



EXPEDITIONARY
LEARNING

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

Evaluating an Argument: “Is Google Making Us Stupid?”



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

I can outline a speaker’s argument and specific claims. (SL.7.3)

I can evaluate the reasoning and evidence presented for soundness, relevance, and sufficiency. (SL.7.3)

I can identify and then evaluate an argument and specific claims in a text for sound reasoning and relevant, sufficient evidence. (RI.7.8)

Supporting Learning Target

- I can evaluate the arguments in “Is Google Making Us Stupid?”

Ongoing Assessment

- Tracing an Argument note-catcher, Part 1 (from homework)
- Thinking Log



Agenda	Teaching Notes
<ol style="list-style-type: none"> 1. Opening <ol style="list-style-type: none"> A. Revisiting Homework (10 minutes) 2. Work Time <ol style="list-style-type: none"> A. Tracing an Argument in “Is Google Making Us Stupid—YES” (15 minutes) B. Tracing an Argument in “Is Google Making Us Stupid—NO” (15 minutes) 3. Closing and Assessment <ol style="list-style-type: none"> A. Adding to the Brain Development Anchor Chart: “Is Google Making us Stupid?” (5 minutes) 4. Homework <ol style="list-style-type: none"> A. Fill out your Thinking Log for Lesson 3. How did today’s reading help clarify your thinking about the issue of screen time? B. Continue independent reading (at least 20 minutes). 	<ul style="list-style-type: none"> • In this lesson, students read an argument text which links neuroscience and digital media. This lesson continues the implementation of the Tracing an Argument note-catcher, which students will use twice in order to evaluate both sides of a yes/no debate piece on the question “Is Google Making Us Stupid?” • “Is Google Making Us Stupid?” walks a potentially confusing line between educational and entertainment screen time. Remind students that they are only considering the benefits and risks of <i>entertainment</i> screen time. If they want to use some of the information presented in this article as evidence in their own papers, they need to contextualize the information carefully. • Work Time A guides students through using the note-catcher on the “YES” portion of the “Is Google Making Us Stupid?” article. • Work Time B gives them another opportunity to practice using the note-catcher on the “NO” portion of the article, this time independently. Students will turn in their note-catchers for this work time so you can review them and provide feedback. If possible, return them with feedback before Lesson 5, when students will again fill in a Tracing an Argument note-catcher as part of their researcher’s notebook. • In advance: Determine pairs for the Closing activity. • Post: Learning target.



Lesson Vocabulary	Materials
sound reasoning, unsound reasoning, relevant, claim, reason, evidence	<ul style="list-style-type: none">• Tracing an Argument note-catcher (for “Beyond the Brain”; answers for Part 2, for teacher reference)• “Is Google Making Us Stupid?” (one per student)• Document camera• Tracing an Argument note-catcher (from Lesson 2; two new blank copies per student)• Tracing an Argument note-catcher (for “Is Google Making Us Stupid—YES?”; answers, for teacher reference)• Tracing an Argument note-catcher (for “Is Google Making Us Stupid—NO”; answers, for teacher reference)• Brain Development anchor chart—student version (from Unit 1, Lesson 2)• Model Brain Development anchor chart (for teacher reference)



Opening	Meeting Students’ Needs
<p>A. Revisiting Homework (10 minutes)</p> <ul style="list-style-type: none"> • Have students get out their homework and copies of “Beyond the Brain” from Lesson 2. • Review the correct answers for evidence and evaluation of evidence from Paragraph 7 and the entire section of Paragraph 8. Display the Page 1 teacher reference version from Lesson 2 if needed. Ask students to volunteer their answers. • Have students make corrections on their note-catchers as needed. • Ask students to turn to page 2. Refer to the Tracing an Argument note-catcher Page 2 (answers, for teacher reference), provided in the supporting materials, as needed. Together, consider the questions one by one, asking them to volunteer to answer and/or cold calling: <ul style="list-style-type: none"> * “Did the author provide sufficient evidence? Explain why or why not.” • Listen for: “Yes. He provided at least one piece of evidence for each of the reasons he gave in each paragraph.” Note here that the author also provided evidence in Paragraphs 9 and 10, even though students didn’t read them in class. <ul style="list-style-type: none"> * “Was the reasoning sound? Explain why or why not.” • Listen for: “Yes. Each reason connected strongly to the claim.” <ul style="list-style-type: none"> * “Overall, does the author successfully prove the claim? Why or why not? Refer to what you wrote above about relevant and sufficient evidence and sound reasoning.” • Listen for: “Since the author’s evidence was relevant, sufficient and sound, he successfully created a valid argument.” • If questions have not otherwise arisen, ask students if there was any point for which they felt the reasoning and evidence was <i>not</i> sufficient, relevant, or sound. Discuss these points of critique as a whole class. • Finally, direct students to the last paragraph of “Beyond the Brain” and read it out loud. • Ask students where, in this last paragraph, the author restates his claim. Listen for: “In the sentences about ‘being skeptical’ and ‘the brain is not the mind.’” • Remind them that restating the claim is a solid and effective way to end an argument piece. • Refer students to the learning target: <ul style="list-style-type: none"> * “I can evaluate the arguments in ‘Is Google Making Us Stupid?’” 	



