style-type: none"> End of Unit 3 Assessment Part I: Planning and Drafting an Editorial 	
Lesson 16	End of Unit Assessment Part II: Revising to Create a Polished Editorial and Author's Chair Celebration	<ul style="list-style-type: none"> I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can produce writing that is appropriate to task, purpose, and audience. (W.4.4) I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1) 	<ul style="list-style-type: none"> I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. I can plan, draft, and revise an editorial in the course of two lessons. I can listen as my peers share their writing and give specific praise for their work. 	<ul style="list-style-type: none"> End of Unit 3 Assessment Part II: Revising to Create a Polished Editorial Tracking My Progress, End of Unit 3 recording form 	<ul style="list-style-type: none"> Author's Chair Celebration



Optional: Experts, Fieldwork, And Service

Experts:

- Ask an editor of a local newspaper or magazine to talk with the students about how editorials fit in their publication. Invite a local newspaper journalist to speak to students about how editorials are written.

Fieldwork:

- Visit the local offices of the local newspaper and get a tour of the facilities to track how articles go from drafting to publication.

Service:

- N/A

Optional: Extensions

- Create a simple machines magazine with articles on how they work and how to use them. Ask the art teacher to help students craft diagrams of their simple machines to add to the articles.

Preparation and Materials

- As in previous modules, students revise their work using different-colored pencils for each focus. This begins in Lesson 8. Students will need the following colors: red, orange, green, blue, purple.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3:

Recommended Texts



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Unit 3 focuses on simple machines and how those machines are used in modern life. The list below includes texts with a range of Lexile text measures on this topic. This provides appropriate independent reading for each student to help build content knowledge.

It is imperative that students read a high volume of texts at their reading level in order to continue to build the academic vocabulary and fluency demanded by the CCLS.

Common Core Band Level Text Difficulty Ranges:

(As provided in the NYSED Passage Selection Guidelines for Assessing CCSS ELA)

- Grade 2–3: 420–820L
- Grade 4–5: 740–1010L
- Grade 6–8: 925–1185L

Where possible, texts in languages other than English are also provided. Texts are categorized into three Lexile levels that correspond to Common Core Bands: below grade band, within band, and above band. Note, however, that Lexile® measures are just one indicator of text complexity, and teachers must use their professional judgment and consider qualitative factors as well. For more information, see Appendix 1 of the Common Core State Standards.

Title	Author And Illustrator	Text Type	Lexile Measure
Lexile text measures below band level (below 740L)			
<i>Bicycle Book</i>	Gail Gibbons (author)	Informational	530
<i>Construction Toys</i>	Wendy Sadler (author)	Informational	670
<i>The Inventions of Eli Whitney: The Cotton Gin</i>	Holly Cefrey (author)	Informational	725*

*Lexile based on a conversion from Accelerated Reading level;

Lexile® is a trademark of MetaMetrics, Inc., and is registered in the United States and abroad. Copyright © 2012 MetaMetrics.



Title	Author And Illustrator	Text Type	Lexile Measure
Lexile text measures within band level (740-1010L)			
<i>The History of Everyday Life</i>	Elaine Landau (author)	Informational	760*
<i>The Bicycle</i>	Larry Hills (author)	Informational	775*
<i>Household Inventions: From Toilets to Toasters</i>	Natalie Lunis (author)	Informational	840
<i>How Do Hybrid Cars Work?</i>	Richard Hantula (author)	Informational	840*
<i>So You Want to Be an Inventor?</i>	Judith St. George (author)	Informational	840
<i>Reinvent the Wheel: Make Classic Inventions, Discover Your Problem-Solving Genius, and Take the Inventor's Challenge</i>	Ruth Kassinger (author)	Informational	890*
<i>Inventors Who Changed the World</i>	Angela Royston (author)	Informational	900*
<i>The Chinese Thought of It: Amazing Inventions and Innovations</i>	Ting-xing Ye (author)	Informational	910*
Lexile text measures above band level (over 1010L)			
<i>Whose Idea Was That? Inventions that Changed Our Lives</i>	David Ellyard (author)	Informational	1010*
<i>Gadgets and Inventions</i>	Neil Morris (author)	Informational	1060
<i>Mighty Machines</i>	Ian Graham (author)	Informational	1080

*Lexile based on a conversion from Accelerated Reading level.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 1

Reading Editorials, Part I: Determining Authors' Opinions



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can write an editorial stating my opinion about which simple machine benefits people the most in their everyday lives. (W.4.1)
I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8)

Supporting Learning Targets

- I can determine an author's opinion in a text.
- I can write a gist statement about an editorial.
- I can form an opinion about simple machines for my editorial.

Ongoing Assessment

- Exploring Opinions as Readers and Writers anchor chart (added notes)



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Reader/Writer: Chalk Talk: What Do We Know about Simple Machines? (10 minutes)B. Introducing the Performance Task and Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Characteristics of Opinions (15 minutes)B. First Read of an Editorial: Reading for the Gist (10 minutes)C. Second Read of an Editorial: Finding the Opinion (10 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Forming an Opinion on Simple Machines (10 minutes)4. Homework<ol style="list-style-type: none">A. Reread the text "No More Junk in Our Schools." Underline three statements that support the author's opinion that junk food should be removed from school vending machines.	<ul style="list-style-type: none">• In this unit, students will read editorials to examine how authors use reasons and evidence to support their points (RI.4.8). They also will use these editorials as mentor texts for their own editorial writing for this module's performance task (W.4.1). Many lessons in the first half of this unit focus on both of these standards.• The performance task is introduced to students in this lesson using the Simple Machine Editorial rubric. This document has both the prompt and learning targets for the performance task, as well as a blank table for creating the rubric with students. Over the course of this unit, students will define the criteria for success for each target on the rubric.• Co-constructing the rubric based on the learning targets gives students a clear picture of what meeting these targets will look like as they write their editorials. Research shows that engaging students in the assessment process engages, supports, and holds students accountable for their learning. This practice helps all learners, but it supports struggling learners the most.• Also in this lesson, students write a short summary of the text. This is a review from Modules 1 and 2 (see Module 2, Unit 2, Lesson 1).• In advance: Prepare for Simple Machines Chalk Talk charts by titling four pieces of chart paper:<ul style="list-style-type: none">* What We Know about <u>Inclined Planes</u>* What We Know about <u>Levers</u>* What We Know about <u>Pulleys</u>* What We Know about <u>Wheels and Axles</u>• Place one chart in each corner of the room.• See the directions for the chalk talk in the supporting materials and record them on the board or chart paper to post for students at the beginning of this lesson.• Review:<ul style="list-style-type: none">• Chalk Talk protocol (Appendix)• Four Corners strategy (Appendix).



Lesson Vocabulary	Materials
editorial, opinion, best, worst, most, least, prettier, coldest	<ul style="list-style-type: none">• Simple Machines Science journal (each student's from Unit 2)• Chart paper for Chalk Talk Directions (or write these on the board)• Chart paper for Simple Machines Chalk Talk charts (four)• Markers (one per student)• Document camera• Simple Machine Editorial rubric• Exploring Opinions as Readers and Writers anchor chart (from Unit 1, Lesson 4)• Opinion strips• No More Junk in Our Schools (one per student)• Note cards (one per student for exit ticket)



Opening	Meeting Students' Needs
<p>A. Engaging the Reader/Writer: Chalk Talk: What Do We Know about Simple Machines? (10 minutes)</p> <ul style="list-style-type: none">• Congratulate students on completing the End of Unit 2 Assessment and building expertise on simple machines. Explain that as they begin this final unit of the module, they will have an opportunity to share their expertise as writers. Let them know that today the first thing they will do is take stock of their collective knowledge about simple machines by participating in a chalk talk (introduced in Module 1, Unit 2).• Be sure students have their Simple Machines Science journal. Point out and review the Chalk Talk directions recorded on the board (or chart paper). Show the class where you have posted the Simple Machines Chalk Talk charts in the four corners of the room.• Read the title of each chart aloud to students:<ul style="list-style-type: none">* What We Know about Inclined Planes* What We Know about Levers* What We Know about Pulleys* What We Know about Wheels and Axles• Tell them that you would like them to follow the directions for a chalk talk to add their thinking to each chart. Tell students that they should try to write something they know from their reading or research on each chart and to reference their science journals. Distribute a marker to each member of the class, reminding them that a chalk talk is a silent activity, and allow students to visit and add to charts.• Give students 5 minutes to visit each chart and record. Look for students to record key concepts about each simple machine. Specifically, look for them to describe how each simple machine makes work easier by reducing effort but how there is a trade-off of increased distance.• Gather students together and tell them that they will revisit these charts at the end of the lesson. Collect or have them put away their science journals.	<ul style="list-style-type: none">• If you would like to track students' thinking on the Chalk Talk charts, consider assigning students different-colored markers.



Opening (continued)	Meeting Students' Needs
<p>B. Introducing the Performance Task and Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Using the document camera, display the Simple Machine Editorial rubric. Read the performance task description at the top of the rubric to students. Ask them to turn to a partner and share what they think they will be doing or questions they have. Have pairs share out.• Read the learning target below the performance task: “I can write an editorial stating my opinion about which simple machine benefits people the most in their everyday lives.” Explain that the class will focus on this learning target for the rest of this unit. Circle the words <i>editorial</i> and <i>opinion</i>. Remind students that they discussed the meaning of the word <i>opinion</i> in the beginning of Unit 1 and they will review the definition of this word and add to it in this lesson.• Explain that an <i>editorial</i> is a type of writing that shares the author’s opinion on a topic and that editorials are often found in newspapers or magazines. Tell students that today they will learn more about both of these words to help them prepare for their performance task.• Post and read out loud the supporting learning targets:<ul style="list-style-type: none">– “I can determine an author’s opinion in a text.”– “I can write a gist statement about an editorial.”– “I can form an opinion about simple machines for my editorial.”• Ask students to turn to a partner and tell them what they think the class will be reading today to help them accomplish these targets. Have pairs share out. Listen for: “We will read an editorial,” or “We will read opinions.”• Explain that the class will examine opinions and read an example of an editorial for this lesson. Then they will be asked to form an opinion on which simple machine (posted on the chalk talk charts: inclined plane, levers, pulleys, or wheels and axles) is the most helpful.	



Work Time	Meeting Students' Needs
<p>A. Characteristics of Opinions (15 minutes)</p> <ul style="list-style-type: none">• Post the Exploring Opinions as Readers and Writers anchor chart (from Unit 1, Lesson 4). Review the definition of <i>opinion</i> written on the top of the chart. “Opinion: what a person thinks about something or someone. This thinking can be based on facts, feelings, experience, or a combination of all three.”• Explain that another way to explain <i>opinion</i> is “someone’s point of view on a topic.” Add this note to the anchor chart next to the definition.• Tell students that you have some statements about various topics that you would like them to discuss with one another to determine whether each statement is an opinion or not.• Explain that for each topic (dancing, flowers, etc.), there are two statements. Distribute opinion strips and give students a minute to read them.• Then tell students that they will “mix and mingle,” reading their statements aloud to one another until they have found someone with a statement on the same topic. Give students 3 minutes to mix and mingle and find their partner. Circulate and assist as necessary.• Once students have found their partners, focus their attention and prompt them:<ul style="list-style-type: none">* “Which of your statements is most likely an opinion? How do you know?”• Give pairs a few minutes to discuss, then gather them together as a whole group asking partners to stick together.• Draw a simple T-chart on the board titled: Opinion: Yes or No. Ask a pair to share out their statements and their thinking.• Have the class indicate whether they agree or disagree with a thumbs-up or thumbs-down.• Record each statement onto the T-chart. Ask pairs to share until all statements have been shared and voted on.• Ask students to examine the “Yes” side of the T-chart and share what they notice with their partner.• Cold call a few students to share what their partner said. Point out the following common characteristics of opinions and record onto the Exploring Opinions as Readers and Writers anchor chart.	<ul style="list-style-type: none">• To further support level 1 ELL students, consider partnering them with a student who speaks their L1 or provide them with a translation of their quote from Google Translate.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">Characteristics of Opinions:<ul style="list-style-type: none">Often use words like “best” or “worst” (additional examples: “most” and “least”)Often use endings like -er or -estCan be reasonably debated or arguedA differing point of view could be stated	<ul style="list-style-type: none">
<p>B. First Read of an Editorial: Reading for the Gist (10 minutes)</p> <ul style="list-style-type: none">Tell students that now that they know some characteristics of opinions, they are ready to take a look at an editorial and identify evidence for an opinion in the author's writing. Explain that as with any complex text, first they will be reading for the gist, or what the article is about. Tell students that you would like them to annotate the text, by writing the gist in the margin at the bottom of the text after you have read it aloud to them. Remind students that the gist is a short (20 words or less) statement of what a text is mostly about. It should describe the main idea and include evidence from the text to support it.Distribute the text “No More Junk in Our Schools.” Ask students to read along silently as you read it aloud.Ask students to take 5 minutes to reread the text and write the gist at the bottom of the page. Circulate and support as necessary.Ask for volunteers to read their gist statements. Listen for: “This article is about how the author thinks vending machines should be taken out of schools,” or “This article tells reasons why vending machines should not be in schools.”	<ul style="list-style-type: none">Consider pulling a small group or conferring with students who struggle to read grade-level text. Another strategy is to provide text-dependent questions that support them in comprehending the text. For example: “What does the author want removed from schools?” and “Why does the author think vending machines in schools are not a good idea?”



Work Time (continued)	Meeting Students' Needs
<p>C. Second Read of an Editorial: Finding the Opinion (10 minutes)</p> <ul style="list-style-type: none">• Using the document camera, display the text and zoom in on the first paragraph. Ask students to reread this paragraph with a partner and locate the sentence that most clearly states the author's opinion. Remind them to use the Exploring Opinions as Readers and Writers anchor chart as a resource.• Cold call a pair to share their thinking. Listen for students to point out the following sentence:<ul style="list-style-type: none">– “The best thing schools can do to help their students eat healthier is to get rid of their vending machines.”• Explain that this sentence most clearly states the author's opinion about vending machines in schools, which is the topic of the article.• Distribute note cards for the exit ticket.<ul style="list-style-type: none">* Ask students to write this sentence on the note card: “The best thing schools can do to help their students eat healthier is to get rid of their vending machines.”* Ask them to explain in writing why this statement is an opinion.• Allow them to use the anchor chart as a resource. Collect exit tickets and use them as a formative assessment for the learning target:<ul style="list-style-type: none">– “I can determine an author's opinion in a text.”• Ask students to hold on to their text for homework.	



Closing and Assessment	Meeting Students' Needs
<p>A. Forming an Opinion on Simple Machines (10 minutes)</p> <ul style="list-style-type: none">• Tell students that now that they have determined the characteristics of opinions, it is time to form their own opinion about which simple machine is the most helpful in daily life.• First reread the top of the Simple Machines Editorial rubric to students. Ask them to look at the chart paper posted in four corners of the room. Explain that they will now take a quick tour of each corner to review the statements written during the chalk talk at the beginning of the lesson.• Give directions for Four Corners:<ol style="list-style-type: none">1. Read each chart and decide which simple machine you feel is the most helpful in our daily lives.2. Count off from one to four. Divide into your number grouping and each group go stand by one of the four charts.3. With your group, take 5 minutes to circulate and read all the charts.4. On your own, decide which simple machine you think is the most helpful and move to the corresponding corner.5. Once you are in the corner you chose, turn to a partner in that corner and explain:<ul style="list-style-type: none">* "Why did you choose this particular simple machine as the most helpful in daily life?"• Have a few pairs share out their reasons. Record students' simple machine choice for grouping in future lessons.	<ul style="list-style-type: none">• Depending on your classroom space, you may decide to give a signal for students to switch to the next poster. This may be necessary in a crowded space.• Do not worry if students are not evenly split between each simple machine. This will not affect grouping for future lessons.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Reread the text "No More Junk in Our Schools." Underline three statements that support the author's opinion that junk food should be removed from school vending machines. <p><i>Note: Ensure that students have a way to organize their texts and writing materials for this unit. Giving students a writing folder will help them to hold on to the editorial texts they will read and analyze in the first half of the unit and later use as mentor texts for their writing in the last half. The folder will also be a place where students can keep their plans, drafts, and revisions throughout the unit.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 1

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Chalk Talk Directions

Teacher Directions: Write the following directions on the board or on chart paper for students.

Chalk Talk Directions: Do the following silently:

1. Go to a chart and read the question at the top.
2. Read any comments that have been written by others.
3. Think about what response you would like to write or add.
4. Wait for an opening, then write your response. (Don't crowd or push.)
5. Move on to the next chart, then repeat the steps above.



Simple Machine Editorial Rubric

A local engineering magazine wants to educate its readers on the importance of simple machines in the age of high-tech gadgets. So they've decided to hold a "Campaign for Simple Machines." Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month's magazine.

Learning Target: I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. (W.4.1)

Criteria	Meets	Partially Meets	Does Not Meet
Ideas			
I can write an introduction in my editorial that explains simple machines and states my opinion clearly. (W.4.1a)			
I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. (W.4.1b)			
Word Choice			
I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial. (L.4.3)			
Organization			
I can group together reasons with related evidence in my editorial. (W.4.1a)			
I can use linking words to connect my opinion to my reasons. (W.4.1c)			
I can develop a conclusion that summarizes my opinion about simple machines in my editorial. (W.4.1d)			



Simple Machine Editorial Rubric

Criteria	Meets	Partially Meets	Does Not Meet
Conventions			
I can use conventions to send a clear message to my reader. (L.4.2)			



Opinion Strips

Teacher Directions:

- Make enough copies for each student to have an A or B strip. (ie. For 25 students make 5 copies of the strips below).
- Then cut apart so that students have either an A or B.
- Students will have to find a partner with a statement that is similar to theirs to compare and decide which is most likely an opinion.

A. José is the best dancer in class.

B. José is in a dance class.

A. Winter is coldest in the north.

B. Winter is the worst season.

A. Roses are prettier than daisies.

B. Roses and daisies are flowers.

A. We should go to school in the summer.

B. We are in school now.

A. I think Anna is the fastest runner.

B. Anna won the race.





“No More Junk in Our Schools”

The best thing schools can do to help their students eat healthier is to get rid of their vending machines. Most of these machines sell junk food. There are vending machines in most middle schools and high schools. There are even some in elementary schools. There are lots of reasons to get rid of these machines, but here are a few of the most convincing.

The most important reason is that it is unhealthy for kids to eat a lot of sweet, fatty, and salty foods. Vending machines usually sell food like soda, chips, and candy. These are very unhealthy foods. Eating a lot of these foods can cause kids to health problems like heart disease and diabetes. These are all deadly diseases.

Another good reason vending machines should be ditched is that they advertise unhealthy food to kids. Food and beverage companies are making money from selling junk food in schools, and the health of students is suffering. This is wrong. In fact, the doctors at the American Academy of Pediatrics say there should be a ban on advertising unhealthy food to kids.

Finally, junk food distracts from learning. Eating foods high in sugar can cause kids to become tired, and tired kids have trouble focusing.

Removing vending machines from schools is the healthiest choice we can make for our students.

Lexile 980

Written by Expeditionary Learning for Instructional Purposes

Sources

American Academy of Pediatrics, <http://www2.aap.org/obesity/about.html>

Don't Market Junk Food to Kids, Doctors Say, by Sharon Bernstein, June 27th, 2011, Los Angeles Times, http://latimesblogs.latimes.com/money_co/2011/06/junk-food-marketing-kids-doctors.html

School Food Environments and Policies in US Public Schools, D. Finkelstein, E. Hill, R. Whitaker, Pediatrics, <http://www.pediatricsdigest.mobi/content/122/1/e251.full>



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 2

Reading Editorials, Part II: How Authors Support Their Opinions with Reasons and Evidence



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can write a gist statement about an editorial.• I can determine an author's opinion in an editorial.• I can explain how authors support their opinions with reasons and evidence.	<ul style="list-style-type: none">• Exploring Opinions as Readers and Writers anchor chart• Reading and Analyzing an Editorial graphic organizer



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Sharing Homework: Mix and Mingle (5 minutes)B. Review Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Reviewing the Text “No More Junk in Our Schools”: Recording the Gist and Opinion (5 minutes)B. Rereading the Text to Determine Reasons and Evidence: Guided Practice, Partner Work, and Sharing (30 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Exit Ticket: Finding Reasons and Evidence in the Text (5 minutes)B. Preparing for Homework: Reading Another Editorial for Gist (10 minutes)4. Homework<ol style="list-style-type: none">A. Reread the article “Who Cares about Polar Bears?” and answer Questions 1 and 2 in your graphic organizer.	<ul style="list-style-type: none">• As noted in Lesson 1, in this unit students will read editorials to examine how authors use reasons and evidence to support their points (RI.4.8). They will also use these editorials as mentor texts for their own editorial writing (W.4.1) for this module’s performance task. You will notice that many lessons in this unit’s first half focus on these two standards.• Consider supplying a copy of the Exploring Opinions as Readers and Writers anchor chart for students to keep in their writing folders for reference.• In advance: Ensure that students have a way to organize their texts and writing materials for this unit (i.e., a writing folder). Students will use this folder to contain the texts and graphic organizers from the first half of the unit and later their editorial plans, drafts, and revisions.• Review students’ exit tickets from Lesson 1 to determine whether to spend more instructional time during Part A of Work Time. Based on the needs of your students, determine whether to do a “think-aloud” about determining the author’s opinion in the introductory paragraph of the text.



Lesson Vocabulary	Materials
opinions, reasons, evidence	<ul style="list-style-type: none">• Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 1; see example in supporting materials)• “No More Junk in Our Schools” (from Lesson 1; one per student)• Reading and Analyzing an Editorial graphic organizer (two per student; one to use in class as a recording form and exit ticket, and the second for homework)• Document camera• Writing folder (for each student to organize texts, graphic organizers, and writing materials for this unit)• “Who Cares about Polar Bears?” (one per student, for homework)



Opening	Meeting Students' Needs
<p>A. Sharing Homework: Mix and Mingle (5 minutes)</p> <ul style="list-style-type: none">• Post the Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 1). Have students take out the text “No More Junk in Our Schools” from their homework from the night before. Tell the class:• “Reread the text ‘No More Junk in Our Schools’ and look for more opinion statements. Underline and annotate in the margin why you think the sentence you underlined is the author’s opinion.”• Give directions:<ol style="list-style-type: none">1. Use the anchor chart to justify what you underlined in the text so you can share this reasoning with your classmates.2. Focus on the characteristics of opinions listed on the anchor chart added in the previous lesson:<ul style="list-style-type: none">– Often use words such as “best” or “worst” (additional examples: “most” or “least”)– Often use endings like -er or -est– Can be reasonably debated or argued– A differing point of view could be stated3. Mix and mingle: share the opinions you found in the text and how you identified them as opinions.• Give students a few minutes to mingle and share with one or two peers. Gather students back to sit whole group. Ask:<ul style="list-style-type: none">* “Were the opinions you recorded the same as or different from those of your classmates’ opinions?”* “How did you identify the statement you underlined as an opinion?”• Cold call a few students to share what they underlined and why they think these statements are opinions. Discuss with the class and clarify misunderstandings as necessary.• Have students hold onto their text, as they will need them for the rest of this lesson.	<ul style="list-style-type: none">• For students who need further support reading grade-level text or are in need of a visual, consider using a document camera to display students’ text when they are called to share their work with the whole group.



Opening (continued)	Meeting Students' Needs
<p>B. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Remind students that yesterday they focused on defining and identifying opinions. They also formed an opinion about which simple machine helps the most in daily life. Tell students that to further prepare to write their own editorial, they will have to examine editorials more closely.• Post and read aloud the following learning targets:<ul style="list-style-type: none">– “I can write a gist statement about an editorial.”– “I can determine an author’s opinion in an editorial.”• Students should notice that these targets are a repeat from the previous lesson. Have them give you a quick thumbs-up, thumbs-sideways, or thumbs-down to indicate their understanding of these targets. Clarify if necessary.• Post and read the third learning target:<ul style="list-style-type: none">– “I can explain how authors support their opinions with reasons and evidence.”• Ask students to Think-Pair-Share on important words they notice in the target and what this learning target means to them.• Ask a few pairs to share their thinking. Be sure to point out the following words: <i>opinions</i>, <i>reasons</i>, and <i>evidence</i>.• Remind students that yesterday they defined what an <i>opinion</i> is and how to determine one when they are reading. Explain that today they will focus on the reasons authors give for their opinions, or why they believe what they believe.• Explain that they will also examine how authors use evidence (facts, observations, or details) to support their reasoning. Let students know that they will be rereading the editorial “No More Junk Food in Our Schools” to analyze how authors do this.	<ul style="list-style-type: none">• For students limited in their English language or oral skills, consider allowing them to do a quick sketch of what the learning target means to them before the Think-Pair-Share.



