



EXPEDITIONARY
LEARNING

Grade 4: Module 3A: Performance Task



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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)