Opening (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> Let students know that today, they will continue to “play” with arguments by tracing two sides of a debate about Google. Encourage them to see this activity as pertinent and interesting by connecting it to their everyday use of the Internet and Google, as well as criticisms they may have heard in real life about both of those activities. Remind them that both the technology and the brain science are very new to us as human beings, so both topics remain controversial. 	

Work Time	Meeting Students’ Needs
<p>A. Tracing an Argument in “Is Google Making Us Stupid—YES” (15 minutes)</p> <ul style="list-style-type: none"> Distribute “Is Google Making Us Stupid?” and the two new blank copies of the Tracing an Argument note-catcher per student. Display one note-catcher under the document camera. Ask students: <ul style="list-style-type: none"> * What do you notice about this note-catcher? Listen for students to recognize that this is the same note-catcher they worked with in Lesson 2 and for homework, when they were analyzing the article “Beyond the Brain.” Reinforce the thinking behind this note-catcher: it is a tool to help students trace author’s arguments. Have students find a partner. Explain that today, students will read a debate piece that asks two authors to write about opposing views on the question of whether Google, and the Internet in general, is negatively affecting our brains. Note who the authors are: Nicholas Carr, a writer who specializes in brain science, and Peter Norvig, the director of research for Google. You may wish to have a brief discussion here about why these authors were assigned which sides of the debate, and/or about bias. Read “Is Google Making Us Stupid—YES” aloud. Have students read along silently in their heads as they listen. Ask students to identify which sentence(s) is the claim of this piece. Remind them where a claim usually lies in argumentative pieces: toward the beginning. Listen for: “Google is doing something damaging to our brains” and/or “Google is distracting us, and so we think less deeply and understand less.” Have students record the claim on their note-catchers and model doing so under the document camera. Ask students to discuss with their partners what supporting reasons are in this piece. Accurate answers may vary. Listen for: “We need to think deeply in order to think ‘brilliantly,’” “When we’re online, we are constantly distracted,” and “Google encourages us to move superficially through information, because that’s how it makes money.” 	<ul style="list-style-type: none"> “Is Google Making Us Stupid?” is generally an accessible text for middle school students. However, for those with emergent literacy, considering previewing or pre-reading the text together in a small group before teaching it in class. For students needing additional supports, you may want to provide a partially filled-in note-catcher. Consider also providing a fully filled-in note-catcher for Work Time A. This will allow students with emergent literacy to act as “experts” with their peer partners and/or in whole-class discussion.



Work Time (continued)	Meeting Students’ Needs
<ul style="list-style-type: none"> • Record two reasons on the note-catcher. (Explain that students are working with only two reasons for the sake of time.) • For each reason given or developed by the class, have partners discuss a piece of evidence the author uses to support the reason. Record accurate answers on the note-catcher along with the students. Examples may include: “Science has demonstrated that we need calm minds in order to think deeply,” “The Internet is designed to bombard us with messages and interruptions,” and “Google allows us to ‘zip’ through the net so that it can show us more ads.” • Partners will now discuss whether the evidence is relevant, using the sentence stem “If ... then.” Remind them that the “then” section is where they link the evidence back to the claim. Again, accurate answers may vary. • Listen for answers such as: <ul style="list-style-type: none"> – “If science has demonstrated that we need calm minds in order to think deeply, then Google is bad for us,” – “If the Internet is designed to bombard us with messages and interruptions, then we will struggle to think deeply while online,” and – “If Google allows us to ‘zip’ through the net so that it can show us more ads and make more money, then Google is bad for us.” 	
<p>B. Tracing an Argument in “Is Google Making Us Stupid—NO” (15 minutes)</p> <ul style="list-style-type: none"> • Read “Is Google Making Us Stupid—NO” aloud two times. • The first time, students silently read in their heads as they listen. • The second time, have students begin to fill in their second note-catcher independently. • Instruct them to fill out the remaining sections of the Tracing an Argument note-catcher and then turn it in to you. Circulate and offer assistance where needed, but with a “light touch,” as this second note-catcher will serve as a formative assessment. • Collect the Tracing an Argument note-catchers. Use the Tracing an Argument note-catcher (answers, for teacher reference) to give written feedback and return in the next lesson if at all possible. 	