Work Time	Meeting Students' Needs
<p>A. Reviewing the Text “No More Junk in Our Schools”: Recording the Gist and Opinion (5 minutes)</p> <ul style="list-style-type: none">• Place students with a partner for review, rereading, and discussion of this text. They will remain working with this partner for most of the lesson.• Next, distribute the Reading and Analyzing an Editorial graphic organizer (one per student). Students should still have their text “No More Junk Food in Our Schools.” Have students record their names and title of the editorial. Display the graphic organizer using a document camera. Point out Question 1 on the graphic organizer:<ol style="list-style-type: none">1. What is the topic? What is the gist of this editorial?• Ask a few volunteers to share the gist statement they wrote on the bottom of their text in Lesson 1. If necessary, clarify the gist with the class. Tell students that in a moment they will record their gist again on the graphic organizer.• Point out Question 2 on the graphic organizer:<ol style="list-style-type: none">2. What is the author’s opinion on this topic (WHAT the author believes)?• Remind students that yesterday they identified the author’s opinion in the introductory paragraph and wrote it on an exit ticket. Display the text and zoom in on the first paragraph.• Ask students to turn to their partner and share which sentence in the first paragraph of the editorial states the author’s opinion on vending machines in schools. Remind them to refer to the Characteristics of Opinions listed on the anchor chart as they share.• Cold call a pair to share their response. Students should identify the first sentence in the text as the author’s stated opinion: “The best thing schools can do to help their students eat healthier is to get rid of their vending machines.” Listen for them to comment on the use of <i>best</i> as a key word in identifying this as opinion. Help students notice that there could be a different/opposing point of view on the issue of whether we should have vending machines in schools.• Once students are clear on the gist and the author’s opinion, ask them to record their responses for both Questions 1 and 2 of the graphic organizer. Model this as necessary using a document camera and a copy of the graphic organizer.	



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading the Text to Determine Reasons and Evidence (30 minutes)</p> <p>Guided Practice (10 minutes)</p> <ul style="list-style-type: none">Refer to the Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 1). Explain to students that authors often use reasons and evidence to support a point they want to make, or in the case of editorials, their opinion on a topic. Explain that a <i>reason</i> is an explanation for why an author thinks something is true. It is why they believe what they believe. Add the following to the Exploring Opinions as Readers and Writers anchor chart:“Authors support their <i>opinions</i> (WHAT they believe) with <i>reasons</i> (WHY they believe).”Point out Question 3 in the graphic organizer:<ol style="list-style-type: none">What are the reasons and evidence the author uses to support this opinion?Put a box around the word <i>reasons</i> and give students the following directions:With your partner:<ol style="list-style-type: none">Reread the second paragraph of the text.Find a sentence that you think is the author’s reason.Be prepared to share your sentence and why you think it is the reason. (Use details in the text to support your thinking.)Give students 5 minutes to complete the above steps with their partner.Cold call pairs to share the sentence they identified and why they identified it as the reason. This should be fairly simple for students as the sentence states explicitly that it is a reason: “The most important reason is that it is unhealthy for kids to eat a lot of sweet, fatty, and salty foods.” Ask students to write the latter half of the sentence “...it is unhealthy for kids to eat a lot of sweet, fatty, and salty foods” as the first reason on their graphic organizer.Next, reread Question 3 on the graphic organizer. Ask students to focus on the word <i>evidence</i>. Remind them that this word means facts or details listed in the text that support the reason stated. Tell students that <i>evidence</i> is HOW authors support their reasons with facts and details.Model with a think-aloud like the following: “So, if the reason stated is that it is unhealthy to eat sweet, fatty, and salty foods, then I should find some details or facts that support this reason in the paragraph.”	<ul style="list-style-type: none">During guided practice, determine which, if any, students should be pulled into a small group supported by the teacher during the partner work.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Continue modeling: Read the second paragraph aloud to students and point out the second sentence: "Vending machines usually sell food like soda, chips, and candy." Explain that this sentence is a fact that supports the author's reason. Let them know that it is likely that some facts have been researched by the author, but others will be common knowledge.• On your graphic organizer, model writing this evidence under the recorded reason. Ask students to record the evidence along with you on their own graphic organizers.• Ask students to work with their partners to reread this paragraph and find another sentence that contains evidence that supports the author's reason. After a minute or so, have pairs share their sentences. Listen for students to share: "...these foods can cause kids to have health problems..." <p>Partner Work (10 minutes)</p> <ul style="list-style-type: none">• Once you feel students are ready to identify reasons and evidence with their partner, have them analyze the third paragraph in the text, which starts, "Another good reason..." and ends "...ban on advertising unhealthy food to kids." They should record their reasons and evidence in the bulleted section of the graphic organizer.• Give them 10 minutes to do this. Circulate and support partners as necessary or pull a small group to continue with another round of guided practice. <p>Sharing and Debrief (10 minutes)</p> <ul style="list-style-type: none">• Have pairs group with another pair and share their reasons and evidence. Ask groups to discuss the following:<ul style="list-style-type: none">* "What information should we add about reasons and evidence to the Exploring Opinions as Readers and Writers anchor chart?"• Give groups 5 minutes to share and discuss. Circulate to listen to discussion and note any groups that could be selected to share with the whole group about the discussion question. Also note any misconceptions that should be cleared up during the whole group debrief.	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Ask one or two groups to share their reason and evidence from the third paragraph. Listen for students to share the following reason:<ul style="list-style-type: none">– Vending machines advertise unhealthy foods to kids.• Listen for the following evidence:<ul style="list-style-type: none">– Companies are making money selling unhealthy food.– Doctors say there should be a ban on advertising unhealthy food to kids.• Ask a few groups to share their thoughts on the discussion question. Listen for students to explain that “<i>reasons</i> are WHY an author has an opinion” and “<i>evidence</i> is HOW authors support their reasons.” Add the following to the anchor chart:• Opinions are supported by:<ul style="list-style-type: none">– <u>Reasons</u>: WHY an author has a particular opinion.– WITH– <u>Evidence</u>: HOW authors support their reasons with facts or details (based on research and/or observations).• Point out that the facts or details used by authors can be from research or observation. Add this note after the explanation of evidence.	



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket: Finding Reasons and Evidence in the Text (5 minutes)</p> <ul style="list-style-type: none">• Tell students that you would now like to see if they can find reasons and evidence in the text on their own. Explain that you would like them to independently read and record the reason and evidence stated in the fourth paragraph starting, “Finally...” and ending “...have trouble focusing.” Tell them that this will be their exit ticket for today.• Give them 5 minutes to read and record.• Collect their Reading and Analyzing an Editorial graphic organizers to help determine any instructional adjustments to the next lesson (where they will read and analyze a second editorial). Have students put the text “No More Junk in Our Schools” into their writing folders.	
<p>B. Preparing for Homework: Reading another Editorial for Gist (10 minutes)</p> <ul style="list-style-type: none">• Distribute the text “Who Cares about Polar Bears?” Explain that the class will analyze this next editorial to help them explain how authors use reasons and evidence to support their opinions. Tell students that today you will read the text aloud to help them get the gist, tonight they will reread the text and answer Questions 1 and 2 on the graphic organizer, and tomorrow they will read the text a third time to find the author’s reasons and evidence.• Tell students that this text will likely seem more complex, because it contains some scientific concepts. Reassure them that it is okay if they do not fully understand the text after you have read it aloud and that they will be able to confirm their answers to Questions 1 and 2 on the graphic organizer in class tomorrow.• Read the text aloud as students follow along in their own copies. Afterward, have them turn to a partner and discuss what they think the article is mostly about.• Finally, distribute another copy of the Reading and Analyzing an Editorial graphic organizer (one per student) for students to use in their homework.	<ul style="list-style-type: none">• For students who struggle to read grade-level texts, consider allowing them to have an adult at home read the text aloud to them. You can also provide further support by adding text-dependent questions or excerpts from the text to their graphic organizer. For example, an additional scaffold for Question 2 on the graphic organizer could be the following: In the first paragraph, the author shares his or her opinion about polar bears. Based on the following sentences from the text, what is the author’s opinion? “So who should care about the polar bear? We all should.”



Homework	Meeting Students' Needs
<ul style="list-style-type: none">Reread the article “Who Cares about Polar Bears?” and answer Questions 1 and 2 in your graphic organizer. <p><i>Note: Use students’ the Reading and Analyzing an Editorial graphic organizers distributed at the beginning of this lesson to determine student progress toward the following learning target: “I can explain how authors support their opinions with reasons and evidence.” Use this information to inform differentiation for the next lesson.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 2

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Exploring Opinions as Readers and Writers Anchor Chart
(Example for Teacher Reference)

Opinion: What a person thinks about something or someone. This thinking can be based on facts, feelings, or experience—or a combination of all three.

*Someone's point-of-view on a topic.

Characteristics of Opinions:

- Often use words like best or worst (additional examples: most/least)
- Often use endings like *-er* or *-est*
- Can be reasonably debated or argued
- A differing point-of-view could be stated



Reading and Analyzing an Editorial Graphic Organizer

Name: _____

Date: _____

Title of the Editorial: _____

1. What is the topic? What is the gist of this editorial?

2. What is the author's opinion on this topic (WHAT the author believes)?

3. What are the reasons and evidence the author uses to support this opinion?

(List the reasons and their supporting evidence from the text: you may not need to use all the spaces below.)

Reason ('WHY' the author believes an opinion):



Reading and Analyzing an Editorial Graphic Organizer

Evidence (facts, details, information):

Evidence:



Reading and Analyzing an Editorial Graphic Organizer

Reason:

Evidence:

Evidence:

Reason:

Evidence:

Evidence:



Who Cares about Polar Bears?

Polar bears are bears that live in the arctic, and they depend on the sea ice for their survival. In the last several years the sea ice in the arctic has been melting at an alarming rate. If this continues, it could mean the end of the polar bear. So, should we care about the survival of the polar bear? Yes we should! Here are some good reasons.

First, the polar bear could become extinct, like the dinosaurs. Polar bears are considered a “threatened species.” According to the Endangered Species Act, this means that the polar bear is close to becoming an endangered species. An endangered species is an animal that is close to becoming extinct. Once an animal is extinct, it can no longer be found in the wild. It would be really sad to only see stuffed polar bears in museums.

Additionally, the melting arctic ice cap not only threatens the polar bear, it also threaten us. As the arctic ice melts, the sea level rises around the world, and a rising sea level can cause flooding. Millions of Americans live along the coast, and they are in danger. Cities like New Orleans, New York, and Miami could see an increase in flooding. Both polar bears and humans are affected by the problem of melting sea ice.

So, should we care about the polar bear? Absolutely, because caring about the polar bear is not only a compassionate thing to do, it is in our best interest too. If polar bears die out, it means our world is in a lot of trouble. It also means that more species are in danger, too.

Lexile 990

Written by Expeditionary Learning for Instructional Purposes

Sources:

U.S. Fish & Wildlife Service: Listing a Species as Threatened or Endangered Section 4 of the Endangered Species

Act <http://www.fws.gov/endangered/esa-library/pdf/listing.pdf>

Lessons from the Arctic by Don Moore and Josue Cardenas, Smithsonian Zoogoer ,Jan/Feb. 2009,

<http://nationalzoo.si.edu/Publications/Zoogoer/2009/1/PolarBear.cfm>

Rising Sea Levels Seen as Threat to Coastal U.S. by Justin Gillis, New York Times, March 13, 2012,

<http://www.nytimes.com/2012/03/14/science/earth/study-rising-sea-levels-a-risk-to-coastal-states.html>



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 3

Reading as Writers: Identifying Characteristics of Editorials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8) I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">I can explain how authors support their opinions with reasons and evidence.	<ul style="list-style-type: none">Entrance/Exit Ticket



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing the Learning Target: Entrance Ticket (10 minutes)2. Work Time<ol style="list-style-type: none">A. Reviewing Homework: Sharing the Gist and Opinion (10 minutes)B. Rereading the Text to Determine Reasons and Evidence (25 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Debrief/Exit Ticket (5 minutes)B. Preparing for the Mid-Unit Assessment (10 minutes)4. Homework<ol style="list-style-type: none">A. Review your study guide for tomorrow's assessment. Then reflect on the following question: How will analyzing editorials help you prepare to write your own? Be prepared to share your explanation tomorrow.	<ul style="list-style-type: none">• In advance: Review students' exit tickets: Reading and Analyzing an Editorial graphic organizers used with the text "No More Junk in Our Schools" from Lesson 2 (last section after Question 3 on the Reading and Analyzing an Editorial graphic organizer) to determine whether any students should be pulled into a small group supported by the teacher during Part B of Work Time.• As with Lesson 2, adjust the pacing for Part B of Work Time based on how much support your students need.• Review the directions for the Back-to-Back and Face-to-Face Protocol (see Appendix 1).• If you provided students a copy of the Exploring Opinions and Reasons anchor chart in Lesson 2, encourage them to add to it (see example for teacher reference).



Lesson Vocabulary	Materials
opinions, reasons, evidence, characteristics, editorials (review); survival, threatened, extinct	<ul style="list-style-type: none">• Entrance/exit ticket (one per student)• Reading and Analyzing an Editorial graphic organizer (two per student - (1) exit ticket from Lesson 2 (2) student copies from Lesson 2 homework)• Writing folders• “Who Cares about Polar Bears?” text (from Lesson 2 homework)• Document camera• Reading and Analyzing an Editorial graphic organizer (one blank copy for modeling)• Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 2)• Sheet of notebook paper (one per student)



Opening	Meeting Students' Needs
<p>A. Reviewing the Learning Target: Entrance Ticket (10 minutes)</p> <ul style="list-style-type: none">• Tell students that today they will use an “entrance ticket” to start the lesson; this will help them to think about their learning from the previous lesson and prepare them for today’s learning. They will come back to this at the end of class to reflect on what they have learned. Distribute the entrance/exit ticket to students.• Focus the class on the learning target at the top of the entrance/exit ticket, and read it aloud as students read along silently: “I can explain how authors support their opinions with reasons and evidence.” Read aloud the discussion question underneath: “How do reasons and evidence help an author support their opinion?”• Tell students that they will reflect on the learning target in writing and then discuss the question with a partner. Point out the “First, I’m thinking ...” and “Now I’m thinking ...” sections of the ticket.• Tell students that in order to notice their progress toward this target, they will discuss and reflect on their learning at both the beginning and end of this lesson. This also will help them prepare for their upcoming assessment, during which they will read and analyze an editorial and answer questions about the author’s opinion and how the author uses reasons and evidence.• Give students a few minutes to reflect and record their thinking about the discussion question in the “First I’m thinking ...” section. Once students have recorded their thoughts, review the Back-to-Back and Face-to-Face protocol directions (see supporting materials).• Ask students to bring their entrance tickets for sharing and to find a partner to stand back-to-back with. Once students are organized, cue them to turn face-to-face and share what they have written and discuss the question on their entrance ticket. Circulate and listen to gauge students’ understanding of the learning target.• Collect the entrance tickets for quick review and hold on to them to redistribute at the end of this lesson.	<ul style="list-style-type: none">• Using entrance tickets allows you to get a quick check for understanding of the learning target so that instruction can be adjusted or tailored to students’ needs during the lesson. Pairing entrance tickets with exit tickets allows teachers and students to track progress from the beginning to the end of the lesson.



Work Time	Meeting Students' Needs
<p>A. Reviewing Homework: Sharing the Gist and Opinion (10 minutes)</p> <ul style="list-style-type: none">• Distribute students' completed Reading and Analyzing an Editorial graphic organizer (exit ticket from Lesson 2). Ask students to put this in their writing folder for safekeeping.• Ask students to get out their "Who Cares about Polar Bears?" text and their Reading and Analyzing an Editorial graphic organizer from last night's homework.• Have students share answers to Question 1 from their homework with a partner. Ask them to listen closely to their partner's answer, as they may be asked to share it with the rest of the class.• Ask for a few pairs to share their partner's answer. Listen for the following gist: "This article is about how people should be concerned about polar bears becoming extinct because of global warming." Help students to generate this short gist statement of the article if they are struggling to do so independently. Reassure them that this was a complex text and they will understand it more as they read it more closely today.• Using a document camera, display your blank copy of the Reading and Analyzing an Editorial graphic organizer. Model for students: Based on the class' discussion, write a gist statement. Encourage students to add or revise their gist statements if necessary.• Display the "Who Cares about Polar Bears?" text and zoom in on the first paragraph. Then ask partners to share their answers to Question 2 on their graphic organizers and find where in the first paragraph of the text a reader can find this opinion stated.• Ask a few pairs to share the opinion they recorded and point out where this opinion can be found in the text. Listen for the students to say that the author's opinion is that "people should care about polar bear's survival." They should point out the following sentences in the text: "So, should we care about the survival of the polar bear? Yes, we should!"• Prompt students with the following question:<ul style="list-style-type: none">* "How did you determine the author's opinion?"• Encourage them to reference the text and Exploring Opinions as Readers and Writers anchor chart for characteristics of opinions. They should key into the word <i>should</i> in the text.	<ul style="list-style-type: none">• Consider adding a think-aloud with more explicit modeling to further support students if they are having trouble getting the gist of this article.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Explain that this word is a directive; it is used by the author to tell the reader what to do or think. This is one way of stating an opinion. Add the following bullet to the Characteristics of Opinions in the Exploring Opinions as Readers and Writers anchor chart.<ul style="list-style-type: none">* Often use words like <i>should</i> or <i>shouldn't</i>.• Then add the author's opinion "People should care about the survival of the polar bear" to Question 2 on your displayed Reading and Analyzing an Editorial graphic organizer. Allow students to once again add to or revise their own graphic organizers (if necessary).	



Work Time (continued)	Meeting Students' Needs
<p>B. Rereading the Text to Determine Reasons and Evidence (25 minutes)</p> <p>Guided Practice (10 minutes):</p> <ul style="list-style-type: none">• Explain to students that now that they have the gist and have identified the author's opinion on the topic, they will analyze the text to see what reasons and evidence the author uses to support that opinion.• Be sure the text is still displayed using the document camera and that students have their own copy of the text in front of them. Ask students to read along silently as you read the second paragraph aloud to them. Consider pausing during your read-aloud to clarify the following vocabulary and context clues that help the reader to determine their meaning: <i>survival</i>, <i>threatened</i>, and <i>extinct</i>.• Afterward, ask students to turn to a partner and share a gist statement for the paragraph ("What is the main idea for this paragraph?"). Ask a few pairs to share their gist statements. Listen for students to say: "The polar bear is a threatened species" or "The polar bear is in danger of becoming extinct."• Bring students' attention back to the text and point out the first sentence: "First, the polar bear could become extinct..." Explain that this is the first reason the author uses to support his or her opinion that people should care about the polar bear. Explain to students that in editorials, the main idea (or gist) of paragraphs following the introduction often share the <i>reasons</i> that authors will use to support their opinions.• Add: "The polar bear could become extinct" under the first section for Question 3 on the graphic organizer. Have students record this reason on their own graphic organizer.• Tell students that their next task is to find the <i>evidence</i> the author uses to support his/her reason.• Give students 5 minutes to reread the paragraph and underline any sentences or phrases they feel are evidence. Remind them to be selective; otherwise they may end up underlining the entire paragraph.• Have pairs share out the evidence they have selected. Listen for students to reference the following phrases in the text: "Polar bears are considered a 'threatened species'" or "Once an animal is extinct, it can no longer be found in the wild." Ask students to notice that not every sentence in the paragraph is evidence.• Record the evidence on your graphic organizer and ask students to copy it as well. Write in note form:<ul style="list-style-type: none">– Polar bears are a threatened species.– Extinct species are not found in the wild.	<ul style="list-style-type: none">• Determining which sentences or phrases from the text most clearly state the evidence or details used by the author can be difficult for students. If you find students struggling to pull this evidence out of the text, consider explicitly modeling with a think-aloud that allows students to understand the process of selectively choosing evidence or details to underline.• It is important for students to be able to identify reasons and evidence independently so that they can explain how it supports the author's opinion. Students will be asked to do this independently on the mid-unit assessment in Lesson 6. If you have students who are continuing to struggle with this, consider pulling them into a small group or having them work with a partner during this portion of the lesson.



Work Time (continued)	Meeting Students' Needs
<p>Independent Practice (15 minutes):</p> <ul style="list-style-type: none">• Tell students that now you would like them to do this on their own. Review the steps that you took when modeling:<ol style="list-style-type: none">1. Rereading for the gist to identify the reason2. Reading and underlining to find evidence3. Recording on the graphic organizer• Once you feel students are ready to identify reasons and evidence, have them analyze the third paragraph in the text, which starts “Additionally, the melting Arctic ice...” and ends “...the problem of melting sea ice.” They should record their reasons and evidence in the bulleted section of the graphic organizer.• Give them 10 minutes to do this. Circulate and support as necessary and/or pull a small group for more guided practice.• After students have recorded the reason and evidence for paragraph 3, cold call a few to share out the reason. Listen for:<ul style="list-style-type: none">– “Melting sea ice is a problem for the polar bear and humans.”– “If the polar bear’s ice melts, it will cause problems for humans too.”• Allow students to add to or revise on their own graphic organizers if necessary.• Repeat the above process for determining the evidence. When students share, listen for them to provide the following evidence from the text:<ul style="list-style-type: none">– “Melting sea ice causes rising sea levels.”– “Americans who live on the coast could see more flooding.”• Allow students to add to or revise their own graphic organizers if necessary. Ask students to put the “Who Cares about Polar Bears?” text in their writing folders and collect their now completed Reading and Analyzing an Editorial graphic organizer as a formative assessment of the day’s learning target.	



Closing and Assessment	Meeting Students' Needs
<p>A. Debrief/Exit Ticket (5 minutes)</p> <ul style="list-style-type: none">Ask students to arrange themselves for the Back-to-Back and Face-to-Face protocol. Prompt them to think about the following question:<ul style="list-style-type: none">* “How does using reasons and evidence help support an author’s opinion?”Give them a minute to think before cuing them to turn face-to-face.Redistribute the entrance/exit ticket from the beginning of this lesson and ask students to complete the last portion, “Now, I’m thinking...” Collect for reviewing students’ progress toward the learning target.	<ul style="list-style-type: none">To further support students in their analysis of editorials, you may want to provide students with their own copy of the texts as well as displaying them on the document camera.
<p>B. Preparing for the Mid-Unit Assessment: (10 minutes)</p> <ul style="list-style-type: none">Tell students that on the upcoming mid-unit assessment, they will get to demonstrate their progress toward the following learning target:<ul style="list-style-type: none">– “I can explain how authors support their opinions with reasons and evidence.”Review the Exploring Opinions as Readers and Writers anchor chart. Remind students that after closely reading and analyzing editorials, they now know what an opinion is, how to identify one in an author’s writing, and how authors support their opinions with reasons and evidence.Ask students to make a copy of this anchor chart on notebook paper to use as a study guide for their homework (see supporting materials for an example of a finished Exploring Opinions as Readers and Writers form).Tell them that for their assessment, they will read an editorial and identify the opinion as well as the author’s reasons and evidence used to support that opinion. Reassure students that there are no tricks with this assessment. They will be using the same process they have used over the past several days to closely read an editorial and answer questions.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Review your study guide for tomorrow’s assessment. Then reflect on the following question: How will analyzing editorials help you prepare to write your own? Be prepared to share your explanation tomorrow.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 3

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Entrance/Exit Ticket

Name:

Date:

Learning Target: I can explain how authors support their opinions with reasons and evidence.

How do reasons and evidence help an author support their opinion?