Closing and Assessment	Meeting Students’ Needs
<p>A. Adding to the Brain Development Anchor Chart: “Is Google Making Us Stupid?” (5 minutes)</p> <ul style="list-style-type: none"> • Direct students’ attention to the Brain Development anchor chart—student version, and let them know that together, the class will connect the thinking in the lesson text to the brain science they learned in Unit 1. Remind them to record their connections in the researcher’s notebook as you record them on the anchor chart, using the “if/then” format. • Discuss that the “if/then” format works in reverse in Unit 2. Instead of starting with the brain science and connecting it to its results in the real world, the texts begin with real-world arguments about screen time; students must think about how those arguments might connect to teen brain science. • Model, using the Model Brain Development Anchor Chart as a guide for yourself <ul style="list-style-type: none"> * “<u>If</u> we need calm minds to think, <u>then</u> overuse of technology such as Google might cause us to synaptically prune our brains to be distracted, and our thinking will be negatively affected.” * “<u>If</u> we are exposed to more, and more diverse, information through Google, <u>then</u> our brains will synaptically prune to use better information to make decisions. This might also counteract the effect of the immature prefrontal cortex.” 	
Homework	Meeting Students’ Needs
<ul style="list-style-type: none"> • Fill out your Thinking Log for Lesson 3: How did today’s reading help clarify your thinking about the issue of teen brains and screen time? • Continue independent reading (at least 20 minutes). 	



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Supporting Materials



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Tracing an Argument Note-Catcher
For “Beyond the Brain”
(Answers, for Teacher Reference)

Part 2

Did the author provide sufficient evidence? Explain why or why not.

Yes. He provided at least one piece of evidence for each of the reasons he gave in each paragraph.

Was the reasoning sound? Explain why or why not.

Yes. Each reason connected strongly to the claim.

Overall, does the author successfully prove the claim? Why or why not? Refer to what you wrote above about relevant and sufficient evidence and sound reasoning.

Since the author’s evidence was relevant, sufficient, and sound, he successfully proved his claim.



“Is Google Making Us Stupid?”

YES: Nicholas Carr, author of *The Shallows: What the Internet Is Doing to Our Brains*

Who doesn't love Google? In the blink of an eye, the search engine delivers useful information about pretty much any subject imaginable. I use it all the time, and I'm guessing you do too. But I worry about what Google is doing to our brains. What really makes us intelligent isn't our ability to find lots of information quickly. It's our ability to think deeply about that information. And deep thinking, brain scientists have discovered, happens only when our minds are calm and attentive. The greater our concentration, the richer our thoughts. If we're distracted, we understand less, remember less, and learn less.

That's the problem with Google—and with the Internet in general. When we use our computers and our cellphones all the time, we're always distracted. The Net bombards us with messages and other bits of data, and every one of those interruptions breaks our train of thought. We end up scatterbrained. The fact is, you'll never think deeply if you're always Googling, texting, and surfing.

Google doesn't want us to slow down. The faster we zip across the Web, clicking links and skimming words and pictures, the more ads Google is able to show us and the more money it makes. So even as Google is giving us all that useful information, it's also encouraging us to think superficially. It's making us shallow.

If you're really interested in developing your mind, you should turn off your computer and your cellphone—and start thinking. Really thinking. You can Google all the facts you want, but you'll never Google your way to brilliance.



“Is Google Making Us Stupid?”

NO: Peter Norvig, director of research, Google Inc.

Any new information technology has both advocates and critics. More than 2,000 years ago, the classical Greek philosopher Socrates complained that the new technology of writing "will create forgetfulness in the learners' souls because they will not use their memories."

Today, Google is the new technology. The Internet contains the world's best writing, images, and ideas; Google lets us find the relevant pieces instantly.

Suppose I'm interested in the guidance computers on Apollo spacecraft in the 1960s. My local library has no books on that specific subject—just 18 books about the Apollo missions in general. I could hunt through those or turn to Google, which returns 45,000 pages, including a definitive encyclopedia article and instructions for building a unit.

Just as a car allows us to move faster and a telescope lets us see farther, access to the Internet's information lets us think better and faster. By considering a wide range of information, we can arrive at more creative and informed solutions. Internet users are more likely to be exposed to a diversity of ideas. In politics, for example, they are likely to see ideas from left and right, and see how news is reported in other countries.

There's no doubt the Internet can create distractions. But 81 percent of experts polled by the Pew Internet Research Project say the opportunities outweigh the distractions. Socrates was wrong to fear the coming of the written word: Writing has improved our law, science, arts, culture, and our memory. When the history of our current age is written, it will say that Google has made us smarter—both individually and collectively—because we have ready and free access to information.

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Tracing an Argument Note-catcher
For “Is Google Making Us *Stupid—YES*”
(Answers, for Teacher Reference)

Name of Text/Excerpt/Clip: <i>“Is Google Making Us Stupid—YES”</i>		
Author/Speaker’s Name: <i>Nicholas Carr</i>		
Claim: <i>Google is doing something damaging to our brains.</i>		
Reason: – <i>We need to think deeply in order to think “brilliantly.”</i>	Reason: – <i>When we’re online, we are constantly distracted.</i>	Reason: – <i>Google encourages us to move superficially through information, because that’s how it makes money.</i>
Supporting Evidence 1	Supporting Evidence 2	Supporting Evidence 3
<i>Science has demonstrated that we need calm minds in order to think deeply.</i>	<i>The Internet is designed to bombard us with messages and interruptions.</i>	<i>Google allows us to “zip” through the net so that it can show us more ads.</i>



Tracing an Argument Note-catcher
For “Is Google Making Us *Stupid—YES*”
(Answers, for Teacher Reference)

<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... we need calm minds to think deeply, and the Internet does not help us have calm minds ...</i></p> <p>Then ... Google is doing something damaging to our brains.</p>	<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... the Internet fractures our attention, and we do not have calm minds ...</i></p> <p>Then ... Google is doing something damaging to our brains.</p>	<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... Google fractures our attention further by encouraging speedy interactions with information ...</i></p> <p>Then ... Google is doing something damaging to our brains.</p>
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Tracing an Argument Note-catcher
For “Is Google Making Us Stupid—NO”
(Answers, for Teacher Reference)

Name of Text/Excerpt/Clip: <i>“Is Google Making Us Stupid—NO”</i>		
Author/Speaker’s Name: <i>Peter Norvig</i>		
Claim: <i>Google has made us smarter—both individually and collectively—because we have ready and free access to information.</i>		
Reason: <i>Google lets us find relevant information instantly.</i>	Reason: <i>By considering a wide range of information, we can arrive at more creative and informed solutions.</i>	Reason: <i>The Internet’s opportunities outweigh its distractions.</i>
Supporting Evidence 1	Supporting Evidence 2	Supporting Evidence 3
<i>My local library has no books on that specific subject—just 18 books about the Apollo missions in general. I could hunt through those or turn to Google, which returns 45,000 pages.</i>	<i>In politics, for example, they are likely to see ideas from left and right, and see how news is reported in other countries.</i>	<i>But 81 percent of experts polled by the Pew Internet Research Project say the opportunities outweigh the distractions.</i>



Tracing an Argument Note-catcher
For “Is Google Making Us Stupid—NO”
(Answers, for Teacher Reference)

<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... Google can get us more specific information faster ...</i></p> <p>Then ... Google has made us smarter.</p>	<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... we have access to a diversity of information through Google ...</i></p> <p>Then ... Google has made us smarter.</p>	<p>Is this evidence relevant?</p> <p>Yes / No</p> <p>Explain why this evidence is or is not relevant to the claim:</p> <p><i>If ... people believe the Internet’s advantages outweigh the disadvantages ...</i></p> <p>Then ... Google has made us smarter.</p>
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Model Brain Development Anchor Chart
(For Teacher Reference)

Note: This chart is filled out in different lessons. The bolded items are added in this lesson.