First, I'm thinking

Now I'm thinking



Exploring Opinions as Readers and Writers anchor chart
(Example for Teacher Reference)

This anchor chart was added to in Lesson 2. At the start of this lesson (Lesson 3), the chart should contain the following:

Exploring Opinions as Readers and Writers

Opinion: What a person thinks about something or someone. This thinking can be based on facts, feelings, or experience—or a combination of all three.

- * Someone's point of view on a topic

Characteristics of Opinions:

- * Often use words like “best” or “worst” (additional examples: “most” or “least”)
- * Often use endings like *-er* or *-est*
- * Can be reasonably debated or argued
- * A differing point of view could be stated

Opinions are supported by:

Reasons: WHY an author has a particular opinion.

WITH

- * Evidence: HOW authors support their reasons with facts or details (based on research and/or observations)



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 4

Mid-Unit Assessment: Reading and Answering Questions about Editorials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
I can determine the meaning of academic words or phrases in an informational text. (RI.4.4) I can explain how an author uses reasons and evidence to support particular points in a text. (RI.4.8)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">I can explain how an author uses reasons and evidence to support an opinion.	<ul style="list-style-type: none">Mid-Unit 3 Assessment: Reading and Answering Questions about EditorialsTracking My Progress, Mid-Unit 3 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Review Learning Targets (5 minutes)B. Reviewing Characteristics of Editorials (10 minutes)2. Work Time<ol style="list-style-type: none">A. Mid-Unit Assessment: Reading and Answering Questions about Editorials (40 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Tracking Progress (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• The mid-unit assessment gauges students' ability to read and analyze opinion writing (aligned with RI.4.8). For this assessment, students read and answer questions about an opinion piece—an editorial—with a particular focus on author's craft. Note that for teachers to assess students' ability to read and analyze a text on their own, the editorial is about a new topic (not simple machines). Thus, students must base their answers on their understanding of the text itself, rather than on background knowledge the class built together about simple machines.• Consider students who need testing accommodations: extra time, separate location, scribe, etc.• Review: Concentric Circles protocol (Appendix).

Lesson Vocabulary	Materials
summarize, editorial, reasons, evidence, opinion	<ul style="list-style-type: none">• Reading and Analyzing an Editorial graphic organizer (from Lesson 3 to hand back to students)• Writing folder• Exploring Opinions as Readers and Writers anchor chart (added to in Lesson 2)• Mid-Unit 3 Assessment: Reading and Answering Questions about Editorials• Tracking My Progress, Mid-Unit 3 recording form



Opening	Meeting Students' Needs
<p>A. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Distribute students' completed Reading and Analyzing an Editorial graphic organizer (from Lesson 3). Ask students to put this in their writing folder for safekeeping.• Post and read the following learning target:<ul style="list-style-type: none">– “I can explain how an author uses reasons and evidence to support an opinion.”• Tell students that today they will complete an assessment based on this learning target. Remind them that they have been making progress toward this target for the past several days. Reassure students that for the assessment they will not be doing anything new.• Ask students turn to a partner and describe what this target means to them and what they anticipate for the assessment. Have a few pairs share out.• Explain that they will be reading an editorial and answering questions that focus on these learning targets. Tell them that they will do a round of Concentric Circles to prepare their brains for the assessment.	<ul style="list-style-type: none">• Consider providing copies of Questions for Concentric Circles (in supporting materials) to students who struggle with auditory processing.



Opening (continued)	Meeting Students' Needs
<p>B. Reviewing Characteristics of Editorials (10 minutes)</p> <ul style="list-style-type: none">• Ask students to get out their homework: “Review your study guide for tomorrow’s assessment. Then reflect on the following question: How will analyzing editorials help you prepare to write your own? Be prepared to share your explanation tomorrow.”• Remind students of the Concentric Circles protocol directions.<ol style="list-style-type: none">1. Find a partner and number off 1s and 2s.2. Form two circles: 1s form an inner circle (shoulder-to-shoulder) facing out, and 2s stand in front of their partners.3. Listen for the teacher to give a prompt for discussion.4. Discuss the prompt with your partner.5. When the cue is given by the teacher, follow the instructions for moving to your next discussion partner.• During the protocol, listen for students to mention notes from the Exploring Opinions as Readers and Writers anchor chart.• Ask students to talk with their partner about the following question:<ul style="list-style-type: none">* “What is an opinion, and how do you determine one as a reader?”• Give students 1 minute to discuss.• Then ask students in the inner circle to move two partners to the left and greet their new partner. Ask them to discuss the following question:<ul style="list-style-type: none">* “What are reasons and evidence, and how do authors use them?”• Give students 1 minute to discuss.• Gather students back together. Post the Exploring Opinions as Readers and Writers anchor chart. Review the chart as necessary based on what you heard students share during Concentric Circles.	



Work Time	Meeting Students' Needs
<p>A. Mid-Unit Assessment: Reading and Answering Questions about Editorials (40 minutes)</p> <ul style="list-style-type: none">• Ask students to move back to their seats to prepare for the assessment. Distribute the Mid-Unit 3 Assessment: Reading and Answering Questions about Editorials. Remind students of the importance of reading the text several times.• Point out the directions at the top of the assessment and clarify if needed.• Ask students to begin. Circulate to observe test-taking strategies and record observations for future instruction. For example, are students going back to the text to look for answers? Do they appear to be reading the text completely before beginning the assessment? Are they annotating the text or their assessment? This information can be helpful in preparing students for future assessments and standardized tests.• Tell students who finish early that they can continue with their independent reading.	<ul style="list-style-type: none">• For ELLs, consider providing extended time for tasks and answering questions in class discussions. ELLs receive extended time as an accommodation on NY State assessments.
Closing and Assessment	Meeting Students' Needs
<p>A. Tracking Progress (5 minutes)</p> <ul style="list-style-type: none">• Distribute the Tracking My Progress, Mid-Unit 3 recording form and ask students to take some time to reflect on their conversations during Concentric Circles and their experience with the assessment, then to fill out the tracking sheet. Collect the Tracking My Progress sheets for additional assessment information on the learning target.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: Be sure that students hold on to the editorial texts from the first half of this unit in their writing folders. They will continue to reference them as mentor texts as they learn how to write their own editorials about simple machines.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 4

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials

Name:

Date:

Directions: Read the editorial below and answer the questions that follow.

Uniforms in Schools?

Across the country more schools are thinking about school uniforms. A uniform is special set of clothes worn by all members of a group. Many of us are familiar with the uniforms. Police officers, fire fighters, and mail carriers wear uniforms. How about uniforms on students though? Well, many schools think it is a great idea, and I agree.

The best reason for schools to adopt uniforms is that they improve behavior. Students who wear uniforms are less likely to cause trouble. They are more likely to focus on their learning. Students may be less likely to bully each other about clothes too. One school district in Long Beach, California found that school suspensions dropped by 90% after adopting school uniforms.

Another reason school uniforms are a good idea, is that they improve school spirit. Sports teams all wear the same uniform, so why not students? When students are all wearing their school insignia, or symbol, they can feel like members of a team. They won't feel left out because they don't have the best shoes or the latest fashion. Uniforms make students feel like they belong.

Some people think school uniforms mean less rights for students, but I disagree. If school uniforms can improve students' behavior and help them to belong, then school uniforms are a good idea.

Lexile 880

Written by Expeditionary Learning for instructional purposes

Sources:

"Public School Uniform Statistics," available at www.educationbug.org/a/public-school-uniform-statistics.html.

Anne Svensen, "School Uniforms Pros and Cons," available at

<http://school.familyeducation.com/educational-philosophy/individuality/38676.html>.

Grace Chen, "Public School Uniforms: The Pros and Cons for Your Child," available at www.publicschoolreview.com/articles/16.

"School Uniforms and Dress Codes," National Association of Elementary School Principals, available at www.naesp.org/ContentLoad.do?contentId=67.

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials

Read each question and use the text to answer.

1. What is the gist? Write a short statement explaining what this editorial is about.

2. Which of the following statements best describes the author's opinion?

- A. School uniforms work best in big cities.
- B. School uniforms are bad for students.
- C. School uniforms are good for schools.
- D. School uniforms are similar to other uniforms.

3. Which line from the text best supports the answer to question 2 above?

- A. "...Long Beach, California found that school suspensions dropped by 90% after adopting school uniforms."
- B. "Some people think school uniforms mean less rights for students, but I disagree."
- C. "Well, many schools think it is a great idea, and I agree."
- D. "Sports teams all wear the same uniform, so why not students?"

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials

4. Read the line from the text and answer the question that follows:

“The best reason for schools to adopt uniforms is that they improve behavior.” How does this reason support the author’s opinion?

- A. It explains how uniforms look.
- B. It explains how uniforms benefit students.
- C. It explains how uniforms are used.
- D. It explains how uniforms make schools more fun.

5. Which evidence from the text is used to support the reason in question 4? “The best reason for schools to adopt uniforms is that they improve behavior.”

- A. “Police officers, fire fighters, and mail carriers wear uniforms.”
- B. “...school suspensions dropped by 90 percent after adopting school uniforms.”
- C. “Uniforms make students feel like they belong.”
- D. “Some people think school uniforms mean fewer rights for students...”

6. Another reason the author uses to support his/her opinion about school uniforms is: **“they improve school spirit.”** Find one piece of evidence from the text that supports this reason and record it below. Explain why the evidence you selected supports the reason above.

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials

7. Which sentence uses the word *uniform* with the same meaning as the text?
- A. The buildings in the city were all very *uniform*.
 - B. The worker wore a *uniform* with brown pants and a blue shirt.
 - C. The car moved at a *uniform* speed.
 - D. The baseball player had a *uniform* swing.
8. Which word below has a similar meaning to the word *improve* as it is used in the following line from the text: “uniforms can improve students’ behavior”?
- A. better
 - B. worsen
 - C. impact
 - D. increase
9. Which line from the text helps you to infer the meaning of the word *improve*?
- A. “Students may be less likely to bully each other about clothes too.”
 - B. “...students feel like they belong.”
 - C. “...students are all wearing their school insignia...”
 - D. “Students who wear uniforms are less likely to cause trouble.”



Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials
(Answers, for Teacher Reference)

Read each question and use the text to answer.

1. What is the gist? Write a short statement explaining what this editorial is about.

Possible Answer: This editorial is about uniforms in schools. The author thinks that students should wear uniforms to schools because it makes their behavior better and gives them school spirit.

2. Which of the following statements best describes the author's opinion?
- A. School uniforms work best in big cities.
 - B. School uniforms are bad for students.
 - C. **School uniforms are good for schools.**
 - D. School uniforms are similar to other uniforms.
3. Which line from the text best supports the answer to question 2 above?
- A. "...Long Beach, California found that school suspensions dropped by 90% after adopting school uniforms."
 - B. "Some people think school uniforms mean less rights for students, but I disagree."
 - C. **"Well, many schools think it is a great idea, and I agree."**
 - D. "Sports teams all wear the same uniform, so why not students?"

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials
(Answers, for Teacher Reference)

4. Read the line from the text and answer the question that follows:

“The best reason for schools to adopt uniforms is that they improve behavior.” How does this reason support the author’s opinion?

- A. It explains how uniforms look.
- B. It explains how uniforms benefit students.**
- C. It explains how uniforms are used.
- D. It explains how uniforms make schools more fun.

5. Which evidence from the text is used to support the reason in question 4? “The best reason for schools to adopt uniforms is that they improve behavior.”

- A. “Police officers, fire fighters, and mail carriers wear uniforms.”
- B. “...school suspensions dropped by 90 percent after adopting school uniforms.”**
- C. “Uniforms make students feel like they belong.”
- D. “Some people think school uniforms mean fewer rights for students...”

6. Another reason the author uses to support his/her opinion about school uniforms is: **“they improve school spirit.”** Find one piece of evidence from the text that supports this reason and record it below. Explain why the evidence you selected supports the reason above.

Possible Answer: The editorial says that sports teams all wear the same uniform, so why not students. I think this supports the author’s reason that uniforms improve school spirit, because in sports when you are on the same team you support each other. If students wore uniforms they might support each other like a team.

Mid-Unit 3 Assessment:
Reading and Answering Questions about Editorials
(Answers, for Teacher Reference)

7. Which sentence uses the word *uniform* with the same meaning as the text?
- A. The buildings in the city were all very *uniform*.
 - B. **The worker wore a *uniform* with brown pants and a blue shirt.**
 - C. The car moved at a *uniform* speed.
 - D. The baseball player had a *uniform* swing.
8. Which word below has a similar meaning to the word *improve* as it is used in the following line from the text: “uniforms can improve students’ behavior”?
- A. **better**
 - B. worsen
 - C. impact
 - D. increase
9. Which line from the text helps you to infer the meaning of the word *improve*?
- A. “Students may be less likely to bully each other about clothes too.”
 - B. “...students feel like they belong.”
 - C. “...students are all wearing their school insignia...”
 - D. **“Students who wear uniforms are less likely to cause trouble.”**



Tracking My Progress, Mid-Unit 3

Name: _____

Date: _____

Learning Target: I can explain how an author uses reasons and evidence to support particular an opinion.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 5

Preparing to Write: Identifying Characteristics of Editorials and Determining Reasons to Support Our Opinions about Simple Machines



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
- I can recall information that is important to a topic. (W.4.8)
- I can sort my notes into categories. (W.4.8)
- I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can identify the characteristics of an editorial.
- I can create reasons for my opinion on simple machines based on scientific text, my notes, and my observations.
- I can identify which reasons are supported by the text and which are supported by my observations.
- I can effectively collaborate with my Simple Machine Expert Group.

Ongoing Assessment

- Simple Machine Opinion charts (one for each simple machine studied: wedge [for modeling], inclined plane, lever, pulley, and wheel)



Identifying Characteristics of Editorials and Determining Reasons to Support Our
Opinions about Simple Machines

Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Identifying Characteristics of Editorials (15 minutes)B. Determining Reasons that Support Opinions: Guided Practice with the Wedge (15 minutes)C. Determining Reasons that Support Opinions: Simple Machine Expert Groups (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• In the opening of this lesson, students are introduced to the prompt for the performance task. In advance, review the separate Performance Task document on EngageNY.org to fully envision the task students are heading toward.• Brief direct instruction is provided to help students understand the word “campaign,” which is crucial for them to understand for the purpose of the performance task. In advance, think of examples of campaigns that your specific student population may be familiar with, in case they need more direct instruction as you discuss the performance task.• In advance: Review the choice students have made about which simple machine they will write their editorial on. In this lesson, students will form their Simple Machine Expert Groups (of four students studying the same simple machine). They will collaborate to support one another as they prepare and plan for their writing in the next two lessons. (You may decide to strategically group students based on academic or behavioral needs or have students self-select their groups.)• Prepare a blank Editorial Characteristics and Planning anchor chart (see supporting materials for both blank and complete versions) to capture students’ comments in this lesson. Leave some space in each box to fill in during Lesson 6 (when you will model planning of an editorial about the wedge; see teaching note).• Prepare blank Simple Machine T-charts (see supporting materials) for each Simple Machine Expert Group.• Prepare the Simple Machine T-chart (see Wedge Model in supporting materials).• Review: Fist to Five strategy (Appendix).



Identifying Characteristics of Editorials and Determining Reasons to Support Our
Opinions about Simple Machines

Lesson Vocabulary	Materials
campaign, characteristics, editorials, evidence, scientific, opinion, observations, effectively, collaborate; wedge, work, force, effort, inclined plane, lever, pulley, wheel and axle	<ul style="list-style-type: none">• Simple Machine Editorial rubric (one for display on document camera)• Document camera• Chart paper for new anchor chart: Editorial Characteristics and Planning (see supporting materials for examples of blank and complete versions of this chart)• “No More Junk in Our Schools” (one to display, from Lesson 1)• “Who Cares about Polar Bears?” (one to display, from Lesson 2)• <i>Simple Machines: Forces in Action</i> by Buffy Silverman (one text for each student and one for modeling)• Simple Machines science journal (each student’s, from Unit 2)• Simple Machine T-Chart (wedge model, one for modeling for students; see supporting materials for an example to prepare beforehand and what it should look like after modeling)• Chart paper for new anchor chart: Simple Machine T-Charts (one chart for each group of three or four students; see supporting materials for an example)• Markers (one for each expert group)



Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none"> Explain to students that now that they have closely read and analyzed some editorials, they are ready to prepare for writing their own editorials about simple machines. Display the top half of page 1 on the Simple Machines Editorial rubric using the document camera. Review the following prompt and learning target with students: “A local engineering magazine wants to educate its readers on the importance of simple machines in the age of high-tech gadgets. So they’ve decided to hold a ‘Campaign for Simple Machines.’ Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month’s magazine.” Explain that a <i>campaign</i> is a set of decisions and activities people take for a particular purpose. Ask the students to turn and talk: <ul style="list-style-type: none"> * “What is a type of campaign you know about?” Listen for comments like: “The presidential campaign” or “A campaign to raise money for a special cause.” Provide examples as needed to clarify this key academic vocabulary word. Post and read aloud the main long-term learning target for the performance task: <ul style="list-style-type: none"> – “I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. Explain that today’s learning targets will help students make progress toward this bigger target of their performance task. Post and read the day’s learning targets: <ul style="list-style-type: none"> – “I can identify the characteristics of an editorial.” – “I can create reasons for my opinion on simple machines based on scientific text, my notes, and my observations.” – “I can identify which reasons are supported by the text and which are supported by my observations.” – “I can effectively collaborate with my Simple Machine Expert Group.” Address the first three targets by reviewing (one at a time) the words <i>characteristics</i>, <i>editorial</i>, <i>evidence</i>, <i>scientific</i>, <i>opinion</i>, and <i>observations</i>. Have students discuss the meaning of each target with a partner. Invite pairs to share out their thinking. Annotate the targets to help students clarify their meaning. 	<ul style="list-style-type: none"> Help students to connect their analysis of editorials (RI.4.8) to the performance task (W.4.1). While these standards are taught explicitly, they act to support students in reading like writers and writing like readers. Asking students to review classroom expectations and make suggestions for improvement helps them to monitor their behavior. Some students who struggle with group work may benefit from writing individualized goals and sharing them with their teacher and perhaps a trusted peer.



Opening (continued)	Meeting Students' Needs
<ul style="list-style-type: none">For the fourth target, focus on the phrase <i>effectively collaborate</i>. Review with students the expectations for group work. Remind them that they have worked in expert groups before when they were studying their colonial trades. Help them to remember what worked well and what was a challenge. Let them know that you will be observing their performance with this target today and they will reflect on their progress at the end of the lesson.	
Work Time	Meeting Students' Needs
<p>A. Identifying Characteristics of Editorials (15 minutes)</p> <ul style="list-style-type: none">Post the blank Editorial Characteristics and Planning chart (see supporting materials for examples of blank and complete version of this chart). Point out the prompt at the top of the chart: "Editorials are..." Tell students that they have now read two editorials closely and can probably describe them well.Ask them to turn to a partner and respond to the question:<ul style="list-style-type: none">* "What is an <i>editorial</i>?"Have pairs share their thinking. On the chart, write something such as the following to summarize students' comments:Editorials are...<ul style="list-style-type: none">— A form of writing often found in newspapers, magazines, or blogs that shares the author's opinion on a topic.Next, point out the section below, labeled "Editorials have..." with the graphic organizer below. Tell students that you would like them to take a look at both editorials to see what they have in common. Tell them that they will pay particular attention to what each paragraph contains.Using the document camera, display the texts "Who Cares about Polar Bears?" and "No More Junk in Our Schools" side by side and zoom in on the first paragraph. Reread each introduction and give students an example similar to the following: "I notice that in the first paragraph of both of these editorials the author shares the topic of the editorial, polar bears and vending machines in schools. There is also a little background information, where polar bears live and what vending machines sell."	<ul style="list-style-type: none">To further support students in their analysis of editorials, you may want to have students get out their own copy of the texts as well as displaying them on the document camera.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Tell students that the class will now fill in the graphic organizer with students' comments to explain the organization of editorials. (See teaching note: Be sure that when you add students' comments below, you leave some space within each box. You will fill in these spaces during Lesson 6 when you model planning of an editorial about wedges.)• On the graphic organizer write the word "Introduction" at the top of the first box on the left. Then add the following below (note: leave the last bullet blank for students to help fill in):• An introduction paragraph that:<ul style="list-style-type: none">– States the topic– Shares background information• Ask students to Think-Pair-Share:<ul style="list-style-type: none">* "What other characteristics should be written in the introduction box?"• Have pairs share their ideas. Listen for students to say: "The opinion is shared," or "The author's opinion is shared." Record: "States the author's opinion" for the last bullet.• Next, point out the boxes in the middle of the graphic organizer. Explain that these middle boxes (which represent the body paragraphs) are each likely to have a similar structure. One at a time, zoom in on the second paragraph of each of the two editorials. Read each paragraph aloud as students read along silently. Ask students to turn and talk:<ul style="list-style-type: none">* "What characteristics do these two paragraphs have in common?"* "What kind of information does each of these paragraphs include?"• Have pairs share out. Students should be quick to note that each body paragraph contains reasons and evidence.• On the anchor chart, in the first box of the middle three boxes, write: Detail paragraphs that share:<ul style="list-style-type: none">– Reasons: WHY an author has an opinion– Evidence: HOW an author supports their reasons with facts or details• Explain that this is true for all remaining paragraphs in the two articles. (The difference between the two is that one author provides three reasons while the other provides two.)	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Move on to the last paragraph in each text, which corresponds to the last box on the graphic organizer. Read each conclusion, one at a time, as students read along silently. Ask students to Think-Pair-Share: <ul style="list-style-type: none"> * “What do the concluding paragraphs of both editorials have in common?” * “What should we write in the final box in the graphic organizer on the anchor chart?” • Have pairs share. Listen for them to note: “The author shares their opinion again.” • Record the following in the last box of the graphic organizer: A conclusion paragraph that: <ul style="list-style-type: none"> – Summarizes the author’s opinion • Review all the characteristics of editorials that students have identified. Then help students see how this relates to their own writing task. First, point to the first box on the chart; Explain to students that they have already formed their opinion about which simple machine is the most helpful. Pointing to the middle boxes, tell students that their next step will be to determine reasons and evidence for that opinion. 	
<p>B. Determining Reasons that Support Opinions: Guided Practice with the Wedge (15 minutes)</p> <ul style="list-style-type: none"> • Tell the class that writers get their ideas from many places: their imaginations, research, and observations of the world around them. • Remind students that during Module 2, when they wrote their historical fiction, they did significant research about Colonial America to support their writing. In this module they have researched and observed simple machines through reading and experimenting. Tell them that now that they know about the topic, and also know what editorials are and how they are structured, they are well prepared to begin writing. • Tell students they will begin the writing process by reviewing the text and their notes. Gather students together in a whole group. Distribute the text <i>Simple Machines: Forces in Action</i> and ask them to get out their Simple Machines Science Journals. Tell them that they will be working with their expert groups in a moment to prepare reasons for the opinions in their editorials, but first you would like them to help you think of some more reasons based on the text. • Post the Simple Machine T-chart (wedge model) where it is visible to all students. Tell students that you would like them to help you prepare to write your editorial. 	<ul style="list-style-type: none"> • If needed, modify Work Time B to include more explicit modeling and think aloud about how the text can support the reasons listed in the model.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none"> • Tell students that you have a few reasons you think wedges are the <u>most</u> helpful simple machine in daily life. Point out the reasons that you recorded on the T-chart: <ul style="list-style-type: none"> – Many of my garden tools are wedges. – Wedges are easy to use. • Explain that both of these reasons are just your observations. Tell students that you know that good writers typically don't use just their observations to support their points; they also use text-based research. Explain that you would like their help thinking of reasons that are based on details in the text <i>Simple Machines: Forces in Action</i>, because you would like your editorial to be scientifically accurate. • Using the document camera, display pages 12–13 of <i>Simple Machines: Forces in Action</i>. Think aloud: "I'm going to reread the section of this text on wedges to see if we can come up with some more reasons for my opinion that are based on details from this text." Ask students to turn to these pages in their texts so they can read silently along with you. • Read page 12 aloud slowly. Ask students to turn to a partner and discuss this question: <ul style="list-style-type: none"> * "Based on evidence from the text, what is another reason you could use to support your opinion that wedges are the most helpful simple machine?" • Have students share the reasons they came up with. Ask them to point out which details in the text support their reason. On the left side of the T-chart, add any reasons that are based on details from the text. • If students are having difficulty stating reasons based on the text, point out the last sentence in the first paragraph: "An axe and the tip of a nail are examples of wedges." Tell students that the text names these tools as wedges and you are thinking that one good reason that wedges are the best is that they can be used to help build a house. • Add the following reasons to the chart on the left-hand side: <ul style="list-style-type: none"> – You need wedges (saws and nails) to build a house. • Next, read page 13 of the text aloud slowly as students read along silently. Ask students to think and then talk with a partner: <ul style="list-style-type: none"> * "Based on evidence from the text, what is another reason that you could use to support your opinion that wedges are the most helpful simple machine?" • Listen for students to mention knives for cutting food and teeth for biting into things. 	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Have students share the reasons they have come up with and ask them to point out which details in the text support their reason. On the left side of the T-chart, add any reasons that are based on details from the text.• Be sure the following reasons are added to the T-chart:<ul style="list-style-type: none">– Wedges (knives) help you cut your food.– Wedges are found in nature (teeth).• Next demonstrate how to use the right side of the T-chart to label each reason as “observable fact” or “text research.” Label the first two reasons as “observable facts” on the right-hand column of the T-chart. Explain that the first is labeled an “observable fact” because it is something anyone could observe in the world around them. Tell them that the second reason is an observation you recorded in your notes during the experiment with wedges in Unit 2.• Explain that the other reasons can be directly supported by evidence in the text. Label the remaining reasons as “supported by the text.” Ask students to notice how many of your reasons are supported by the text. Explain that this is important because your editorial must be <i>scientifically</i> accurate.• Thank students for helping you to prepare for your writing. Tell them that it is now their turn to prepare: they will go through a similar process to create a T-chart of reasons for their opinion on simple machines.	



Work Time (continued)	Meeting Students' Needs
<p>C. Determining Reasons that Support Opinions: Simple Machine Expert Groups (20 minutes)</p> <ul style="list-style-type: none">• Tell students that in a moment, they will work with their expert groups to do what you just modeled for the simple machine they have been studying. Post and review the following directions:<ol style="list-style-type: none">1. Select a recorder.2. Add your simple machine to the top of your group's T-chart.3. List all group members' reasons (from homework).4. Review notes on your simple machine in your Simple Machines Science Journal.5. Add any more reasons.6. Reread the section of the text about your group's simple machine.7. Add any more reasons.8. Determine whether reasons listed are "observable fact" or can be "supported by the text," and label each. (Remember, most of your reasons should be supported by the text.)• Ask students to bring their copy of the text <i>Simple Machines: Forces in Action</i> and their Simple Machines science journal and go meet with their Simple Machine Expert Group. Before groups begin their work, remind them that the groups around them will be reading and will need to focus. Ask all groups to work using quiet voices. Distribute a blank Simple Machine T-chart and a marker for each group.• Circulate and support groups as necessary. Be sure that most of the reasons students are recording on their charts can be directly supported by the text. Prompt students to point out which details in the text support their reasons.	<ul style="list-style-type: none">• To further support some students, you may decide to type and print these directions for groups or individuals to reference as they work.• Observe students' progress toward the target, "I can effectively collaborate with my Simple Machine Expert Group," and make notes about one thing the class is doing well and one thing they need to work on. You will share these observations in the closing of this lesson.



Closing and Assessment	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Read the day's learning targets:<ul style="list-style-type: none">– “I can identify the characteristics of an editorial.”– “I can create reasons for my opinion on simple machines based on scientific text, my notes, and my observations.”– “I can identify which reasons are supported by the text and which are supported by my observations.”– “I can effectively collaborate with my Simple Machine Expert Group.”• Ask students to show a Fist to Five for each of the targets: zero (fist), meaning far from the target, to five (five fingers), having solidly met the target. Make any observations of the results for each. For example: “I see a lot of 5s for the second target and I noticed that all the T-charts have many reasons listed, so it looks like we did well with that.”• Be sure to observe the results for the last target and add your observations from expert group work time. Let students know what they did well and what they could improve on. If time permits, ask students for additional positive feedback for their work today, or suggestions for how the class could work even better in their expert groups in the future.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: Hold on to the groups' Simple Machines T charts to use in Lesson 6. Students will be working more individually, but will need to refer to these charts as they begin to plan their editorials.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 5

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

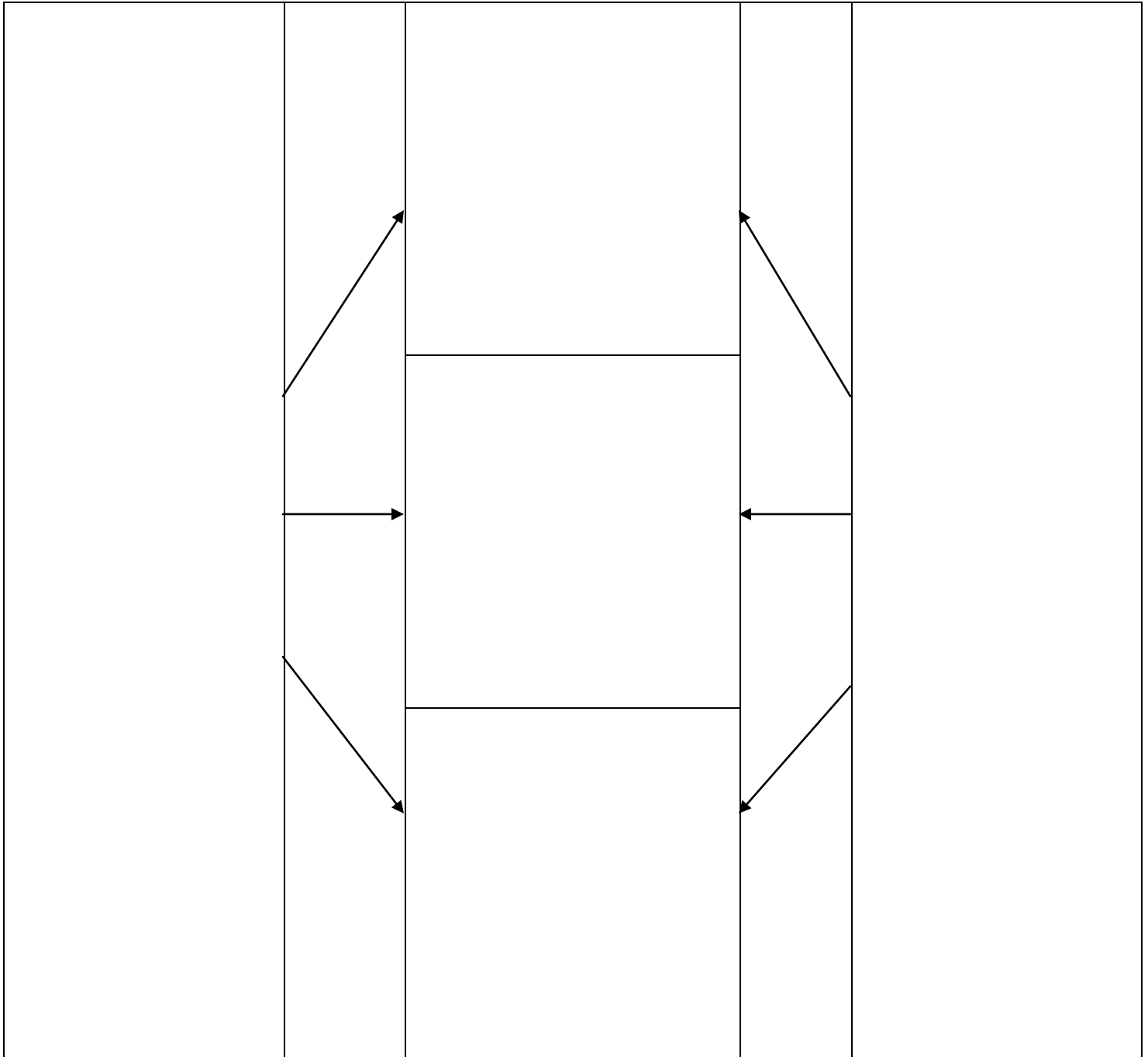
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Editorial Characteristics and Planning Anchor Chart
(Blank Chart, for Teacher Reference)

Editorials are...

Editorials have...



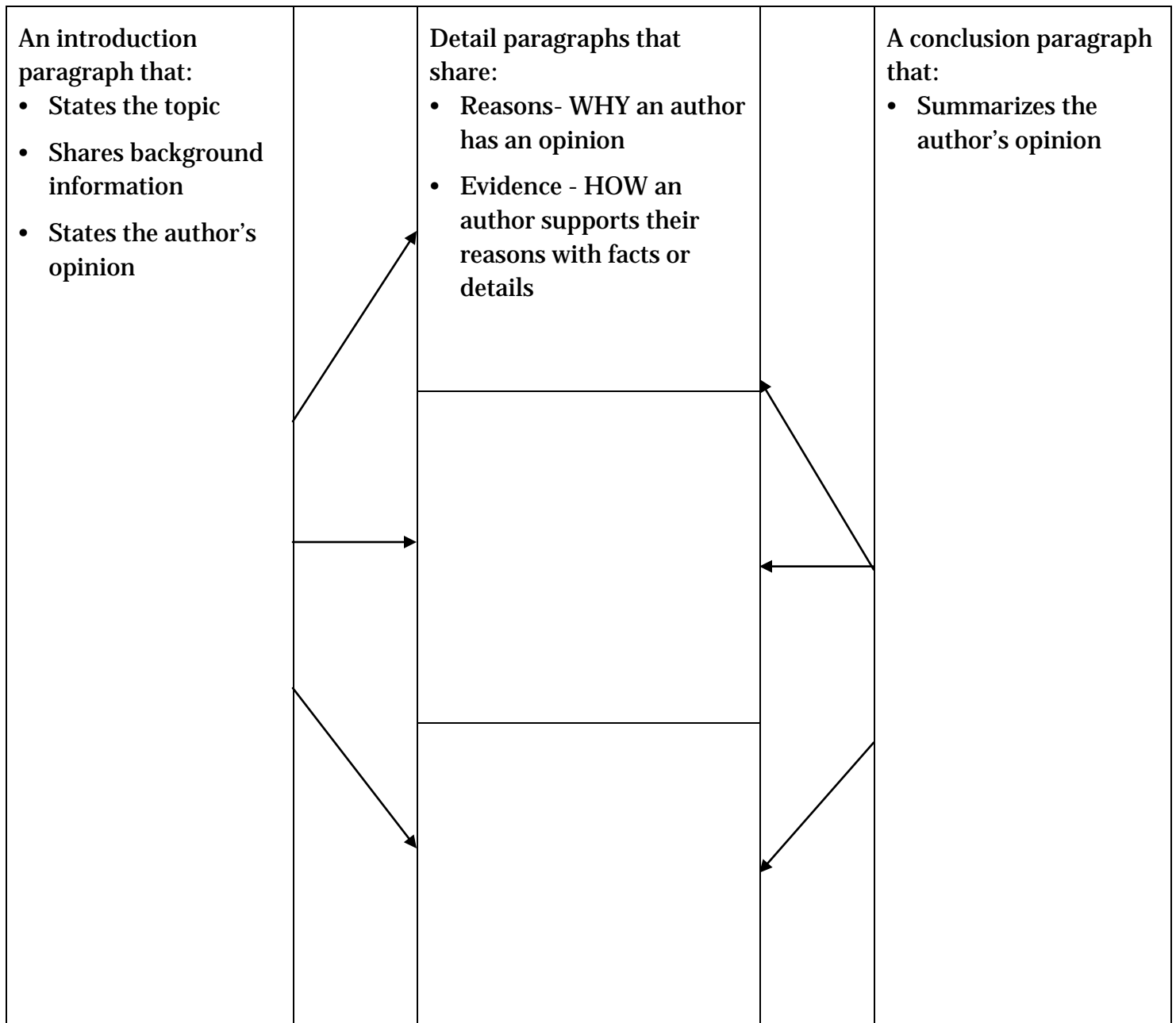


Editorial Characteristics and Planning Anchor Chart
(Completed Chart, for Teacher Reference)

Editorials are...

A form of writing often found in newspapers and magazines that shares the author's opinion on a topic

Editorials have...



*Example of an Editorial Planning graphic organizer complete with characteristics of editorials
(determined by students in this lesson)*



Simple Machine T-Chart (Wedge Model)

Prepare this version of the T-chart for modeling in this lesson.

Opinion: The _____ helps people the most in their daily lives.

Reasons for this opinion	“Observable Fact” OR “Supported by the Text”

Simple Machine T-Chart (Wedge Model):

Prepare this version of the T-chart for modeling in this lesson.

Opinion: The wedge _____ helps people the most in their daily lives.

Reasons for this opinion	“Observable Fact” OR “Supported by the Text”
<ul style="list-style-type: none">• Many of my garden tools are wedges.• Wedges are easy to use	



Simple Machine T-Chart (Wedge Model)

Simple Machine T-Chart (after modeling):

The Wedge Model should look something like this at the end of the guided practice.

Opinion: The wedge helps people the most in their daily lives.

Reasons for this opinion	“Observable Fact” OR “Supported by the Text”
<ul style="list-style-type: none">• Many of my garden tools are wedges.• Wedges are easy to use• You couldn’t build a house without wedges (saws and nails).• You couldn’t cut your food without wedges (knives).• Wedges are found in nature (teeth).	<ul style="list-style-type: none">• Observable Fact• Observable Fact• Supported by the Text • Supported by the Text• Supported by the Text



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 6

Planning to Write Editorials: Grouping Reasons with Evidence That Supports My Opinion



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can recall information that is important to a topic. (W.4.8) I can sort my notes into categories. (W.4.8)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can use scientifically accurate reasons and evidence to support my opinion about a simple machine.• I can group together reasons with related evidence in my editorial.	<ul style="list-style-type: none">• Simple Machine Editorial graphic organizer• Simple Machines Editorial rubric



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging the Writer: Anticipating the Learning Targets on the Rubric (5 minutes)B. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Planning an Editorial: Guided Practice with the Wedge (20 minutes)B. Planning an Editorial: Independent Practice (20 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Simple Machine Rubric: Adding Criteria for Success (10 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• This portion of the unit begins the writing process for the performance task. Be sure that students have a system for organizing their writing resources (Simple Machines science journal and text <i>Simple Machines: Forces in Action</i>), graphic organizers, and drafts.• In this lesson students will refer to many anchor charts during the Opening and Work Time. In advance, read through the lesson to visualize how various charts are used, and organize accordingly.• Post the Simple Machines T-charts around the room so students can view them during Work Time B.• Prepare a larger version of the Simple Machine Editorial rubric on chart paper. You will add criteria for success toward the performance task on this chart.• Co-constructing the rubric based on the learning targets outlined from the standards allows students to clearly picture what meeting these targets will look like as they write their editorials. Research shows that engaging students in the assessment process engages, supports, and holds students accountable for their learning. This practice helps all learners, but it supports struggling learners the most.• Review students' choice of simple machine and pair them with a writing partner who has chosen the same simple machine. They will work with this partner in a series of critique and feedback sessions to help revise their writing. It is important that student pairs focus on the same simple machine, as the end of unit assessment will require them to choose another simple machine and write an on-demand editorial.• Review: Mix and Mingle (Appendix).



Lesson Vocabulary	Materials
scientifically accurate (review) opinion, reasons, evidence	<ul style="list-style-type: none">• Document camera• Simple Machines Editorial rubric (one to display)• Exploring Opinions as Readers and Writers anchor chart (from Lesson 3)• Editorial Characteristics and Planning chart (from Lesson 5)• Simple Machines T-chart (wedge model, from Lesson 5)• Simple Machines Editorial graphic organizer (wedge model, one copy for teacher reference)• Sticky note (one per student)• <i>Simple Machines: Forces in Action</i> by Buffy Silverman (one text for each student and one for modeling)• Simple Machines science journal (each students', from Unit 2)• Simple Machines T-charts (one chart for each group of three or four, from Lesson 5)• Simple Machines Editorial graphic organizer (one per student)• Writing folders



Opening	Meeting Students' Needs
<p>A. Engaging the Writer: Anticipating the Learning Targets on the Rubric (5 minutes)</p> <ul style="list-style-type: none">Using a document camera, display the top half of the Simple Machine Editorial rubric.Review the writing prompt and learning target with the class:<ul style="list-style-type: none">“A local engineering magazine wants to educate its readers on the importance of simple machines in the age of high-tech gadgets. So they’ve decided to hold a ‘Campaign for Simple Machines.’ Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month’s magazine.”Learning target on the rubric:<ul style="list-style-type: none">* “I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.”Remind students that they have become experts on simple machines and over the past several days have learned a lot about how authors support their opinions with reasons and evidence. Post the Exploring Opinions as Readers and Writers anchor chart (from Lesson 3) and Editorial Characteristics and Planning chart (from Lesson 5).Prompt students to “mix and mingle” on the following:<ul style="list-style-type: none">* “Given what we know about opinions and editorials, what would you expect to see for learning targets on the bottom half of this rubric?”Circulate and listen as members of the class discuss the prompt. Listen for them to say things such as: “I think one of the learning targets will be about writing an introduction that has the opinion about simple machines,” or “There will be a learning target about using evidence to support our reasons.”Ask students to return to their seats. Focus them on the Simple Machine Editorial rubric chart. Ask students to give you a thumbs-up if they anticipated a target as you read each target aloud.Read the targets in the criteria for success table on the rubric one at a time. Notice which targets students anticipated and which may need more clarification in upcoming lessons.	<ul style="list-style-type: none">Co-constructing the rubric based on the learning targets allows students to clearly picture what meeting these targets will look like as they write their editorials.



Opening (continued)	Meeting Students' Needs
<p>B. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Tell students that today they will focus on two of these targets. Point out the following learning targets under the Ideas and Organization sections on the chart:<ul style="list-style-type: none">– “I can use scientifically accurate reasons and evidence to support my opinion about a simple machine.”– “I can group together reasons with related evidence in my editorial.”• Discuss the phrase <i>scientifically accurate</i>. Explain to the class that this concept is similar to the phrase <i>historically accurate</i>, which was used when students wrote historical fiction in Module 2. Ask students to share with a partner what they think this phrase means. Cold call pairs to share. Listen for explanations like: “It means the science has to be right,” or “Our reasons and evidence will have to be based on our simple machine research.” Clarify this target as necessary.• For the second target, ask students,<ul style="list-style-type: none">* “What do you think it means to ‘group reasons with related evidence?’”• Have students turn and talk once again. Listen for explanations like: “It means our evidence has to match our reasons.”• Tell students that today’s lesson will help them clarify these targets further so that they can add criteria for success to the rubric.	



Work Time	Meeting Students' Needs
<p>A. Planning an Editorial: Guided Practice with the Wedge (20 minutes)</p> <ul style="list-style-type: none">• Post the Simple Machine T-chart (wedge model) next to the Editorial Characteristics and Planning chart. Tell students that you would like their help planning your editorial. Use the characteristics outlined on the Editorial Characteristics and Planning chart to guide your modeling (see the Simple Machine Editorial graphic organizer [wedge model] in the supporting materials as an example).• Before beginning your modeling, do the following<ul style="list-style-type: none">– Distribute 1 sticky note to each student.– Distribute the text <i>Simple Machines: Forces in Action</i>– Have students get out their Simple Machines science journal.– Group students with a writing partner who is writing about the same simple machine (ideally from the same expert group.) Students will continue to work with their writing partner for critique and feedback throughout the module.• Model as follows: Tell students that you have already formed the opinion that “the wedge is the most helpful simple machine.” Record this as a note in the Introduction box.• Explain that you also know that you have to give your readers some background information about what simple machines are and how the wedge works. Tell them you know that it is important for this information to be <i>scientifically accurate</i>.• Ask students to work with their partner to help you with this by doing the following:<ol style="list-style-type: none">1. In your Simple Machines science journal, review your notes about simple machines (pages 8 and 9) and your vocabulary section.2. On a sticky note, jot down information about simple machines you think we should add to the Introduction about wedges.• Give students a few minutes to look over their notes, discuss, and record with their partners.• Then ask pairs to share out their suggestions. Listen for students to suggest: “Simple machines make work easier by reducing effort,” “There are six simple machines,” or “There is a trade-off when using simple machines: less effort equals greater distance.”	<ul style="list-style-type: none">• During the guided practice, be sure to note which students are struggling. This can help you determine with whom to confer during the independent practice (Work Time Part B).



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Add suggestions that are scientifically accurate to the Introduction box. Additionally, add the following specifically about wedges:<ul style="list-style-type: none">– A wedge is two inclined planes joined together.– A wedge makes it easier to push something apart.• Tell students that these are the details specifically about wedges from your notes.• Thank students for their help. Then point to the posted Simple Machine Editorial graphic organizer (wedge model). Explain to the class that your next step is to determine which reasons and evidence you would like to include in your editorial.• Tell students that you have selected two reasons from the chart. Explain that one of them was a combination of reasons you noticed on the chart: Wedges are used to make many important tools. Record this in the first box in the middle of your Editorial Characteristics and Planning chart. Explain that this reason is a combination of all the reasons that mention tools on the Simple Machine T-chart (wedge model).• In the next box below, record the following reason: “Wedges are found in nature.” Tell them that you picked this reason straight from the chart because you thought it was unique to wedges.• Tell students that now that you have your reasons, you will have to go back to your notes and the text <i>Simple Machines: Forces in Action</i> to find some evidence. Remind them that it is okay to have some observations as evidence, but in order to ensure that their evidence is scientifically accurate, it should be based on their research (science journal notes and the text).• Ask students to help you find some evidence for your first reason, “Wedges are used in many important tools.” Have them turn to page 12 in their text and read only the first paragraph with their partner, looking for evidence to support your reason.• Cold call a few pairs to share. Students should notice that both the axe and nail are tools mentioned as examples of wedges. Add this evidence to your planning chart.• Help students think about how evidence must match up with a specific reason by providing a counterexample. Point out the sentence: “A wedge is wide at one end and thin at the other.” Ask partners to discuss:<ul style="list-style-type: none">* “Could this sentence be used as evidence to support my reason? Why or why not?”	



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• After students discuss briefly, cold call a few more pairs to share their thinking. Explain that while this sentence might be good evidence for another reason (wedges are nice-looking and simple), it does not fit with your reason. Tell them that it is important for them to group reasons with evidence that is related (or supports them); otherwise their editorials will not make sense to the reader.• Thank the students for their assistance. Tell them that you will continue to gather evidence that is related to your reasons and add notes for your concluding paragraph. Quickly review what this paragraph should include (a summary of the author's opinion), then ask students for a thumbs-up if they feel ready to plan their own editorials or thumbs-down if they need you to clarify how to use the graphic organizer.• Clarify as necessary or decide which students you will confer with during the independent practice based on this information.	
<p>B. Planning an Editorial: Independent Practice (20 minutes)</p> <ul style="list-style-type: none">• Explain to students that now they will plan their editorials using their own graphic organizers. They will do this individually but should continue to sit next to their partner, so that they can support each other as needed. Be sure the Simple Machines T-charts are posted where students can see them and reference them during their work and that students have their text and journals for gathering evidence.• Distribute a Simple Machines Editorial graphic organizer to each student. Circulate and support as needed. As students finish planning, have them put their materials away in their writing folders.	<ul style="list-style-type: none">• Students will be using their science journals and the text to select evidence. If some students struggle in managing these materials, consider marking the sections of the text and their journals where they should focus to gather evidence. This can be done ahead of time for select students or as needed when you confer.