Other developmental information	Prefrontal cortex	Neurons	Limbic system	So what?
<p>The brain needs sleep to take things from your short term memory to your long term memory (Knox)</p> <p>Your brain does not fully develop until the mid-20s (Scholastic)</p>	<p>Also called the “frontal lobe” (Knox)</p> <p>This area helps with insight and understanding the effect of your behavior on someone else (Knox)</p> <p>Matures later than other parts of the brain (Scholastic)</p> <p>Right behind your forehead (Scholastic)</p> <p>Helps with thinking ahead and sizing up risk and reward (Scholastic)</p>	<p>“White matter” is called myelin, and it coats the nerves and makes them “communicate” more effectively (Knox)</p> <p>In order for your brain to make a decision, tiny specialized cells “talk” with each other through a series of neurotransmitters, like a circuit in a computer. Then the whole network puts out a response, which becomes your outward behavior. (Scholastic)</p>	<p>Develops earlier than the PFC (Scholastic)</p> <p>Plays a central role in your emotional response (Scholastic)</p> <p>Associated with decisions made in feeling (Scholastic)</p> <p>When teens make decisions in emotionally charged situations, this one weighs in heavily (Scholastic)</p>	<p>So <u>if</u> the PFC is not as efficient, <u>then</u> teens may make decisions without fully realizing long-term consequences. <u>If</u> they do that, <u>THEN</u> this can be good (they take daring risks) and bad (they take dangerous risks).</p> <p><u>If</u> the PFC is the social hub and it is still developing in teens, <u>then</u> teens may still need practice with social skills.</p>



Model Brain Development Anchor Chart
(For Teacher Reference)

Other developmental information	Prefrontal cortex	Neurons	Limbic system	So what?
	<p>The PFC is the central hub of social circuitry (Giedd)</p>	<p>Information travels from neuron to neuron by way of their axons and dendrites (Scholastic)</p> <p>The space between one neuron’s axon and the other neuron’s dendrites is called its synapse (Scholastic)</p> <p>To make the connection better, the axons wrap themselves in myelin through a process called myelination (Scholastic)</p>	<p>The limbic system in the teen brain is more sensitive to risk and reward and gets a bigger shot of dopamine in rewarding situations. So it is more biased toward seeking out new information. (Galvan)</p> <p>Dopamine is the main neurotransmitter in the limbic system (Giedd)</p> <p>The limbic system is activated during basic biological drives, by substance abuse, and addictive behaviors. It is also activated by video games. (Giedd)</p>	<p><u>If</u> there are non-verbal social cues that can only be learned in the physical presence of a person, <u>then</u> someone mostly socializing online may not learn those skills.</p> <p><u>If</u> video games activate dopamine in the brain similarly to addictive behaviors, <u>then</u> a person may become addicted to video games in the same way someone can be addicted to behaviors.</p>



Model Brain Development Anchor Chart
(For Teacher Reference)

Other developmental information	Prefrontal cortex	Neurons	Limbic system	So what?
		<p>Also, if a synapse isn't used often, it is pruned through synaptic pruning. Then that energy is redirected into a more active synapse. (Scholastic)</p> <p>Synaptic pruning occurs based on the choices, the behavior, and the environment of an individual (Scholastic)</p>		<p><u>If</u> the brain is branching and pruning in adolescence, <u>then</u> it is highly adaptable. (Giedd)</p> <p><u>If</u> it adapted in the past, <u>then</u> it may adapt today. <u>If</u> it is adaptable, <u>then</u> it may be able to adapt to the digital world.</p> <p>So <u>if</u> synapses are being pruned or strengthened by the activities that teens spend their time on, <u>then</u> teens can shape their brain. And <u>if</u> activities shape one's brain, <u>then</u> one should be mindful about the activities that one is doing. As Dr. Willis says, "Practice makes permanent."</p> <p><u>If</u> we need calm minds to think, <u>then</u> overuse of technology such as Google might cause us to synaptically prune our brains to be distracted, and our thinking will be negatively affected.</p> <p><u>If</u> we are exposed to more, and more diverse, information through Google, <u>then</u> our brains will synaptically prune to use better information to make decisions. This might also counteract the effect of the immature prefrontal cortex.</p>