Closing and Assessment	Meeting Students' Needs
<p>A. Simple Machine Rubric: Adding Criteria for Success (10 minutes)</p> <ul style="list-style-type: none">• Gather students together and focus them on the Simple Machine Editorial rubric chart again. Ask the class to reread the first learning target for the day: "I can use scientifically accurate reasons and evidence to support my opinion about a simple machine."• Ask students to Think-Pair-Share on the following question:<ul style="list-style-type: none">* "What will it look like if we meet this target in our editorials?" Listen for comments like: "We will use information from our research for our reasons and evidence," or "We will pick reasons that can be supported by evidence from our notes or the text."• Add something like the following to the "Meets" column of the rubric next to this learning target:<ul style="list-style-type: none">– All reasons are supported by evidence from our class research on simple machines (<i>Simple Machines: Forces in Action</i> and our Simple Machines science journals).• For the Partially Meets column, you can add the above with the word Some instead of All. For Does Not Meet, add No instead of All. This will hold true for each of the learning targets for which you create criteria on the rubric for the rest of the unit.• Repeat a similar process with the day's second learning target: "I can group together reasons with related evidence in my editorial."<ul style="list-style-type: none">– All reasons are supported by evidence (examples, details, and facts) that is directly related to the reasons. Example: Reason: Wedges are used in lots of tools. Evidence: An axe and nail are examples.• Tell students that at the start of the next lesson, they will get feedback on their plans from their writing partners based on these criteria. Then they will write a draft of their editorials.	<ul style="list-style-type: none">• Consider adding models with examples of "Meets" or "Does not Meet" to the rubric or beside it. Using models can further clarify for students what it means to meet the learning target.



Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: Add the rest of the planning notes to the Editorial Characteristics and Planning chart (see supporting materials in this lesson) to prepare for Lesson 7.</i></p>	<ul style="list-style-type: none">• An alternative to having students finish this planning at home is to give them additional designated time at some point during the school day.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 6

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



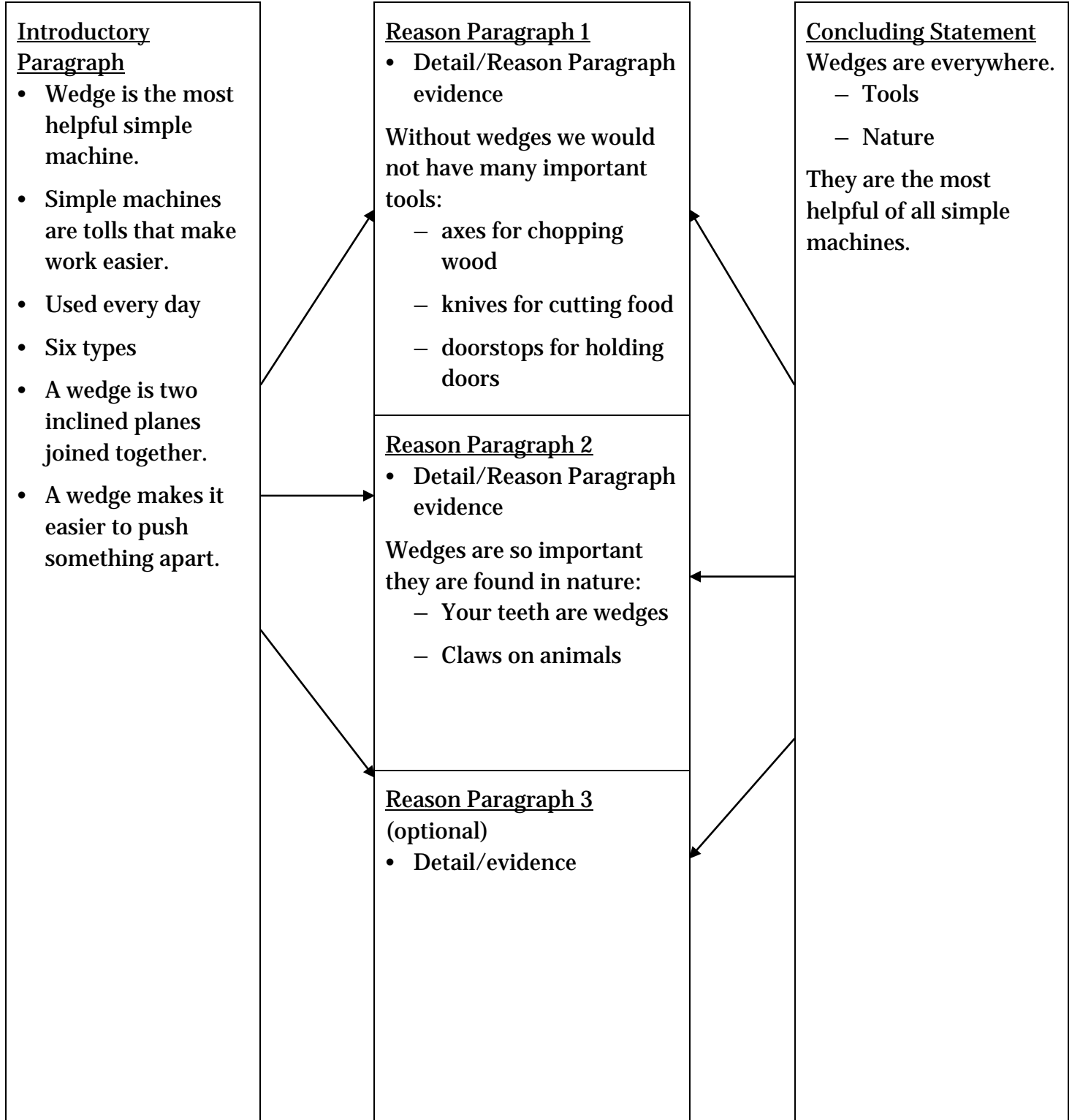
Simple Machines Editorial Rubric

Learning Target: I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. (W.4.1)

Criteria	Meets	Partially Meets	Does Not Meet
Ideas			
I can write an introduction in my editorial that explains simple machines and states my opinion clearly. (W.4.1a)			
I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. (W.4.1b)			
Word Choice			
I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial. (L.4.3)			
Organization			
I can group together reasons with related evidence in my editorial. (W.4.1a)			
I can use linking words to connect my opinion to my reasons. (W.4.1c)			
I can develop a conclusion that summarizes my opinion about simple machines in my editorial. (W.4.1d)			
Conventions			
I can use conventions to send a clear message to my reader. (L.4.2)			



Simple Machines Editorial Graphic Organizer
(Wedge Model- for teacher reference)





Simple Machines Editorial Graphic Organizer
(Blank student version)

<u>Introductory Paragraph</u> <ul style="list-style-type: none">• States point of view• Description of simple machines in our world OR <ul style="list-style-type: none">• Description of simple machines in our world• States point of view	<u>Reason Paragraph 1</u> <ul style="list-style-type: none">• Detail/Reason Paragraph evidence	<u>Concluding Statement</u>
	<u>Reason Paragraph 2</u> <ul style="list-style-type: none">• Detail/Reason Paragraph evidence	
	<u>Reason Paragraph 3 (optional)</u> <ul style="list-style-type: none">• Detail/evidence	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 7

Drafting an Editorial about a Simple Machine



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)

- a. I can group together reasons with related evidence in my editorial.
- b. I can use scientifically accurate reasons and evidence to support my opinion about a simple machine.

I can use the writing process to produce clear and coherent writing (with support). (W.4.5)

I can effectively participate in a conversation with my peers and adults. (SL.4.1)

Supporting Learning Targets

- I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.
- I can use scientifically accurate reasons and evidence to support my opinion about a simple machine.
- I can group together reasons with related evidence in my editorial.
- I can give kind, helpful, and specific feedback to my critique partner.

Ongoing Assessment

- Simple Machine Editorial graphic organizers
- Drafts of Simple Machine Editorials



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Peer Critique on Plans: Focused on Scientific Accuracy and Grouping Reasons and Evidence (15 minutes)B. Reviewing Characteristics of Editorials and Strong Paragraphs (5 minutes)C. Drafting Simple Machine Editorials (25 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Sharing and Debrief (10 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• In this lesson, students write their first draft of their Simple Machine editorials. They receive feedback on scientific accuracy and the grouping of reasons and evidence in their graphic organizers from a peer and then proceed to draft. Decide whether students will be drafting on the computer or on paper.• Note that Lesson 14 is dedicated to having students publish their work in a computer lab. The lessons that lead up to this lesson assume that this drafting will be done with pencil and paper. However, if you have students word-process throughout the drafting process, they will have to print off a draft for critique, feedback, and annotating revisions. See lesson notes throughout the rest of the unit to prepare accordingly.• In advance: Prepare on chart paper the Critique Protocol anchor chart (see supporting materials or use the version created in Module 2A, Unit 3, Lesson 7).• Review: Peer Critique protocol (Appendix 1).



Lesson Vocabulary	Materials
editorial, opinion, specific, critique, scientifically accurate, reasons, evidence	<ul style="list-style-type: none">• Equity sticks• Critique Protocol Norms anchor chart (from Module 2A, Unit 3, Lesson 7, or see supporting materials to model to create)• Simple Machines Editorial graphic organizer (students' copies, from Lesson 6)• <i>Simple Machines: Forces in Action</i> by Buffy Silverman• Simple Machines Science journals (students' copies)• Editorial Characteristics and Planning chart (with the wedge model from Lesson 6)• Notebook paper or computers for drafting (enough for each student)• Writing folders• Index cards (standard size, one per student for an exit ticket)

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post and read aloud the following learning targets:<ul style="list-style-type: none">– “I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.”– “I can use scientifically accurate reasons and evidence to support my opinion about a simple machine.”– “I can group together reasons with related evidence in my editorial.”– “I can give kind, helpful, and specific feedback to my critique partner.”• Ask students what they know already about these targets. Give students a chance to talk with a partner about their thinking. Then cold call students using the equity sticks.• All of these targets should be familiar to students. They have been focused on the first three targets for the past several lessons. The last is a target used for critique sessions in Modules 1 and 2. Have students share what they recall about this target. Clarify as needed and explain that the class will review the critique process more thoroughly in a moment.	



Work Time	Meeting Students' Needs
<p>A. Peer Critique on Plans: Focused on Scientific Accuracy and Grouping Reasons and Evidence (15 minutes)</p> <ul style="list-style-type: none">• Review the main components of a successful critique on the Critique Protocol Norms anchor chart (see teaching notes and supporting materials of this lesson for preparing this anchor chart).<ul style="list-style-type: none">– Be kind– Be specific– Be helpful– Participate• Tell students that today they are going to critique their writing partner's editorial plans to help them prepare for writing their first draft. Tell them they will focus their feedback using the Simple Machines Editorial Rubric anchor chart.• Explain that for today their feedback will focus only on learning targets 2 and 4 from the rubric: "I can use scientifically accurate reasons and evidence to support my opinion about a simple machine," and "I can group together reasons with related evidence in my editorial."• Review the criteria for Meets on the rubric. Remind students that in order for this feedback to be helpful, they should focus only on these specific areas.• Ask students to get out their Simple Machines Editorial graphic organizer, the text <i>Simple Machines: Forces in Action</i>, and their Simple Machines Science journals. Place students with their writing partners (established in Lesson 6). Explain that they will have 5 minutes apiece to critique and take notes. Tell the class that those being critiqued should make notes about changes or revisions directly on their graphic organizers. Circulate and support partnerships in keeping their critique kind and focused.	<ul style="list-style-type: none">• Critiques simulate the experiences students will have in the workplace and help build a culture of achievement in your classroom.• Students should be comfortable with the routine of peer critique from their experiences in Modules 1 and 2. However, you may consider modeling with your wedge plans from the Editorial Characteristics and Planning chart in Lesson 6, if you feel that your students need more practice with peer critique before working with a partner.



Work Time (continued)	Meeting Students' Needs
<p>B. Reviewing Characteristics of Editorials and Strong Paragraphs (5 minutes)</p> <ul style="list-style-type: none">• Post the Editorial Characteristics and Planning chart (with the wedge model) next to the Simple Machines Editorial rubric chart and gather students back together in front.• Ask the class to examine your editorial plans for the wedge. Briefly review the following with students:<ul style="list-style-type: none">* “How many paragraphs do you have planned?”* “What should each paragraph contain, based on your plans and what you know about the characteristics of editorials?”* “What are the features of a strong paragraph?” (topic sentence, details, and concluding sentence)	<ul style="list-style-type: none">• If your class needs more explicit instruction on paragraph writing, expand this area of the lesson to include more modeling with the wedge editorial. Another option is to pull a small group during Work Time Part C to provide more direct support with the drafting process.
<p>C. Drafting Simple Machine Editorials (25 minutes)</p> <ul style="list-style-type: none">• Tell students that they are about to complete a first draft editorial and that it does not have to be perfect. Students should reference the rubric when drafting, but shouldn't worry about meeting every learning target at this point. Request that they pay special attention to learning targets 2 and 4 from the rubric and use their partner's feedback to guide the drafting process.• Students should spend the next 25 minutes writing their first drafts. Circulate and support as needed. Be sure to confer with students you observed struggling in Lesson 6. Help students to focus on getting their ideas down on paper as opposed to worrying about spelling or grammar. Remind them that they will edit for these toward the end of the writing process.• After 25 minutes, have students put their drafts and materials in their writing folders.	<ul style="list-style-type: none">•



Closing and Assessment	Meeting Students' Needs
<p>A. Sharing and Debrief (10 minutes)</p> <ul style="list-style-type: none">• Explain to students that it has been a while since they participated in a critique session and that they may feel the class is a bit rusty. Tell them that today for an exit ticket you would like them to reflect on this learning target alone, so that they can set goals for their next critique session.• Distribute an index card for the exit ticket and ask students to do the following:<ul style="list-style-type: none">* On the front of the card, record your name at the top and write the learning target: "I can give kind, helpful, and specific feedback to my critique partner."* On the front of the card, write a personal reflection: "Did you meet the learning target? What is your evidence?"* On the back, write a class evaluation: "How did the class do with giving kind, helpful, and specific feedback? What is your evidence?"	<ul style="list-style-type: none">• For students who struggle with following multiple step directions, consider displaying these directions using a document camera or SmartBoard. Another option is to type up these instructions for students to have in hand.
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home. <p><i>Note: Review students' Simple Machine Editorial drafts and give specific feedback on the following learning targets on the rubric: "I can use scientifically accurate reasons and evidence to support my opinion about a simple machine" and "I can group together reasons with related evidence in my editorial."</i></p> <p><i>Consider writing your feedback on sticky notes instead of directly on students' papers. This will allow them space for their own annotations during the revision process and is respectful of their work as a writer. Students will be able to revise based on your feedback and that of their peers the next time they draft.</i></p>	<ul style="list-style-type: none">•



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 7

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Critique Protocol Norms

Be Kind: Treat others with dignity and respect.

Be Specific: Focus on why something is good or what, particularly, needs improvement.

Be Helpful: The goal is to help everyone improve his or her work.

Participate: Support one another. Your feedback is valued!

Directions

1. Author and listener: Review area of critique focus from the rubric
2. Author: Reads his or her piece
3. Listener: Gives feedback based on rubric criteria: "I like how you _____. You might consider _____."
4. Author: Records feedback
5. Author: Says, "Thank you for _____. My next step will be _____."
6. Switch roles and repeat



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 8

Revising for Ideas: Interesting Introductions



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
I can use the writing process to produce clear and coherent writing (with support). (W.4.5)
I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can write an introduction in my editorial that explains simple machines and states my opinion clearly.
- I can give kind and helpful feedback to my writing partner.

Ongoing Assessment

- List of Introductions



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Engaging Readers and Writers (5 minutes)Review Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Criteria for Effective Introductions in an Editorial (5 minutes)Examining Models of Effective Editorial Beginnings (10 minutes)Guided Practice Writing Different Types of Introductions (10 minutes)Independent Practice on Writing Introductions (20 minutes)Closing and Assessment<ol style="list-style-type: none">Sharing and Debrief (5 minutes)Homework<ol style="list-style-type: none">Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">This lesson is very similar to the format in Module 2, Unit 3, Lesson 11. The students examine mentor texts for how authors write effectively. They will then apply what they learn to their own writing.Writing partners for this unit were established in Lesson 7.In this lesson, the class will help the teacher to revise the introductions of the Model Wedge Editorial (see supporting materials of this lesson). There are examples of possible revised introduction paragraphs in the supporting materials.The task of writing two different introductions may be difficult for students. This part of the lesson may require additional teacher support.Beginning with this lesson, students will revise their work using different-colored pencils for each focus. See materials lists for colors used in Lessons 8–12.Consider supplying copies of the Interesting Introductions anchor chart for students to reference and keep in their writing folders.In advance: Enlarge the introduction paragraphs from “No More Junk in Our Schools” and “Who Cares about Polar Bears?” editorials to be posted on the class anchor chart during Work Time B.Recreate the Bold Beginnings anchor chart from Module 2, Unit 3, Lesson 12.



Lesson Vocabulary	Materials
states, opinion, introduction	<ul style="list-style-type: none">• Equity sticks• Bold Beginnings anchor chart (from Module 2A, Unit 3, Lesson 12)• “No More Junk in Our Schools” editorial (from Lesson 1; one per student and one to project)• Document camera• Interesting Introductions anchor chart (new; teacher-created)• “Who Cares About Polar Bears?” editorial (from Lesson 2; one per student and one to project)• Model Wedge Editorial• Simple Machine Editorials (drafts from Lesson 7)• Red colored pencil (one per student)• Simple Machine Editorial rubric chart (from Lesson 6)



Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers (5 minutes)</p> <ul style="list-style-type: none">• Ask students what they think is most important about a book or other piece of writing in grabbing the reader's attention. Ask them to think first, then turn and talk to a shoulder partner. Use equity sticks to cold call on one or two students. You should hear responses such as: "The way a story begins is important because it's the first thing a reader reads," and "It should make the reader want to read more."• Validate this thinking and explain that in today's lesson they are going to write different beginnings for their editorials on simple machines, much as they did in Module 2 when they were writing their historical fiction narrative about their colonial tradesperson.	<ul style="list-style-type: none">• Deconstructing the unfamiliar academic vocabulary in learning targets supports all learners who struggle with language. This ensures that they understand clearly what they will be learning in the lesson.
<p>B. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Invite the students to read the first learning target: "I can write an introduction in my editorial that explains simple machines and states my opinion clearly." Ask them if there are any words or phrases that they think are important or just unfamiliar to them. They may identify the following words:<ul style="list-style-type: none">– states = explains– opinion = a point of view (what a person thinks about a topic)• Write the synonyms about the word/phrases and ask the students to read the learning targets silently. Have them give a thumbs-up if they are clear on what they will be expected to do, a thumbs-sideways if they understand some but not all of what to do, and a thumbs-down if they are very unsure about what they should do. Clarify as needed.	<ul style="list-style-type: none">•



Work Time	Meeting Students' Needs
<p>A. Criteria for Effective Introductions in an Editorial (5 minutes)</p> <ul style="list-style-type: none">• Remind students that in Module 2 they learned how to write different bold beginnings for their historical fiction narrative. Review the Bold Beginnings anchor chart (from Module 2, Unit 3, Lesson 12):<ul style="list-style-type: none">– Catches the reader's attention: hooks a reader into wanting to read more– Makes the reader want to read more: gets your reader curious about what's coming next– Is appropriate to purpose and audience: makes the reader feel your piece is going to be an interesting and enjoyable experience and worth his/her time.• In narratives we call the beginning of a piece "the beginning." In editorials we call the beginning "an introduction." It's similar but has different purposes and audiences. Explain that in all writing, the author must make sure that the text begins in a way that is appropriate for the audience and grabs readers' attention and makes them want to read more.	<ul style="list-style-type: none">• Putting copies of anchor charts in students' research folders will give them access to important information as they work independently.



Work Time (continued)	Meeting Students' Needs
<p>B. Examining Models of Effective Editorial Beginnings (10 minutes)</p> <ul style="list-style-type: none">• Ask students to get out their copy of “No More Junk in our Schools.” Project the first paragraph using a document camera. Remind students that they should be familiar with this editorial because they read it in Lesson 3 when they were learning about the characteristics of an editorial. (Note: If you feel that your students need to review the text before proceeding with this lesson, briefly read it aloud as they follow along.)• Read the first paragraph aloud and ask the class to think about how the author designed the introduction so that it grabbed the reader’s attention about the topic. Ask them to turn and tell their partner what they think the author did—how the author designed the flow of the paragraph. Use equity sticks to cold call on one or two students. You should hear responses such as: “The author started by telling us her opinion in the first sentence,” and “She started by telling us her opinion and then stated some facts about vending machines to back up what she thinks.”• Display the Interesting Introductions anchor chart and document students’ observations by writing the following in the left-hand column:<ul style="list-style-type: none">– Introduction 1:<ul style="list-style-type: none">• Begin by stating opinion• Description/facts of vending machines• Post a copy of the introduction paragraph in the right-hand column.• Ask students to get out their copy of the “Who Cares about Polar Bears?” and project the first paragraph. Again, remind the students that they should be familiar with this editorial because they read it in Lesson 3 when they were learning about the characteristics of an editorial. (Note: If you feel that your students need to review the text before proceeding, briefly read the text aloud as they follow along.)• Ask the students to turn to a shoulder partner. Ask them to read the first paragraph aloud together. After they’ve read it, ask them to discuss how they think this editorial begins. Is it the same as the first one? Is it different?	<ul style="list-style-type: none">• Throughout this unit, students read a series of mentor texts. Mentor texts are model texts, written by real authors, that students examine in order to see strong examples of writing craft. In this unit, students analyze various examples of editorials. For more information on mentor texts, read <i>Study Driven</i> by Katie Wood Ray.• Consider partnering an ELL with one who speaks the same L1 for discussion of complex content. Alternatively, partner an ELL with a native speaker of English. ELL language acquisition can be facilitated by interacting with the content in English.



Work Time (continued)	Meeting Students' Needs
<ul style="list-style-type: none">• Invite partnerships to find another partnership to share their thinking. Once the foursome has a collective understanding of how the introduction was designed to grab a reader's attention, ask them all to raise their hands so that they form a silent "tepee" of hands. When all groups have their hands up, ask one person from each group to share. You should hear responses like: "This one doesn't state the opinion until the end of the paragraph," or "The author describes what polar bears are first, then tells their opinion about who should care about them."• Document their observations on the chart by writing in the left-hand column:<ul style="list-style-type: none">– Introduction 2:<ul style="list-style-type: none">• Begins by describing the topic• States opinion• Post a copy of the introduction paragraph in the right-hand column.	
<p>C. Guided Practice Writing Different Types of Introductions (10 minutes)</p> <ul style="list-style-type: none">• Display the Model Wedge Editorial (see supporting materials) using a document camera. Tell the class that this is your first draft of an editorial about how the wedge helps people the most in daily life. Explain that you know your introduction needs some revision and that you would like their help.• Read the draft aloud. As a class, brainstorm how to revise the introduction so that the opinion is stated first and is followed with a description of the wedge, just like Introduction 1 on the class chart.• Write this introduction on chart paper for students to see, or write them on a plain piece of paper to display on the document camera (see supporting materials for examples).• Remind students that before a writer settles on one beginning, he or she will often write several different ones. Ask them to meet in the same groups of four that they worked with earlier to talk about how an introduction might sound if they wrote it like Introduction 2 from the class chart.• Give the students 2 to 3 minutes to discuss options for how the introduction might be written.• Call on one or two groups to share their ideas. Choose one to write beneath the first introduction.	



Work Time (continued)	Meeting Students' Needs
<p>D. Independent Practice on Writing Introductions (20 minutes)</p> <ul style="list-style-type: none">• Direct students to review the Simple Machine Editorials (drafts from Lesson 7) and write two different introductions, just like you did as a class with the wedge. Remind them that they will not rewrite the entire editorial. They will just write the introductions on a separate piece of paper.• Give the students 20 minutes to write their two introductions. As the students work, circulate to assist as needed. Encourage students to think about the criteria for interesting introductions as they work. Reassure students that it is not essential to have two different introductions, but that trying to figure out different ways to start their editorial will expand their skills as writers.	<ul style="list-style-type: none">• During independent work, the teacher can support students with special needs or ELLs as needed. It's okay to let them struggle with the task, as successful completion after considerable effort builds both stamina and confidence.
Closing and Assessment	Meeting Students' Needs
<p>A. Share and Debrief (5 minutes)</p> <ul style="list-style-type: none">• Invite students to read the second learning target to themselves: "I can give kind and helpful feedback to my writing partner." Ask them what it means to "give helpful feedback." Call on one or two students to briefly share their thinking. Listen for: "It's ideas that will help make my writing better," or "It's not 'That's really good.' Because that doesn't help me know what I need to do to make it better. I need specific ideas to help me."• Ask students to sit with their writing partner to share their introductions and to give helpful feedback. Together, they should choose which one fits best with the editorial. Students should circle it with a red colored pencil.• As a class, add introduction criteria to the Simple Machines Editorial rubric chart (from Lesson 6) using the Interesting Introductions anchor chart to clarify the meaning of the following learning target on the rubric:<ul style="list-style-type: none">– "I can write an introduction in my editorial that explains simple machines and states my opinion clearly."	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 8

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Interesting Introductions Anchor Chart

(Sample for Teacher Reference; create this on chart paper in advance)

1. **Catches the reader's attention:** something that hooks a reader into wanting to read more
2. **Makes the reader want to read more:** something that makes your reader curious about what's coming next
3. **Is appropriate to purpose and audience:** something that makes the reader feel your piece is going to be an interesting and enjoyable experience and worth his or her time

Description of Introduction	Example from a Text We Have Read

Model Wedge Editorial

Wedges are Wonderful

Simple machines are tools that make work easier. Wedges are the most helpful of all simple machines.

Wedges are used every day. They make our lives easier. Without wedges, we would not have many important tools. We would not have doorstops for holding doors open. We would not have knives for cutting food. We would not have axes and saws for cutting wood. It would be hard to eat. Can you imagine how you would eat an apple without your teeth or a knife? How would you cut down trees to build a house without an axe or saw? Wedges make jobs easier to do.

People and animals have wedges in their bodies. Teeth are wedges that help people to bite and eat their food. Claws are wedges that help animals to dig. Claws help animals to defend themselves too. Even nature finds wedges helpful.

Wedges are the most helpful of all simple machines.



Examples of Revised Introductions for Model Wedge Editorial

Example 1:

Simple machines are tools that make work easier. They are great for moving something with less effort, but there is a trade-off, distance. One simple machine is the wedge. Wedges are skinny at one end and wide at the other. You can push the skinny end of a wedge into something to split it apart or hold it in place. The wedge is the most helpful of all simple machines. Here's why.

Example 2:

Wedges are a simple machine that make work easier. They are the most helpful of all simple machines. Simple machines help us move things with less effort over a longer distance. The wedge does this by pushing its skinny edge into something to split it apart, but it can also hold something in place. There are a few really good reasons the wedge is the most helpful of simple machines.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 9

Revising for Word Choice: Scientifically Accurate Vocabulary



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can express ideas using carefully chosen words. (L.4.3)
I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
I can use the writing process to produce clear and coherent writing (with support). (W.4.5)

Supporting Learning Targets

- I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial.

Ongoing Assessment

- List of key vocabulary words
- Revised draft
- Exit ticket



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Review Learning Target (5 minutes)Work Time<ol style="list-style-type: none">Identifying Scientific Vocabulary from Research (15 minutes)Guided Practice: Revising Editorials for Scientifically Accurate Vocabulary (10 minutes)Independent Practice: Revising Editorials for Scientifically Accurate Vocabulary (15 minutes)Adding to the Rubric (5 minutes)Closing and Assessment<ol style="list-style-type: none">Share (5 minutes)Exit Ticket (5 minutes)Homework<ol style="list-style-type: none">Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">Beginning with Lesson 8, students are revising their work using different-colored pencils for each focus. In this lesson, you use an orange-colored pencil as you work with scientifically accurate vocabulary during the modeling.In this lesson the class helps the teacher to revise the introductions of the Model Wedge Editorial (see supporting materials) for use of scientifically accurate vocabulary.In advance: List each of the following vocabulary words on a sticky note for modeling during Work Time: <i>effort, work, increase, decrease, distance, narrow, wide</i>.



Lesson Vocabulary	Materials
scientifically accurate descriptions, effort, work, increase, decrease, distance	<ul style="list-style-type: none">• Simple Machines Science journal (one for modeling and students' copies, from Unit 2)• <i>Simple Machines: Forces in Action</i> by Buffy Silverman (one per student)• Sticky notes with the following vocabulary listed: <i>effort, work, increase, decrease, distance, narrow, wide</i> (for modeling)• Sticky notes (one or two per student)• Model Wedge Editorial (with revised introduction; see supporting materials)• Document camera• Colored pencil (orange; one for teacher modeling)• Simple Machines Editorial rubric chart (added to in Lesson 8)• Index cards (one per student)



Opening	Meeting Students' Needs
<p>A. Review Learning Target (5 minutes)</p> <ul style="list-style-type: none">• Post and read aloud the following learning target:<ul style="list-style-type: none">– I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial.”• Ask:<ul style="list-style-type: none">* “Based on the targets, what will we be working on today?”* “What skills and knowledge will we have at the end of the lesson?”• Invite students to discuss with a peer.• Help students connect the idea that they will use their research on their simple machine and the vocabulary section of their science journal to include words that describe their simple machine in their editorial. Clarify the phrase <i>scientifically accurate descriptions</i>: Any descriptions of how their simple machines look and work should include correct scientific words or phrases based on evidence from text and observations.	



Work Time	Meeting Students' Needs
<p>A. Identifying Scientific Vocabulary from Research (15 minutes)</p> <ul style="list-style-type: none">• Ask students to get out their Simple Machines Science journals and turn to the vocabulary section (pages 2–7). Distribute <i>Simple Machines: Forces in Action</i> and ask students to locate the pages for their simple machine. (This provides a good way to reinforce how to use a table of contents.) Distribute sticky notes to each student.• Tell students that in a moment, they will review the vocabulary words and definitions they have in their science journals and the information on their simple machines in the text.• Briefly model for students, showing them a few of your sticky notes with your own list of words that describe the wedge from the vocabulary section of your science journal as well as from the text.• Clarify directions as needed. Then give students about 10 minutes to list the words that describe their simple machine on their sticky notes (one word per note).• Refocus students whole group. Show them your full list of words related to wedges. Ask if they have any other suggestions that you might have missed.	<ul style="list-style-type: none">• For students who struggle with vocabulary, consider giving extended time for selecting scientific vocabulary from their Simple Machines science journals or pulling a small group for guided practice.



Work Time (continued)	Meeting Students' Needs
<p>B. Guided Practice: Revising Editorials for Scientifically Accurate Vocabulary (10 minutes)</p> <ul style="list-style-type: none">• Project the draft Model Wedge Editorial (with revised introduction) on a document camera or written on chart paper from Lesson 8.• Tell the class that you have chosen your introduction and today you will be reading your editorial with the new conclusion so that you can revise it and the rest of your editorial for scientifically accurate vocabulary.• Invite the students to follow along as you read aloud the Model Wedge Editorial, looking for words you have identified that are already in your draft. (These words are in bold in the model in the supporting materials.) Circle these words with an orange colored pencil and check them off the vocabulary list you have written on your sticky note for modeling (with the following vocabulary listed: <i>effort, work, increase, decrease, distance, narrow, wide</i>).• Tell students that now you would like their help in looking for ways to add or replace words in your editorial with the remaining words on your sticky note (<i>increase, decrease, narrow, wide</i>) so that it will be more scientifically accurate.• Zoom in on the revised introduction and first reason paragraphs of your Editorial Wedge Model (with revised introduction; see supporting materials in this lesson). Be sure your sticky note with vocabulary is also displayed.• Ask students to listen for words that could be replaced with scientific vocabulary from your list when you reread. Ask them to give a thumbs-up when they hear a word that could be replaced. Reread the introduction. Call on students holding a thumbs-up, and listen for suggestions such as:<ul style="list-style-type: none">– “Use <i>increase</i> instead of <i>longer</i>.”– “Use <i>narrow</i> instead of <i>skinny</i>.”• Check these words off the list on your sticky note. Now tell students that you think you might be able to add one more word from your sticky note (<i>decrease</i>) to the end of the second paragraph. Reread the last sentence in that paragraph: “Wedges make jobs easier to do.” Ask students if they can think of a way to change this sentence to add the word <i>decrease</i>. Listen for suggestions like:<ul style="list-style-type: none">– “You could change, ‘Wedges make jobs easier to do’ to ‘Wedges decrease the effort it takes to do simple jobs.’”• If students are unclear about how this might be done, model using the suggestion above.	<ul style="list-style-type: none">• For students who struggle to incorporate newly learned vocabulary into their writing, consider pulling a small group during independent practice or allowing students to work with a partner during this time.



Work Time (continued)	Meeting Students' Needs
<p>C. Independent Practice: Revising Editorials for Scientifically Accurate Vocabulary (15 minutes)</p> <ul style="list-style-type: none">• Thank students for helping you start to make your editorial more scientifically accurate. Tell them that now it is their turn to revise. Explain that they should try to use as many of the words on their list as makes sense, but not to force-fit words. Point out that you never used the word <i>wide</i> in your editorial because it did not really fit.• Tell students that there are some words that really should be in their editorials, though. Encourage them to include: <i>effort</i>, <i>work</i>, <i>increase</i>, <i>decrease</i>, and <i>distance</i>.• Ask students to follow this process with their editorials:<ol style="list-style-type: none">1. Read your draft and look for words from your list that are already in your draft. Check these off your list.2. Read the draft again, this time looking for words that could either be added or replaced to make the editorial more scientifically accurate.• Give them at least 15 minutes to revise their drafts with scientifically accurate vocabulary. Circulate and assist as needed.	
<p>D. Adding to the Rubric (5 minutes)</p> <ul style="list-style-type: none">• Explain to the students that they need to add scientifically accurate vocabulary criteria on the Simple Machines Editorial Rubric chart. Based on they revisions to their writing today, what do they feel meeting this learning target looks like?<ul style="list-style-type: none">– “I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial.”• Clarify the meaning of the learning target on the rubric.	



Closing and Assessment	Meeting Students' Needs
<p>A. Share (5 minutes)</p> <ul style="list-style-type: none"> Invite students to find a partner who is not writing about the same simple machine. Ask them to tell their partner if they met the learning target or not and then share evidence from their writing. 	<ul style="list-style-type: none"> Using entrance/exit tickets allows you to get a quick check for understanding of the learning target so that instruction can be adjusted or tailored to students' needs during the lesson or before the next lesson.
<p>B. Exit Ticket (5 minutes)</p> <ul style="list-style-type: none"> Distribute an index card to each student and have them record their name and respond to the following: <ul style="list-style-type: none"> (Front) Did you meet the learning target? What is your evidence? (Back) What are you most proud of as a writer today? Why? "I am most proud of _____ because _____." 	
Homework	Meeting Students' Needs
<ul style="list-style-type: none"> Continue reading in your independent reading book for this unit at home. <p><i>Note: Review students' annotated drafts for vocabulary additions; use this information to determine which students may need more support in incorporating scientific vocabulary into their editorial. Consider pulling a small group for more direct instruction.</i></p> <p><i>Students will need their drafts back for Lesson 10 for peer critique. You do not need to grade their drafts between Lessons 9 and 10, since the purpose of the peer critique is for students to give one another authentic feedback. But review their drafts to notice patterns of strength or concern you may want to alert students to for their peer critique.</i></p>	<ul style="list-style-type: none"> For ELLs or those who struggle with writing, consider reviewing their drafts to give specific positive feedback and to suggest a focus area for their work with peers during this lesson. Pose a focus question for them for their revision, to guide them to use their peer support most strategically.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 9

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Model Wedge Editorial

Wedges are Wonderful

Wedges are a simple machine that make **work** easier. They are the most helpful of all simple machines. Simple machines help us move things with less **effort** over a longer **distance**. The wedge does this by pushing its skinny edge into something to split it apart, but it can also hold something in place. There are a few really good reasons the wedge is the most helpful of simple machines.

Wedges are used every day. They make our lives easier. Without wedges, we would not have many important tools. We would not have doorstops for holding doors open. We would not have knives for cutting food. We would not have axes and saws for cutting wood. It would be hard to eat. Can you imagine how you would eat an apple without your teeth or a knife? How would you cut down trees to build a house without an axe or saw? Wedges make jobs easier to do.

People and animals have wedges in their bodies. Teeth are wedges that help people to bite and eat their food. Claws are wedges that help animals to dig. Claws help animals to defend themselves too. Even nature finds wedges helpful.

Wedges are the most helpful of all simple machines.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 10

Peer Critique: Scientific Accuracy of Ideas and Vocabulary



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
I can use the writing process to produce clear and coherent writing (with support). (W.4.5)
I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can give kind, helpful, and specific feedback to my writing partner.
- I can critique the ideas of my writing partner's editorial for scientific accuracy.

Ongoing Assessment

- Feedback and reflection notes



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Review Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Reviewing Simple Critique Protocol (10 minutes)Peer Critique of Drafts for Ideas (25 minutes)Annotating Drafts for Revision (15 minutes)Closing and Assessment<ol style="list-style-type: none">Exit Ticket (5 minutes)Homework<ol style="list-style-type: none">Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">Beginning with Lesson 8, students have been revising their work using different-colored pencils for each focus. In the current lesson, students use green pencils.Review: Peer Critique protocol (Appendix 1), Critique Protocol anchor chart (from Lesson 7), and Review Peer Critique Norms (Module 2A, Unit 3, Lesson 7)

Lesson Vocabulary	Materials
specific, revision, critique, feedback	<ul style="list-style-type: none">Equity sticksCritique Protocol Norms anchor chart (from Lesson 7)Simple Machines Editorial rubric chart (from Lesson 9)Editorial Feedback recording form (one per student)Green pencils (one per student)Steps for Revising My Editorial anchor chartIndex card (one per student)



Opening	Meeting Students' Needs
<p>A. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post and read aloud the following learning targets: “I can give kind, helpful, and specific feedback to my critique partner,” and “I can critique the ideas of my writing partner’s editorial for scientific accuracy.”• Ask students what they know already about these targets. Give them a chance to talk with a partner about their thinking, then cold call students using the equity sticks. Students may recall the critique process from Modules 1 and 2. Have them share what they recall.• Then ask students to identify parts of the learning targets that are unfamiliar or confusing. Pay particular attention to the words <i>specific</i>, <i>critique</i>, and <i>scientific accuracy</i> (scientifically accurate ideas and vocabulary based on evidence from text and observations) as you clarify the meaning of the targets with students.	



Work Time	Meeting Students' Needs
<p>A. Reviewing Simple Critique Protocol (10 minutes)</p> <ul style="list-style-type: none">Review the main components of a successful critique on the Critique Protocol Norms anchor chart (see teaching notes and supporting materials of this lesson for preparing this anchor chart). Remind students that they created the same anchor chart in Module 2, Unit 3 when they were writing their historical fiction narratives.Remind the students of the non-negotiables before they begin this process. The following four points are crucial for success:<ul style="list-style-type: none"><u>Be kind</u>: Always treat others with dignity and respect. This means we never use words that are hurtful, including sarcasm.<u>Be specific</u>: Focus on particular strengths and weaknesses, rather than making general comments such as “It’s good” or “I like it.” Provide insight into why it is good or what, specifically, you like about it.<u>Be helpful</u>: The goal is to contribute positively to the individual or the group, not simply to be heard. Echoing the thoughts of others or cleverly pointing out irrelevant details wastes time.<u>Participate</u>: Peer critique is a process to support one another, and your feedback is valued!Tell students that today they are going to listen to their partners read their editorial drafts. Tell them they will focus their feedback using the Simple Machines Editorial rubric chart (added to in Lesson 9).Explain that for today their feedback will focus only on the Ideas and Word Choice portions of the rubric. Review the criteria for Meets on the rubric. Students will focus mainly on the scientific accuracy of scientific concepts as well as scientific vocabulary as they describe their simple machine and how it’s used to help make people’s lives better.Remind students that in order for this feedback to be helpful they should only focus on this specific area. Pointing out misspelled words or incorrect punctuation will not be helpful at this point. That will be saved for the final editing.	<ul style="list-style-type: none">Critiques simulate the experiences students will have in the workplace and help build a culture of achievement in your classroom.If you feel that your students need more practice with peer critique before working with a partner, consider using the model paragraph from the wedge editorial.



Work Time (continued)	Meeting Students' Needs
<p>B. Peer Critique of Drafts for Ideas (25 minutes)</p> <ul style="list-style-type: none">• Partner students with others who have written about the same simple machine if possible.• Distribute the students' editorial drafts and the Editorial Feedback recording form. Remind students that this is where they will record their partner's feedback on their work and their next steps.• Have students read the directions then restate in their own words to a partner:<ol style="list-style-type: none">1. Author and listener: Review area of critique focus from rubric2. Author: Reads his or her piece3. Listener: Gives feedback based on rubric criteria: "I like how you _____. You might consider _____."4. Author: Records feedback5. Author: Says, "Thank you for _____. My next step will be _____."6. Switch roles and repeat• Address any clarifying questions, and then have students begin.• Circulate to support students with the critique process, helping them to follow the protocol and focus their feedback using the rubric's Ideas and Word Choice sections.	<ul style="list-style-type: none">• If students are using a computer, they will still make revisions on a printout of their drafts until they are ready to complete a second draft.• For each revision of students' drafts, a different colored pencil will be used to annotate in this unit. This will allow students to keep track of the focus of each revision. A different color will be used in subsequent lessons for each type of revision (e.g., ideas, organization).• To support visual learners, consider using a document camera with a few sentences written double-spaced to demonstrate this note-taking technique.



Work Time (continued)	Meeting Students' Needs
<p>C. Annotating Drafts for Revision (15 minutes)</p> <ul style="list-style-type: none">• Have students thank their partners and move to their workspace. Be sure that every student has a green pencil. Post the Steps for Revising My Editorial anchor chart:<ol style="list-style-type: none">1. Choose the correct colored pencil. Today's color is _____.2. Decide where you will add a revision note based on feedback or new learning.3. Write your revision note in the space above the sentence you want to change.4. Read through your entire editorial and continue to record your revision notes.5. Review your revision notes to be sure they make sense.• Tell them that you would like them to add notes to their drafts using the green pencils today. (This step in the anchor chart will vary from day to day depending on the color used for revisions. See the teaching notes of each subsequent lesson.)• Explain to students that since they skipped lines when they wrote the drafts, you would like them to write notes telling what they will add or change in a given part of their editorial on these blank lines. When they have a sentence they would like to add to or change, they can make a note on the above blank line. Remind them that this will allow them to read and easily reread their drafts and note changes at the same time without erasing or crossing things out.• Give students 15 minutes to add revision notes to their drafts. Circulate to confer and support as needed.• Once students have recorded their revisions, have them organize their writing materials. Explain that they will use these and need to keep them with their draft and recording form as they continue to move through the writing process through the following week.	



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket (5 minutes)</p> <ul style="list-style-type: none">• Gather students. Ask them to assess themselves on the learning targets: "I can give kind, helpful, and specific feedback to my critique partner," and "I can critique the ideas of my writing partner's editorial for scientific accuracy."• Distribute an index card and have them record their name and respond to the following:<ul style="list-style-type: none">* (Front) "Did you meet the learning targets? What is your evidence?"* (Back) "How did critique help you to improve your writing? What is your evidence?"	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 10

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Critique Protocol Norms Anchor Chart

(Teacher directions: *Copy the following text onto a large piece of chart paper for all students to see.*)

Critique Protocol Norms

Be kind: Treat others with dignity and respect.

Be specific: Focus on *why* something is good or what, particularly, needs improvement.

Be helpful: The goal is to help everyone improve their work.

Participate: Support each other. Your feedback is valued!

Directions:

1. Author and listener: Review area of critique focus from rubric
2. Author: Reads his or her piece
3. Listener: Gives feedback based on rubric criteria: "I like how you _____. You might consider _____."
4. Author: Records feedback
5. Author: Says, "Thank you for _____. My next step will be _____."
6. Switch roles and repeat



Editorial Feedback Recording Form (front)

Name:

Date:	Partner:
Focus of Critique:	
My partner liked...	
My partner suggested...	
My next step(s)...	



Editorial Feedback Recording Form (back)

Date:	Partner:
Focus of Critique:	
My partner liked...	
My partner suggested...	
My next step(s)...	



Steps for Revising My Editorial Anchor Chart

(Teacher directions: Copy the text below onto a large chart paper for all students to see.)

Steps for Revising My Editorial:

1. Choose the correct colored pencil. Today's color is _____.
2. Decide where you will add a revision note based on feedback or new learning.
3. Write your revision note in the space above the sentence you want to change.
4. Read through your entire editorial and continue to record your revision notes.
5. Review your revision notes to be sure they make sense.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 11

Revising for Organization: Catchy Conclusions



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
I can use the writing process to produce clear and coherent writing (with support). (W.4.5)
I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can develop a conclusion that summarizes my point of view about simple machines in my editorial.
- I can give specific, kind, and helpful feedback to my writing partner.

Ongoing Assessment

- List of conclusions



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging Readers and Writers (5 minutes)B. Review Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Criteria for Effective Conclusions in an Editorial (5 minutes)B. Examining Models of Effective Editorial Conclusions (10 minutes)C. Guided Practice Writing Different Types of Conclusions (10 minutes)D. Independent Practice on Writing Conclusions (15 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Share (5 minutes)B. Debrief (5 minutes)4. Homework<ol style="list-style-type: none">A. Continue reading in your independent reading book for this unit at home.	<ul style="list-style-type: none">• This lesson's format resembles that of Lesson 8, with a focus on conclusions rather than introductions. The students examine a mentor text ("Who Cares about Polar Bears?") for how authors write a conclusion effectively in editorials. Students will then apply what they learn to their own writing.• The purpose of writing two conclusions is to help students build flexibility as writers. This task may be difficult for students. They may need additional support with writing two catchy conclusions.• Writing partners for this unit were established in Lesson 7.• In this lesson, the class helps the teacher to revise the conclusion of the Model Wedge Editorial. Examples of possible revised conclusions are provided (see supporting materials).• In advance: Prepare a new anchor chart: Catchy Conclusions (see materials).• Review: Peer Critique Norms (Lesson 10).



Lesson Vocabulary	Materials
None	<ul style="list-style-type: none">• Equity sticks• Chart paper for new anchor chart: Catchy Conclusions (see sample in supporting materials: two points listed at the top and a T-chart under it).• Writing folders• Mentor text from previous lessons: “Who Cares about Polar Bears?”• Model Wedge Editorial (see supporting materials)• Document camera• Students’ draft Simple Machines Editorials• Blue pencil (one per student)• Simple Machines Editorial rubric chart

Opening	Meeting Students’ Needs
<p>A. Engaging Readers and Writers (5 minutes)</p> <ul style="list-style-type: none">• Remind students about all the revisions they went through with their historical fiction narratives in Module 2. One of the criteria they focused on was how to write effective conclusions that leave the writer with a sense of completeness. Explain that today they will be creating a conclusion for their editorials, much as they did with their narratives.	<ul style="list-style-type: none">• Deconstructing the unfamiliar academic vocabulary in learning targets supports all learners who struggle with language. This ensures that they understand what they will be learning in the lesson.



Opening (continued)	Meeting Students' Needs
<p>B. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Invite the students to read the learning targets:<ul style="list-style-type: none">– “I can develop a conclusion that summarizes my point of view about simple machines in my editorial.”– “I can give specific, kind, and helpful feedback to my writing partner.”• Ask them to turn and talk with a shoulder partner about what the word <i>summarizes</i> means in the first learning target. Use equity sticks to cold call on two or three students to share what they discussed with their partner. Listen for comments like: “It means that we’ll take everything we said about our simple machine and explain it again but not as detailed.”• Explain that after they have a chance to write a couple of different kinds of conclusions for their editorials, they will give and receive brief feedback from their writing partner on which one works best with the rest of their editorial.	
Work Time	Meeting Students' Needs
<p>A. Criteria for Effective Conclusions in an Editorial (5 minutes)</p> <ul style="list-style-type: none">• Display the Catchy Conclusions anchor chart. Explain that an effective concluding statement in an editorial is similar to a conclusion in a narrative. It helps wraps up an editorial and leaves the reader with a final thought. If a writer left their editorial without a concluding sentence, the writing would end suddenly and leave the reader without a sense of completeness.	



Work Time (continued)	Meeting Students' Needs
<p>B. Examining Models of Effective Editorial Conclusions (10 minutes)</p> <ul style="list-style-type: none">• Ask students to get out their writing folders and their copy of the text “Who Cares about Polar Bears?” and project the last paragraph. Remind members of the class that they should be familiar with the content because they have already read this text throughout this unit.• Read the last paragraph aloud and ask students to think about how the author designed the conclusion so that it summarizes the topic and restates the opinion for the reader. Ask them to turn and tell their partner what they think the author did—how the author designed the flow of the paragraph. Use equity sticks to cold call on one or two students. You should hear responses such as: “The author restated her opinion that polar bears are important to our environment,” and “She started by reminding us of her opinion and then stated some facts about polar bears to back up what she thinks.”• Display the Catchy Conclusions anchor chart and document students’ observations by writing the following in the left-hand column:<ul style="list-style-type: none">– Polar Bears:<ul style="list-style-type: none">• Begin by stating opinion• Description/facts of polar bears and environment• Post a copy of the conclusion paragraph in the right-hand column.• Ask students to turn to a shoulder partner. Tell them to think about another way an author could write a conclusion paragraph that would give the reader a sense of completeness.• Invite partnerships to find another pair and share their thinking. Once the foursome has a collective understanding of how a conclusion might summarize the author’s thinking for the reader, ask them all to raise their hands so that they form a silent “tepee” of hands. When all groups have their hands up, ask one person from each group to share. You should hear responses such as: “The author could summarize the facts first and then restate the opinion,” or “The author could end with a question that would make readers keep thinking after they’re finished reading.”• Document their observations on the chart by writing in the left-hand column.	<ul style="list-style-type: none">• Throughout this unit, students read a series of mentor texts. Mentor texts are model texts, written by real authors, that students examine in order to see strong examples of writing craft. In this unit, students analyze various examples of editorials. For more information on mentor texts, read <i>Study Driven</i> by Katie Wood Ray.• Consider partnering an ELL with one who speaks the same L1 for discussion of complex content. Alternatively, partner an ELL with a native speaker of English. ELL language acquisition can be facilitated by interacting with the content in English.



Work Time (continued)	Meeting Students' Needs
<p>C. Guided Practice Writing Different Types of Conclusions (10 minutes)</p> <ul style="list-style-type: none">• Display the Model Wedge Editorial (see supporting materials) using a document camera. Tell students that you know your conclusion needs some revision and that you would like their help.• Read the draft aloud. As a class, brainstorm how to revise the conclusion so that the opinion is stated first and is followed by a summary of the wedge, just like the polar bear editorial. Write this conclusion on chart paper for students to see, or write it on a plain piece of paper to display on the document camera (see supporting materials for examples).• Remind students that just as when they wrote their introductions, before a writer settles on one conclusion, he or she will often write several versions of them. Now ask students to talk with the same foursome of peers they worked with just a short time ago about other ways to write a conclusion.• Give the students 2 to 3 minutes to discuss options for how another conclusion might be written.• Call on one or two groups to share their ideas. Choose one to write beneath the first conclusion.	
<p>D. Independent Practice on Writing Conclusions (15 minutes)</p> <ul style="list-style-type: none">• Direct students to review their Simple Machines Editorial drafts and write two different versions of their conclusion, just like you did as a class with the wedge. Remind them that they will not rewrite the entire editorial. They will just write the conclusions on a separate piece of paper.• Allow 20 minutes for writing these two conclusions. As the students work, circulate to assist as needed. Encourage them to think about the criteria for catchy conclusions as they work.	<ul style="list-style-type: none">• During independent work, the teacher can support ELLs or students with special needs as needed. Just be sure to let them struggle a certain amount with the task, as successful completion after considerable effort builds both stamina and confidence.



Closing and Assessment	Meeting Students' Needs
<p>A. Share (5 minutes)</p> <ul style="list-style-type: none">• Invite students to read the second learning target to themselves: "I can give kind and helpful feedback to my writing partner." Ask them what it means to "give helpful feedback." Call on one or two students to briefly share their thinking. Listen for: "It's ideas that will help make my writing better," or "It's not 'That's really good.' Because that doesn't help me know what I need to do to make it better. I need specific ideas to help me."• Ask students to sit with their writing partner to share their conclusions and to give helpful feedback. Together, they should choose which one fits best with the editorial. Students should circle it with a blue pencil.	
<p>B. Debrief (5 minutes)</p> <ul style="list-style-type: none">• As a class, add conclusion criteria to the Simple Machines Editorial rubric chart (from Lesson 6) using the Catchy Conclusions anchor chart to clarify the meaning of the following learning target:<ul style="list-style-type: none">– I can develop a conclusion that summarizes my point of view about simple machines in my editorial.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Continue reading in your independent reading book for this unit at home.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 11

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Catchy Conclusions Anchor Chart
(Sample for Teacher Reference)

Your conclusion should explain exactly why your opinion is worth considering.

- **Remind the reader of your opinion**—but don't just state it again word-for-word from your introduction.
- **Summarize the reasons for your opinion**—and make connections between these reasons.

Description of Conclusion	Example from a Text We Have Read



Model Wedge Editorial

Wedges are Wonderful

Wedges are a simple machine that make work easier. They are the most helpful of all simple machines. Simple machines help us move things with less effort over an increased distance. The wedge does this by pushing its narrow edge into something to split it apart, but it can also hold something in place. There are a few really good reasons the wedge is the most helpful of simple machines.

Wedges are used every day. They make our lives easier. Without wedges, we would not have many important tools. We would not have doorstops for holding doors open. We would not have knives for cutting food. We would not have axes and saws for cutting wood. It would be hard to eat. Can you imagine how you would eat an apple without your teeth or a knife? How would you cut down trees to build a house without an axe or saw? Wedges make jobs easier to do.

People and animals have wedges in their bodies. Teeth are wedges that help people to bite and eat their food. Claws are wedges that help animals to dig. Claws help animals to defend themselves too. Even nature finds wedges helpful.

Wedges are the most helpful of all simple machines.



Example Conclusions for Model Wedge Editorial

Example 1

Wedges are everywhere. From important tools to animals' bodies, wedges make work easier. Without wedges we would not be able to build houses or even eat our food! They are the most helpful of all simple machines.

Example 2

So are wedges the most helpful simple machine? I think so. Wedges are used to make lots of important tools. Nature even thinks they are helpful. Just take a bite out of an apple and you will see them at work. They are the most helpful of all simple machines.



Example Conclusions for Model Wedge Editorial
(Notes for Teacher)

Example 1

Wedges are everywhere. *(Introduction to the paragraph)* From important tools to animals' bodies, wedges make work easier. Without wedges we would not be able to build houses or even eat our food! *(Two detail sentences restating the reasons for the opinion)* They are the most helpful of all simple machines. *(Restatement of the opinion)*

Example 2

So are wedges the most helpful simple machine? *(Introduction to the paragraph)* I think so. *(Opinion)* Wedges are used to make lots of important tools. Nature even thinks they are helpful. Just take a bite out of an apple and you will see them at work. *(Three detail sentences restating the reasons for the opinion)* They are the most helpful of all simple machines. *(Restatement of the opinion)*



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 12

Revising for Sentence Fluency: Compound Sentences



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

- I can use conventions to send a clear message to my reader. (L.4.2)
I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)
I can use the writing process to produce clear and coherent writing (with support). (W.4.5)
I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)

Supporting Learning Targets

- I can write sentences that link thoughts together with conjunctions to explain reasons that support my opinion.
- I can give kind and helpful feedback to my writing partner.

Ongoing Assessment

- Revised drafts



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Engaging Readers and Writers (5 minutes)B. Review Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. Criteria for Writing Compound Sentences in an Editorial (10 minutes)B. Examining Models of Compound Sentences (15 minutes)C. Guided Practice Writing Compound Sentences (5 minutes)D. Independent Practice on Writing Compound Sentences (15 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Share and Debrief (5 minutes)4. Homework<ol style="list-style-type: none">A. Combine all of your revision notes and write a second draft of your editorial. Make sure to double-space so there will be room for any editing before you write the final draft.	<ul style="list-style-type: none">• Given the one-hour time constraint, language standards are not heavily emphasized in these modules. Students need additional instruction on language conventions during other parts of the school day. This lesson is intended to review and reinforce that additional instruction, and help students apply the conventions to their own authentic product.



Lesson Vocabulary	Materials
compound, conjunctions	<ul style="list-style-type: none">• Chart paper for new anchor chart: Compound Sentences• “No More Junk in Our Schools” and “Who Cares about Polar Bears?” editorials• Sticky notes• Model Wedge Editorial draft• Equity sticks• Purple pencils (one per student); purple marker (one for the teacher)



Opening	Meeting Students' Needs
<p>A. Engaging Readers and Writers (5 minutes)</p> <ul style="list-style-type: none">• Ask the students to name some things that help them enjoy reading informational texts. Have them turn and share with a shoulder partner. Ask several students to share their thinking. Listen for comments such as: “Interesting details,” “Sentences that flow make things easier to read,” or “Facts that make me want to learn more.”• Review that students have revised their editorials for more interesting introductions, scientifically accurate vocabulary, and catchy conclusions. Explain that today they will revise their writing one more time before putting all their revisions together in a second full draft and then edit it for conventions.	<ul style="list-style-type: none">• Careful attention to learning targets throughout a lesson engages, supports, and holds students accountable for their learning. Consider revisiting learning targets throughout the lesson so that students can connect their learning with the activity on which they are working.
<p>B. Review Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Invite students to read the first learning target: “I can write sentences that link thoughts together with conjunctions to explain reasons that support my opinion.” Ask if there are any unfamiliar words. As students point out words, annotate the learning target with clarifying words or synonyms. For example:<ul style="list-style-type: none">* <i>link</i> = join together; connect* <i>conjunctions</i> = words that join two sentences, clauses, or phrases together• Explain that today’s learning will focus on how to join two simple sentences (complete sentences that have a noun and a verb) together to make longer compound sentences.	



Work Time	Meeting Students' Needs
<p>A. Criteria for Writing Compound Sentences in an Editorial (10 minutes)</p> <ul style="list-style-type: none">• Show students the following sentences and ask them to explain how they are changed from a to b:<ul style="list-style-type: none">a. Simple machines are everywhere. They help make people's lives easier.b. Simple machines are everywhere, and they help make people's lives easier.• Ask a few students to share their observations. Listen for comments like: "The two sentences are put together to make one sentence," or "Instead of two short sentences that talk about the same thing, there's one longer sentence."• Ask the students why an author might write a longer sentence rather than two shorter sentences. Listen for replies such as: "It sounds better," "It makes it easier to read," or "The sentence flows better when I read it."• Acknowledge that when two shorter sentences that describe the same thing are <i>linked</i> by a special word called a <i>conjunction</i>, a <i>compound sentence</i> is made. (Note: Some students may make the connection between compound sentences and compound words.)• Display the Compound Sentences anchor chart. Point out the conjunctions that link two simple sentences together.• Ask students to identify what the conjunction, or linking word, is in the second example sentence. Tell them to whisper their answer into their cupped hands, and on the count of three, whisper it as they fling it out to the universe. Count: "One, two, three!" You should hear students whispering: "And" or "but" etc.	<ul style="list-style-type: none">• For ELLs or students with visual impairments, consider typing up and making copies of the example sentences.



Work Time (continued)	Meeting Students' Needs
<p>B. Examining Models of Compound Sentences (15 minutes)</p> <ul style="list-style-type: none">• Ask students to get out the two mentor editorials, “No More Junk in Our Schools” and “Who Cares about Polar Bears?” Instruct them to reread “No More Junk in Our Schools” to look for compound sentences. As students identify compound sentences, list them on the anchor chart as examples in editorials.• Tell students to find a partner. Distribute sticky notes to each partnership. Now ask the students to reread “Who Cares about Polar Bears?” to find compound sentences. Tell them that when they find one, they should write it on a sticky note and underline the conjunction (make sure their names are on the sticky notes). When the partnerships are finished, ask one person from each pair to post the sticky note(s) on the class anchor chart. <p><i>Note: Use the sticky notes as a formative assessment of their ability to identify compound sentences and conjunctions.</i></p>	<ul style="list-style-type: none">• Providing models of expected work supports all learners but especially supports challenged learners.
<p>C. Guided Practice Writing Compound Sentences (5 minutes)</p> <ul style="list-style-type: none">• Invite the class to look at the Model Wedge Editorial draft as you read it aloud looking for simple sentences that could be combined into compound sentences. Ask students to touch their noses when you reach a point in the text where a compound sentence might be made.• Use equity sticks to cold call on students for revision suggestions. Using a purple marker, model how to revise the draft for compound sentences. (Link two sentences together with a line and write the conjunction above the line.) A possible compound sentence could be:<ul style="list-style-type: none">– Wedges are used every day. They make our lives easier.– Wedges are used every day, and they make our lives easier.– Claws help animals to defend themselves too. Even nature finds wedges helpful.– Claws help animals to defend themselves too, so even nature finds wedges helpful.	



Work Time (continued)	Meeting Students' Needs
<p>D. Independent Practice on Writing Compound Sentences (15 minutes)</p> <ul style="list-style-type: none">• Ask students to reread their editorial drafts and look for simple sentences that they could link together to make compound sentences. Remind them that the two sentences must describe the same topic in order to be linked.• Ask them to use their purple pencils to make these revisions. Give the students 20 minutes to revise their editorials for compound sentences.• Circulate and give support as needed. Encourage students to use a variety of conjunctions, not just “and.”	<ul style="list-style-type: none">• For ELLs and others who struggle with language, consider providing additional guided practice during this portion of the lesson. Alternatively, allowing students to work with a partner may provide the needed support.
Closing and Assessment	Meeting Students' Needs
<p>A. Share and Debrief (5 minutes)</p> <ul style="list-style-type: none">• Remind the class of the learning target: “I can write sentences that link thoughts together with conjunctions to explain reasons that support my opinion.”• Invite students to find a partner who is not writing about the same simple machine. Ask them to tell their partner if they met the learning target or not and share evidence from their writing.• As a class, add sentence fluency criteria to the Simple Machines Editorial rubric chart using the Compound Sentence anchor chart to clarify the meaning of the following learning target on the rubric:<ul style="list-style-type: none">– “I can write sentences that link thoughts together with conjunctions to explain reasons that support my opinion.”	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Combine all of your revision notes and write a second draft of your editorial. Make sure to double-space so there will be room for any editing before you write the final draft.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 12

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Conjunctions: *and, but, for, nor, or, so, yet*

Examples of compound sentences in editorials	



Model Wedge Editorial

Wedges are Wonderful

Wedges are a simple machine that make work easier. They are the most helpful of all simple machines. Simple machines help us move things with less effort over a longer distance. The wedge does this by pushing its skinny edge into something to split it apart, but it can also hold something in place. There are a few really good reasons the wedge is the most helpful of simple machines.

Wedges are used every day. They make our lives easier. Without wedges, we would not have many important tools. We would not have doorstops for holding doors open. We would not have knives for cutting food. We would not have axes and saws for cutting wood. It would be hard to eat. Can you imagine how you would eat an apple without your teeth or a knife? How would you cut down trees to build a house without an axe or saw? Wedges make jobs easier to do.

People and animals have wedges in their bodies. Teeth are wedges that help people to bite and eat their food. Claws are wedges that help animals to dig. Claws help animals to defend themselves too. Even nature finds wedges helpful.

Wedges are everywhere. From important tools to animals' bodies, wedges make work easier. Without wedges we would not be able to build houses or even eat our food! They are the most helpful of all simple machines.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 13

Reviewing Conventions and Editing Peers' Editorials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)</p> <p>I can use the writing process to produce clear and coherent writing (with support). (W.4.5)</p> <p>I can use conventions to send a clear message to my reader. (L.4.1, L.4.2, L.4.3)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can check my peers' work for correct capitalization.• I can check my peers' work for correct spelling.• I can check my peers' work for correct punctuation at the end of sentences.• I can check my peers' work for complete sentences.	<ul style="list-style-type: none">• Conventions anchor charts• Simple Machine Editorials (second drafts annotated for edits)• Exit tickets



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Engaging the Writer (2 minutes) B. Reviewing Learning Targets (3 minutes) 2. Work Time <ol style="list-style-type: none"> A. Chalk Talk (15 minutes) B. Modeling: Editing for Conventions (5 minutes) C. Editing Stations (25 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Exit Ticket (5 minutes) B. Completing Our Simple Machines Editorial Rubric (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Continue reading in your independent reading book for this unit at home. 	<ul style="list-style-type: none"> • This lesson is very similar to the editing lesson in Module 2A (Unit 3, Lesson 14). • In this lesson, students read one another's editorials to identify issues with writing conventions (spelling, punctuation, capitalization, and use of complete sentences). Students just note mistakes as they edit; they do not actually correct the errors. In the next lesson (Lesson 14), students will be given time to correct their own work. • Given the one-hour time constraint, language standards are not heavily emphasized in these modules. Students need additional instruction on language conventions during other parts of the school day. This lesson is intended to review and reinforce that additional instruction, and help students apply the conventions to their own authentic product. • In advance: Write a short "convention-less paragraph" with dialogue without proper conventions—incorrect spelling, lack of punctuation, and no capitalization—to display on an overhead or with a document camera. • Set up four stations with Convention Charts, markers, and colored pencils. Ideally each station will have enough room for about a quarter of your class to sit. Students should be able to see Convention Charts, access materials, and have a surface to write on (table/desks or clipboards). • Students again use colored pencils. In this lesson, a different color is used for each type of convention (for example, red pencils and markers for spelling, blue for punctuation, green for capitalization, and purple for incomplete sentences). • Having different colors at each station will help students to focus on editing for one convention at a time and recall what must be corrected when revising. Place matching colored pencils and markers at each station. • Post a chart paper at each station. On each chart, write the following questions in the designated color: * <ul style="list-style-type: none"> – How do I make sure my SPELLING is correct? – How do I know if I have a COMPLETE SENTENCE? – How do I know if my ENDING PUNCTUATION is correct? – How do I know if CAPITALIZATION in my writing is correct? • Review: Chalk Talk protocol (see Appendix 1).



Lesson Vocabulary	Materials
capitalization, punctuation, conventions, complete sentences (review)	<ul style="list-style-type: none">• Document camera• Convention-less paragraph (for teacher modeling)• Four pieces of chart paper for Conventions anchor charts prepared with questions (see teaching notes above)• Markers (several each of four different colors to match each chart; see teaching notes)• Colored pencils (four colors with each color enough for a quarter of your class; see teaching notes)• Index cards (3" x 5") for exit ticket (one per student)• Simple Machines Editorial rubric anchor chart (added to in Lesson 11)



Opening	Meeting Students' Needs
<p>A. Engaging the Writer (2 minutes)</p> <ul style="list-style-type: none">• Using a document camera, display your short convention-less paragraph. Ask for a volunteer to try to read it aloud.• Ask the class what made reading this paragraph difficult. Listen for students to notice that the reason your paragraph was unclear to them as readers was that there were no <i>conventions</i> used. Review with students that writers use <i>conventions</i>, or writing rules, to make their message clear and understandable to readers.• Remind students that they have already focused on the conventions for writing complete sentences, but today they will review additional conventions and edit their writing so that it is clear and understandable to readers and ready for final publication.	<ul style="list-style-type: none">• Allow students to discover the topic of this lesson through trying to read your convention-less paragraph. This will help to engage students' interest in editing for conventions.
<p>B. Reviewing Learning Targets (3 minutes)</p> <ul style="list-style-type: none">• Introduce the supporting targets:<ul style="list-style-type: none">– I can check my peers' work for correct capitalization.– I can check my peers' work for correct spelling.– I can check my peers' work for correct punctuation at the end of sentences.– I can check my peers' work for complete sentences.• Tell students that they will be editing their editorials for the conventions listed in the supporting targets. Circle key words: <i>spelling, punctuation, capitalization, and complete sentences</i>. Clarify the meanings of these words or targets as needed.	



Work Time	Meeting Students' Needs
<p>A. Chalk Talk (15 minutes)</p> <ul style="list-style-type: none">• Point out the four stations to students. Read the Convention anchor chart at each station:<ul style="list-style-type: none">– How do I make sure my SPELLING is correct?– How do I know if I have a COMPLETE SENTENCE?– How do I know if my ENDING PUNCTUATION is correct?– How do I know if my CAPITALIZATION is correct?• Tell students that they will be doing a chalk talk to share their thoughts on each question. Give brief directions:<ol style="list-style-type: none">1. Go to your assigned chart first.2. Read the question on the chart.3. Add your thoughts on the question to the chart using the markers at the station.4. Visit all charts to read the questions and your classmates' answers. Decide if something is missing from a chart and, if so, add it using the markers at that station.5. Once you have visited every chart, sit in your seat.• Give students time to visit each chart, read, and add their thoughts—about 10 minutes or less.• Focus students whole group. Revisit each chart with students. (Either gather all of the charts or circulate as a class to each chart so all students can see it.) Read a few responses from each chart, and circle or add important tips for each question. Make sure to check for accuracy in punctuation and capitalization rules and offer helpful hints with spelling. Tell students that they will use these convention anchor charts later this lesson.	<ul style="list-style-type: none">• Although students have experienced this protocol before, it could still be confusing for ELLs. Consider reviewing the protocol with these students ahead of time. Another way to support students is to give them a copy of shortened directions with visuals to help guide them.



Work Time (continued)	Meeting Students' Needs
<p>B. Model: Editing for Conventions (5 minutes)</p> <ul style="list-style-type: none">• Display the convention-less paragraph. Use the first few sentences of your paragraph to model. Demonstrate how to edit for each convention by circling or underlining with the correct colored pencil (see teaching notes, above). Be sure to model referring to the Convention anchor charts (posted at each station) as resources.• For example: Read the capitalization chart. Read aloud your convention-less paragraph. Notice a mistake and think aloud: "I notice that one of the rules for capitalization is to be sure names of people or places are capitalized." Demonstrate fixing a mistake: "I see that I capitalized 'Machines,' but this is not a proper noun, so it shouldn't be capitalized. I am going to circle it with a colored pencil from the capitalization station."• Clarify as needed.	<ul style="list-style-type: none">• When you model editing for students, remember that you are just showing them how to identify and note mistakes, not revise them. They will have an opportunity to correct their mistakes in Lesson 14.• Be sure students are editing their drafts with their revised introduction and conclusion chosen in Lessons 8 and 11.
<p>C. Editing Stations (25 minutes)</p> <ul style="list-style-type: none">• Tell students that they are going to go to all four stations to get help from peers to improve the second draft of their Simple Machine Editorials. Divide the class into fourths to send a quarter of the students to each station, but be sure writing partners stay together.• Give directions:<ol style="list-style-type: none">1. Go to your assigned station with the second draft of your editorial.2. At that station, trade papers with your peer critique partner.3. Read your partner's draft (with new beginning and ending) and identify any convention mistakes related to the topic of that station's chart.4. When both partners are finished, move to the next station.5. Be sure to visit all four stations.• Circulate and confer with pairs who may need extra support. Every 5 minutes or so, remind students to rotate to another station. Pairs that finish early can begin revising and typing, if these facilities are available. Collect students' editorials to add further edits. Students will use these edits to correct their spelling, punctuation, capitalization, and incomplete sentences when they revise and publish in the next lesson.	<ul style="list-style-type: none">• In addition to the Convention anchor charts, a convention checklist can be prepared beforehand to support ELLs or students with special needs during editing.• Consider several options if students need more structured management of movement. Partners can raise their hands when they are done at a given station and check with you before they move on. Or students can remain in one place, and all materials can be available where they are working.



Closing and Assessment	Meeting Students' Needs
<p>A. Exit Ticket (5 minutes)</p> <ul style="list-style-type: none">Gather students whole group and review the learning targets. Distribute index cards (one per student). Ask students to write their names at the top and do a “quick write” on the following questions:<ul style="list-style-type: none">* “How will this editing improve your editorials?”* “What made editing easy or difficult for you?”Have them share their answers with a partner, then collect the exit tickets for a formative assessment of the learning targets.	
<p>B. Completing Simple Machines Editorial Rubric (5 minutes)</p> <ul style="list-style-type: none">Ask students to help you add to the conventions criteria on the Simple Machines Editorial Rubric anchor chart based on their work today.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">Continue reading in your independent reading book for this unit at home. <p><i>Note: To prepare for Lesson 14, do the following:</i></p> <ol style="list-style-type: none">Edit students' editorial. Remember to add only those edits that pertain to the conventions discussed in class.Review the exit tickets to determine if any students need further support in the next lesson, where they will revise to correct their mistakes and publish their editorials.Type up the Simple Machines Editorial rubric anchor chart using the template in the supporting materials and make a copy for each student. <p><i>In Lesson 14, students will finalize their writing. If they did not type up their second drafts yet, consider giving them additional time to type their final copies before Lesson 14.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 13

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Convention-less Paragraph

(Sample for Teacher Reference; use this or write your own convention-less paragraph for modeling)

i am very pleesed with how my class has learned so much about Simple Machines when we first started we new very little about Simple Machines but over the last several weeks we hav come very far another teacher asked how do your students know so much about how Simple Machines work and benefit us i told her they had become expert researchers threw reading and writing



Simple Machines Editorial Rubric

A local engineering magazine wants to educate its readers on the importance of simple machines in the age of high-tech gadgets. So they've decided to hold a "Campaign for Simple Machines." Because of your expertise on this topic, you have been asked to write an editorial describing what simple machines are and stating your opinion on which one helps people the most in their daily lives. Editorials will be featured in this month's magazine.

Learning Target: I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. (W.4.1)

Criteria	Meets	Partially Meets	Does Not Meet
Ideas			
I can write an introduction in my editorial that explains simple machines and states my opinion clearly. (W.4.1a)			
I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. (W.4.1b)			
Word Choice			
I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial. (L.4.3)			
Organization			
I can group together reasons with related evidence in my editorial. (W.4.1a)			
I can use linking words to connect my opinion to my reasons. (W.4.1c)			
I can develop a conclusion that summarizes my opinion about simple machines in my editorial. (W.4.1d)			



Simple Machines Editorial Rubric

Criteria	Meets	Partially Meets	Does Not Meet
Conventions			
I can use conventions to send a clear message to my reader. (L.4.2)			



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 14

Publishing Simple Machines Editorials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.
Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)

I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)

I can use grammar conventions to send a clear message to a reader or listener. (L.4.1, L.4.2)

With support, I can use technology to publish a piece of writing. (W.4.6)

Supporting Learning Targets

- I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.
- I can correct conventions based on editing notes in my editorial and online reference resources.
- I can publish a typed version of my simple machine editorial.

Ongoing Assessment

- Simple Machine Editorial (final copy)



Agenda	Teaching Notes
<ol style="list-style-type: none">Opening<ol style="list-style-type: none">Reviewing Learning Targets (5 minutes)Work Time<ol style="list-style-type: none">Modeling: Using Technology to Publish (10 minutes)Independent Work and Conferring (40 minutes)Closing and Assessment<ol style="list-style-type: none">Debrief (5 minutes)Homework<ol style="list-style-type: none">Prepare for your assessment by:<ol style="list-style-type: none">Reviewing the notes in your Simple Machines science journal.Thinking about the simple machines you researched but did not write about. Brainstorm some reasons that each of these simple machines could be considered “the most helpful.”Reviewing the Simple Machines Editorial rubric.	<ul style="list-style-type: none">This lesson is very similar to Module 2A, Unit 3, Lesson 15.This lesson is largely dependent on each student having access to a computer, online dictionary, and a printer. If students have already been able to type their second draft on the computer, the timing of this lesson will work well. If students have not yet started typing, consider giving them additional time to word-process their final copies.If your class lacks sufficient technology, consider modifying this lesson to use standard print dictionaries and focus students on using neat handwriting to create a polished final copy of their editorials.Students may need additional time for typing.In advance: Prepare the Steps for Publishing My Editorial chart (see supporting materials).



Lesson Vocabulary	Materials
publish (review from Module 2A, Unit 3)	<ul style="list-style-type: none">• Teacher computer• LCD projector• Printer and printer paper• Online dictionaries www.dictionary.com or http://www.wordcentral.com/• Simple Machines Editorial rubric (completed in Lesson 13 and typed; one per student)• Prepared on chart paper: Steps for Publishing My Editorial chart (see supporting materials)• Computers for students (see teaching notes)

Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Introduce the learning targets. Circle the word <i>publish</i> and ask students to turn to a partner and share what they remember about this word and its meaning from writing their historical fiction narratives (Module 2A, Unit 3). Call on a few students to share their partner's thinking.• Ask:<ul style="list-style-type: none">* "What references can you use to check the meaning of this word?"• Some answers might include: dictionary, Google, peers, or the teacher. Tell them that today they will again practice using a computer as both a reference and to publish their editorials.	



Work Time	Meeting Students' Needs
<p>A. Modeling: Using Technology to Publish (10 minutes)</p> <ul style="list-style-type: none"> • Ask students to sit where they can see the projection of your computer. Let them know that today is the day they prepare their work to make it public—in other words, to publish it. • Project the online dictionary www.dictionary.com or www.wordcentral.com. Tell students that you are going to use this online resource to check their thinking about the word <i>publish</i>. Type the word “publish” into one of the online dictionaries and read the definitions. Read the definition to the class and have students turn to a partner and explain what it means to <i>publish</i> something in their own words. Have a few pairs share their thinking. • Set purpose: Remind students that they will be sharing their published editorials with an audience, their classmates. Tell them that in order to publish their editorials, they need to be sure everything is complete and correct. Today they will have time to polish their writing. Remind them that they now have an edited draft complete with their revised beginning and ending. It is on this draft that they will correct their conventions. • Demonstrate how to use the online dictionary for misspellings. Show students how to scroll down and check for possible correct spellings by checking the definitions. • Distribute the now typed version of the Simple Machines Editorial rubric. Explain to students that you have taken the rubric anchor chart and typed it up for their reference as they prepare to publish. • Post the Steps for Publishing My Editorial chart. <ol style="list-style-type: none"> 1. Read your draft and correct conventions based on editing notes. 2. Check your editorial one last time using the Simple Machines Editorial rubric. 3. Type up your draft to include all corrections and revisions. 	<ul style="list-style-type: none"> • If using a conventional printed dictionary, you may want to review searching for a word using alphabetical order. • If possible, expand the audience to include others who are not a part of the class (i.e., teachers, principal, parents, other classes). This can be motivating and exciting for students. See recommendations in Lesson: Reflecting on Writing Editorials: Author's Chair in the teaching notes.
<p>B. Independent Work and Conferencing (40 minutes)</p> <ul style="list-style-type: none"> • Have students move to a computer to begin work following the Steps for Publishing My Editorial chart. • Confer with students as needed and when they decide they are finished. <p><i>Note: Ask students to add a footer to their paper with their full name. This avoids confusion when they print their papers.</i></p>	<ul style="list-style-type: none"> • Some students who have difficulty spelling may have a hard time finding the correct spellings for severely misspelled words. Keep these students in mind for conferring. • Depending on pace, students may need additional time for typing.



Publishing Simple Machines Editorials

Closing and Assessment	Meeting Students' Needs
<p>A. Debrief (5 minutes)</p> <ul style="list-style-type: none">• Gather students whole group. Review the learning targets. Tell them that in the next lesson, they will get to demonstrate their ability to write editorials in an on-demand assessment. This means they will take all of the skills and knowledge they have gained over the past several weeks to plan and write another editorial on a different simple machine. Instead of having several weeks to write and revise, they will be asked to do this in one class period.• Assure them that they are ready for this “on my own” assessment. They have just finished their editorials and now should be experts on this genre of writing. They will be able to use their Simple Machines science journals, the text <i>Simple Machines: Forces in Action</i>, and the Simple Machines Editorial rubric to help them.• Explain that in the lesson that follows the assessment, they will celebrate their learning as readers, researchers, and writers by sharing their published editorials in an activity called Author’s Chair Celebration. Tell them that they will be reading these published editorials to one another and reflecting on the writing process.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• Prepare for your assessment by:<ol style="list-style-type: none">1. Reviewing the notes in your Simple Machines science journal.2. Thinking about the simple machines you researched but did not write about. Brainstorm some reasons that each of these simple machines could be considered “the most helpful.”3. Reviewing the Simple Machines Editorial rubric.	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 14

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Steps for Publishing My Editorial Chart

(Directions for teacher: Prepare a chart paper with the following directions for students.)

Steps for Publishing My Editorial

1. Read your draft and correct conventions based on editing notes.
2. Check your editorial one last time using the Simple Machines Editorial Rubric.
3. Type up your draft to include the corrections and revisions.



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 15

End of Unit Assessment Part I: Planning and Drafting an Editorial



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
I can write an opinion piece that supports a point of view with reasons and information. (W.4.1) I can produce writing that is appropriate to task, purpose, and audience. (W.4.4)	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.• I can plan, draft, and revise an editorial in the course of two lessons.	<ul style="list-style-type: none">• End of Unit 3 Assessment Part I: Planning and Drafting an Editorial



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. End of Unit 3 Assessment Part I: Planning and Drafting an Editorial (50 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Preparing for End of Unit 3 Assessment Part II (5 minutes)4. Homework	<ul style="list-style-type: none">• In this lesson, students will complete Part I of the end of unit assessment: Planning and Drafting an Editorial. To complete this on-demand writing assessment, students will be asked to select another simple machine to write an editorial about.• In this portion of the assessment, they will develop reasons and gather evidence to plan for this new editorial by revisiting the notes in their Simple Machines science journals and the text <i>Simple Machines: Forces in Action</i> by Buffy Silverman. They will then draft their editorials using the Simple Machines Editorial rubric to guide their work.• In the next lesson (Lesson 16), students will complete Part II of the assessment, where they will revise their drafts with a focus on conventions to create a polished final copy. This two-part assessment centers on W4.1.

Lesson Vocabulary	Materials
editorial, opinion, draft, revise (review)	<ul style="list-style-type: none">• Simple Machines Science journals• <i>Simple Machines: Forces in Action</i> by Buffy Silverman• Pencils (one per student)• Lined notebook paper (enough for each student's editorial draft)• Simple Machines Editorial rubric (completed in Lesson 13)• End of Unit 3 Assessment Part I: Planning and Drafting an Editorial (one per student)



Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post the following learning targets:<ul style="list-style-type: none">– “I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.”– “I can plan, draft, and revise an editorial in the course of two lessons.”• Read these targets aloud to students. Explain that they are very familiar with the first target, but that the second is new. Explain to them that the second target means that they will be writing a new editorial on a different simple machine for their assessment, but that they will be planning and drafting today for Part I of the assessment and revising tomorrow for Part II.• Ask students to mix and mingle and discuss the following question with at least two people:<ul style="list-style-type: none">* “What will you have to do differently as an editorial writer for this assessment?”• Allow students a few minutes to discuss this question with peers. Ask a few members of the class to share out. Students will likely note that they do not have weeks to complete their editorial this time around. Remind them that they have built expertise on writing editorials and this assessment will give them the opportunity to demonstrate what they have learned as writers, but that they will have to pace themselves. Reassure students that you will help them to do this today and tomorrow.	



Work Time	Meeting Students' Needs
<p>A. End of Unit 3 Assessment Part I: Planning and Drafting an Editorial (50 minutes)</p> <ul style="list-style-type: none">• Have students gather their materials:<ul style="list-style-type: none">– Simple Machine Science journals– Simple Machines: Forces in Action– pencil and lined paper• Ask students to think for a moment about the steps they took in crafting their first editorial. Explain that while they will not have weeks to plan, draft, and revise their work, they will have time to take each of these steps in the writing process over the next two days. Explain that today they will just focus on planning and drafting and tomorrow in Part II they will have time for revising to create a final copy.• Distribute the Simple Machines Editorial rubric. Tell students to refer to this rubric to ensure their editorial meets all the criteria. Remind them that the criteria that the class has built together will be the same criteria used to evaluate their assessments. Reassure them that this is good because they have built a lot of knowledge and skills as editorial writers over the past few weeks, and it is all captured on this rubric.• Distribute the End of Unit 3 Assessment Part I: Planning and Drafting an Editorial. Give students time to read it silently. Address any clarifying questions.• Ask students to begin. Help them keep pace:<ul style="list-style-type: none">* Give students about 5 minutes to read the directions and the prompt.* Give them about 20 minutes to plan using their graphic organizer, science journal notes, and the text.* Give them the remaining 25 minutes to write their drafts.	<ul style="list-style-type: none">• If students receive accommodations for assessment, communicate with the cooperating service providers regarding the adjustments, accommodations, or extended time for this assessment.



Closing and Assessment	Meeting Students' Needs
<p>A. Preparing for End of Unit 3 Assessment Part II (5 minutes)</p> <ul style="list-style-type: none">• Gather students together as a whole group and have them mix and mingle again to discuss the following prompt:<ul style="list-style-type: none">* “As a writer, what is going well for you so far in this assessment?”* “What are your next steps?”• Listen for students to outline clear next steps, such as: “I came up with great reasons and evidence, and next I have to finish my conclusion then revise,” or “I finished my draft, and now I have to revise for conventions.”	<ul style="list-style-type: none">• Consider giving your students a sentence frame for this discussion: “So far in my writing, I _____. Next I will _____.”
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• None <p><i>Note: Look through students' plans and drafts to determine whether more time will need to be provided for Lesson 16. Lesson 16 is designed to allow 25 more minutes for students to revise their drafts and finish the assessment. The last half of the lesson is an Author's Chair Celebration, where students will share their editorials from their performance task. This portion of the lesson can be moved to the next day if more time is required for students require more time to complete both parts of the assessment.</i></p>	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 15

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



End of Unit Assessment Part I:
Planning and Drafting an Editorial

Name:

Date:

Directions:

1. Read the prompt below.
2. Choose a different simple machine on which to write another editorial.
3. Review the Simple Machines Editorial rubric.
4. Plan your editorial using the graphic organizer below. Be sure to review your Simple Machines Science Journal and the text *Simple Machines: Forces in Action* to develop reasons and gather evidence.
5. Write a draft of your editorial on a separate sheet of lined paper.
6. If you finish early, hand in your plans and draft and choose a book from your independent reading.

Prompt:

After reading the first simple machine editorial you wrote, the local engineering magazine has asked you to write another editorial for their “Campaign for Simple Machines”. This time, they would like you to choose a different simple machine and write an editorial stating your opinion on how this simple machine helps people the most in their daily lives.



End of Unit Assessment Part I:
Simple Machines Editorial Graphic Organizer

<u>Introductory Paragraph</u> <ul style="list-style-type: none">• States point of view• Description of simple machines in our world <p style="text-align: center;">OR</p> <ul style="list-style-type: none">• Description of simple machines in our world• States point of view	<u>Reason Paragraph 1</u> <ul style="list-style-type: none">• Detail/Reason Paragraph evidence	<u>Concluding Statement</u>
	<u>Reason Paragraph 2</u> <ul style="list-style-type: none">• Detail/Reason Paragraph evidence	
	<u>Reason Paragraph 3 (optional)</u> <ul style="list-style-type: none">• Detail/evidence	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 16

End of Unit Assessment Part II: Revising to Create a Polished Editorial and Author's Chair Celebration



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



Long-Term Targets Addressed (Based on NYSP12 ELA CCLS)	
<p>I can write an opinion piece that supports a point of view with reasons and information. (W.4.1)</p> <p>I can produce writing that is appropriate to task, purpose, and audience. (W.4.4)</p> <p>I can effectively engage in discussions with diverse partners about fourth-grade topics and texts. (SL.4.1)</p>	
Supporting Learning Targets	Ongoing Assessment
<ul style="list-style-type: none">• I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.• I can plan, draft, and revise an editorial in the course of two lessons.• I can listen as my peers share their writing and give specific praise for their work.	<ul style="list-style-type: none">• End of Unit 3 Assessment Part II: Revising to Create a Polished Editorial• Tracking My Progress, End of Unit 3 recording form



Agenda	Teaching Notes
<ol style="list-style-type: none">1. Opening<ol style="list-style-type: none">A. Reviewing Learning Targets (5 minutes)2. Work Time<ol style="list-style-type: none">A. End of Unit Assessment Part II: Revising to Create a Polished Editorial (25 minutes)B. Author's Chair Celebration (25 minutes)3. Closing and Assessment<ol style="list-style-type: none">A. Tracking My Progress (5 minutes)4. Homework	<ul style="list-style-type: none">• In the first half of this lesson, students will complete their End of Unit Assessment Part II by revising their drafts from Part I. They will use the Simple Machines Editorial rubric as a guide and will be asked to pay particular focus to conventions in order to create a polished final editorial for the assessment.• In the last half of the lesson, students will celebrate their hard work writing editorials by sharing and reflecting in small groups. The Author's Chair Celebration anchor chart in the supporting materials of this lesson provides steps and guidelines for students as they share their work. Grouping for this is flexible; however, the more students share in a group, the longer this portion of the lesson will be. The timing is based on groups of three with a mix of simple machines represented in each group. However, you may wish to consider extending this lesson to accommodate groups of four so all simple machines are represented in each group.• In advance: Prepare and review the Author's Chair Celebration anchor chart (see supporting materials)• Create groups of three or four students for sharing in the Author's Chair Celebration. Be sure that these groups have representation of different simple machine editorials.

Lesson Vocabulary	Materials
editorial, opinion, peers, praise (review)	<ul style="list-style-type: none">• Online or conventional print dictionaries (for each student)• Simple Machines Editorial rubric (one for each student; completed in Lesson 13 and used in the first half of this assessment in Lesson 15)• End of Unit 3 Assessment Part I: Planning and Drafting an Editorial (students' plans and drafts from Lesson 15)• Chart paper for new anchor chart: Author's Chair Celebration• End of Unit 3 Assessment Part II: Revising to Create a Polished Editorial (one per student; or displayed on the board)• Simple Machine Editorials (students' published copies from the module performance task)• Tracking My Progress, End of Unit 3 recording form (one per student)



Opening	Meeting Students' Needs
<p>A. Reviewing Learning Targets (5 minutes)</p> <ul style="list-style-type: none">• Post the following learning targets:<ul style="list-style-type: none">– “I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.”– “I can plan, draft, and revise an editorial in the course of two lessons.”– “I can listen as my peers share their writing and give specific praise for their work.”• Read these targets aloud to students. Explain that today they will be completing Part II of the assessment and then they will participate in an Author's Chair Celebration to share their editorials. Let students know that they will revisit the third learning target once Part II of the assessment is over.• Explain that first they will complete Part II of the assessment, where they will finish their drafts (if necessary) and then revise for conventions to create a polished copy. Explain that this means they will have to read their drafts and edit for spelling, capitalization, punctuation, and complete sentences, then revise to make these corrections and create a polished (or corrected and neat) copy to complete the assessment. Tell them to use the Simple Machine Editorial rubric to check their drafts before they revise.	



Work Time	Meeting Students' Needs
<p>A. End-of-Unit Assessment Part II: Revising to Create a Polished Editorial (25 minutes)</p> <ul style="list-style-type: none">• Be sure students have prepared their space to complete End of Unit 3 Assessment Part II: Revising to Create a Polished Editorial. Explain the expectations for using or accessing the dictionary for their editing. Distribute the Simple Machines Editorial rubric (completed in Lesson 13 and used in Lesson 15) as well as students' plans and drafts from the End of Unit 3 Assessment Part I: Planning and Drafting an Editorial (from Lesson 15).• Give students 25 minutes to complete their assessments. To help students pace themselves, let them know when they have 10 and 5 minutes left.• Collect students' editorial plans and drafts; have them keep their Simple Machines Editorials (polished copies) until after the Author's Chair Celebration.	<ul style="list-style-type: none">• For some students, this part of the assessment may require more than the 25 minutes allotted. Consider providing time over multiple days if necessary.



Work Time (continued)	Meeting Students' Needs
<p>B. Author's Chair Celebration (25 minutes)</p> <ul style="list-style-type: none">• Gather students together as a whole group. Tell them that they have come a long way as writers. Remind them that at the beginning of the year they were working on writing strong paragraphs about the Iroquois (Module 1) and then writing historical fiction narratives (Module 2). Now they have also built expertise as writers of editorials. Tell students that you are proud of the progress they have made as writers and would like to celebrate with them by holding an Author's Chair Celebration.• Post the Author's Chair Celebration anchor chart. Explain that an Author's Chair Celebration is an event similar to a book signing that authors sometimes have at bookstores to celebrate publishing their work. Tell the class that at these events, the author reads to the audience and signs a copy of his or her work. Explain to the students that while they will not have to sign copies of their work, they will get to read their work to a small group.• Review the steps on the Author's Chair Celebration anchor chart and revisit the following learning target: "I can listen as my peers share their writing and give specific praise for their work." Remind students that they have been practicing giving kind feedback during peer critiques and that today they will really just be focusing on what they hear as a strength in their group members' work. They will write this praise on a sticky note for their group member after each share. Clarify or model kind praise as needed.• Split students into their groups (three or four students with a representation of editorials on different simple machines). Explain that they will have about 5 minutes for each person in the group to read, reflect, and receive praise.• Circulate as students share their work, reflect, and give one another praise. Monitor to ensure that students are taking turns about every 5 minutes. Write the following prompt on the board. If a group finishes early, have them discuss it:<ul style="list-style-type: none">* "How have we grown as writers since the beginning of the year?"• Collect students' Simple Machines Editorials (polished copies).	<ul style="list-style-type: none">• As an alternative to an Author's Chair Celebration anchor chart, you can copy the steps below for each group and display them using a document camera. This may be better for students with visual impairments or ELLs.



Closing and Assessment	Meeting Students' Needs
<p>A. Tracking My Progress (5 minutes)</p> <ul style="list-style-type: none">• Congratulate students on all of their learning as readers and writers as they researched simple machines and wrote editorials. Comment that you are proud of the knowledge and skills they have built and would like them to take a short moment to reflect in writing.• Distribute the Tracking My Progress, End of Unit 3 recording form. Give students 5 minutes to reflect in writing and collect as additional assessment information for students' progress toward the learning target.	
Homework	Meeting Students' Needs
<ul style="list-style-type: none">• None	



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Unit 3: Lesson 16

Supporting Materials



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License.

Exempt third-party content is indicated by the footer: © (name of copyright holder). Used by permission and not subject to Creative Commons license.



End of Unit 3 Assessment Part II:
Revising to Create a Polished Editorial

Directions:

1. If your draft is not finished, finish writing it.
2. Review the Simple Machine Editorial rubric.
3. Reread your draft and determine any revisions you would like to make based on the rubric. Pay specific attention to conventions.
4. Annotate your draft for revisions and edit for conventions (be sure to use a dictionary for correcting spelling).
5. Rewrite your editorial to include your revisions on a new sheet of lined paper.
6. Hand in all components of your assessment: both Part I (plans and draft) and Part II (polished editorial).
7. If you finish early, choose a book from your independent reading and read quietly.



Simple Machines Editorial Rubric

Learning Target: I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives. (W.4.1)

Criteria	Meets	Partially Meets	Does Not Meet
Ideas			
I can write an introduction in my editorial that explains simple machines and states my opinion clearly. (W.4.1a)			
I can use scientifically accurate reasons and evidence to support my opinion about a simple machine. (W.4.1b)			
Word Choice			
I can use vocabulary from my research on simple machines to write scientifically accurate descriptions in my editorial. (L.4.3)			
Organization			
I can group together reasons with related evidence in my editorial. (W.4.1a)			
I can use linking words to connect my opinion to my reasons. (W.4.1c)			
I can develop a conclusion that summarizes my opinion about simple machines in my editorial. (W.4.1d)			
Conventions			
I can use conventions to send a clear message to my reader. (L.4.2)			



Author's Chair Celebration Anchor Chart
(For Teacher Reference)

*As an alternative to an anchor chart, you can copy the steps below for each group.

Author's Chair Celebration

In groups of three or four, do the following:

1. Find a space where your group can sit in a circle.
2. Select an author to read and reflect first.
3. Authors should read their piece to the group and share their thinking on the following questions:
 - * What are you most proud of in this piece?
 - * What was your biggest challenge, and how did you handle it?
4. Group members should listen as the author reads and reflects, then take a moment to write the author's name and one piece of specific praise on a sticky note. (Hold on to your sticky notes until all group members have read their pieces.)
5. Take turns so that each author has a chance to read and reflect and listeners have written praise for each author.
6. Exchange sticky notes with praise so that authors can read.
7. Congratulate one another on the publication of your work.



Tracking My Progress, End of Unit 3

Name: _____

Date: _____

Learning Target: I can write an editorial stating my opinion on which simple machine benefits people the most in their everyday lives.

1. The target in my own words is:

2. How am I doing? Circle one.

I need more help to learn this



I understand some of this



I am on my way!



3. The evidence to support my self-assessment is:
