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

I can determine a theme or the central ideas of an informational text. (RI.7.2)
I can analyze the development of a theme or central idea throughout the text. (RI.7.2)
I can cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. (RI.7.1)

### Supporting Learning Target

<table>
<thead>
<tr>
<th>• I can analyze “Growing Up Digital” to determine its central ideas and evidence, and how they relate to each other.</th>
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### Ongoing Assessment

<table>
<thead>
<tr>
<th>• Text-Dependent Questions: “Growing Up Digital”</th>
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<tr>
<td>• Reflection Grid</td>
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### Agenda

1. **Opening**
   - A. Listening for Gist: “Growing Up Digital” (10 minutes)

2. **Work Time**
   - A. Reading Closely: “Growing Up Digital” (15 minutes)
   - B. Analyzing the Main Idea: “Growing Up Digital” (15 minutes)

3. **Closing and Assessment**
   - A. “Attention Economy,” “Growing Up Digital,” and End Reflection (5 minutes)

4. **Homework**
   - A. Continue reading your independent reading book and study for the end of unit assessment in the next lesson. Be sure to bring your independent reading book to class.

### Teaching Notes

- In this lesson, students read and analyze an informational text that acts as a bridge between the building background on neuroscience texts in this unit and the argument texts about the effects of screen time that will follow in Unit 2. This text, “Growing Up Digital,” is more accessible than the text in Lessons 6–8 but deals with similar themes. Namely, this text puts a human face on the issue of screen time and the developing adolescent brain.

- Students return to the multimedia slideshow “Students and Technology: Constant Companions” for the last time. “Growing Up Digital” references the students who are featured in the slideshow.

- In addition, students return to the neurologist’s notebook and work with RI.7.1 and RI.7.2 one more time before the end of unit assessment in Lesson 10. Work Time B is devoted to analyzing the main idea and the structure of the text.

- Students complete a Reflection Grid in the Closing. Think about how you might incorporate or display it in class. Consider summarizing all student responses overnight and sharing it with the students in Lesson 10. Having a chance to reflect and share their individual learning is particularly important in this module, where the content is so personally applicable.

- Be ready to return Homework: Excerpt 4 of “The Digital Revolution and the Adolescent Brain Evolution” from Lesson 8 because students will need it for today’s lesson.

- In advance:
  - Load the multimedia feature from the New York Times Web site:
  - Review: “Growing Up Digital.”

- Post: Learning targets.
Lesson Vocabulary | Materials
---|---
stark, gratification, stimuli, tension | • Digital projector
(From The New York Times, November 20, 2010 © 2010 The New York Times. All rights reserved. Used by permission and protected by the Copyright Laws of the United States. The printing, copying, redistribution, or retransmission of this Content without express written permission is prohibited.)
• “Growing Up Digital” (one per student)
• Definitions in “Growing Up Digital” (for teacher reference)
• Text-Dependent Questions: “Growing Up Digital” (one per student)
• Text-Dependent Questions: “Growing Up Digital” (answers, for teacher reference)
• Neurologist’s notebook #5 (one per student and one for display)
• Neurologist’s notebook #5 (answers, for teacher reference)
• Document camera
• Reflection Grid (one per student)
A. Listening for Gist: “Growing Up Digital” (10 minutes)

- Using a digital projector to cue up the multimedia feature “Students and Technology: Constant Companions.”
- Play the audio under the student “Vishal.” The audio is about 1 minute, 30 seconds long. Then ask students:
  * “From this audio, what are some predictions you can make about the subject of our reading today?”
- Cold call two or three students for their answers.
- Distribute a copy of “Growing Up Digital” to each student. Tell students that this text looks at the same issues they have been exploring in Lessons 6–8 but does so by looking at some specific students. The class has listened to the audio stories of each of these students.
- Orient students to the text. Explain that the left margin is where they will take gist notes.
- Inform the students that you will read this text aloud to them while they read along silently in their heads.
- As they listen to you, they should write down the gist of each paragraph. Remind them to write legibly and small. Assure them that you will pause so they have time to jot down notes without missing the next part of the text, but they should feel free to underline words or phrases they think are important.
- Begin reading. Make sure students are adding to their notes as you read.
- This text takes about 5 minutes to read aloud, not including time to stop and allow students to take notes.
- Define the vocabulary words listed under “Vocabulary” for students as you read, and have them jot down a brief definition of each on their copy of the text. Use Definitions in “Growing up Digital” (for teacher reference) as a resource as needed.
Work Time (continued) | Meeting Students’ Needs
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### B. Reading Closely: “Growing Up Digital” (15 minutes)
- Arrange students in pairs. Tell them they will now read “Growing Up Digital” closely with a partner, just as they did in the last lesson. They will read with some guiding questions. After they have discussed the questions, they will write their ideas on the right-hand side of the paper.
- Distribute Text-Dependent Questions: “Growing Up Digital.” Ask the students to read along as you read the directions. Clarify any questions. Invite them to begin; circulate to help as needed.
- After 10 minutes, debrief students on the questions. Use Text-Dependent Questions: “Growing Up Digital” (answers, for teacher reference) as a guide.

### C. Analyzing the Main Idea: “Growing Up Digital” (15 minutes)
- Distribute neurologist’s notebook #5 and display it with a document camera.
- Explain that “Growing Up Digital” is an informational text that is structured similarly to the other informational texts students have read. It starts with an anecdote, gives some background, and then explores an issue.
- Ask students to turn and talk:
  - “What is the main idea of this text?”
- Tell them to skim back through the first page of the text and underline a sentence that hints at the main idea.
- Ask for students to share out. Direct students to Paragraph 4 of “Growing Up Digital,” and point out that the main idea is directly stated in the second sentence. Write it on the displayed neurologist’s notebook #5 and ask students to do the same on their copy. Refer to neurologist’s notebook #5 (answers, for teacher reference) as needed.
- Ask students to reread Paragraphs 5 and 6 and articulate the two sentences of information to include in the background box on neurologist’s notebook #5.
- After 1 minute, ask students to share what they wrote. Write it on the displayed copy.
- Ask students to reread Paragraphs 7 and 8 silently. After a moment, ask students to raise their hands when they can identify another paragraph from the text that explores how schools deal with the “tension” of technology. When most hands are up, ask for a student to share out. Listen for the student to identify Paragraphs 20 and 21.
- Point out that sometimes an author will explore one supporting idea in several places. Write a supporting idea/detail about the school and technology in one of the boxes.

- 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 they are working on.
- Consider writing these questions on the board for struggling learners who benefit from visuals to reinforce discussion.
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<tr>
<th>Work Time (continued)</th>
<th>Meeting Students’ Needs</th>
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<tr>
<td>• Next, ask students to turn and talk:</td>
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<td>* “What is the purpose of the ‘27,000 Texts a Month’ section? Why would the author include it?”</td>
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<td>• Listen for students to say something like: “This section gives lots of examples of students being affected in different ways. It shows the many faces of this problem.”</td>
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<td>• Ask students to articulate a supporting idea from the “27,000 Texts a Month” section in their notebook.</td>
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<td>• Finally, ask:</td>
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<td>* “Is there a supporting idea that we haven’t captured yet?”</td>
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<td>• Prompt students to return to the text-dependent questions. Listen for them to identify that the author also discusses the positives of “growing up digital.” Add students’ thinking to the displayed copy of neurologist’s notebook #5 and have them do the same on their own copy. They may also identify that parents are conflicted about the use of technology.</td>
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A. “Attention Economy,” “Growing Up Digital,” and End Reflection (5 minutes)

- Ask students to take a few moments to review the short section titled “Attention Economy.”
- With a partner, have students discuss the following prompt:
  * “How does the article we have just read connect with the information in ‘Attention Economy’?”
- Discuss student observations as a whole class. Listen for specific connections to the behavior of the students in the article and dopamine levels.
- Hand out the Reflection Grid. Ask students to fill in each square with their reflections on Unit 1 using the following guide to the symbols on the grid: Something positive they learned goes in the box (+); something negative they learned goes in the box (-); something that surprised them goes in the box (!); and something they still have a question about goes in the box (?). Collect the grids and review them as a formative assessment.
- Remind students that their end of unit assessment will take place during the next lesson. Assure them that there are no tricks to the assessment; it covers the same skills and concepts they have been practicing all along in the unit.

Homework

- Continue reading your independent reading book and study for the end of unit assessment in the next lesson. Be sure to bring your independent reading book to class.
By Matt Richtel

(1) The day before the start of Vishal Singh’s senior year in high school, he faces a stark choice on his bedroom desk: book or computer?

(2) Vishal, a bright 17-year-old Californian who spends most of his time on Facebook, YouTube, and making digital videos, has read just 43 pages of his summer reading assignment, Kurt Vonnegut’s *Cat’s Cradle*. Instead of picking up the book, he clicks to YouTube.

(3) On YouTube, “you can get a whole story in six minutes,” he explains. “A book takes so long. I prefer the immediate gratification.”

(4) Students have always faced distractions. But computers and cellphones, and the constant stream of stimuli they offer, are a new challenge to focusing and learning.

(5) Researchers say the lure of these technologies is particularly powerful for young people. But because developing brains can get used to constantly switching tasks a lot more easily than adult brains, the risk is that today’s teenagers will be less able to stay focused on anything, not just schoolwork.

(6) “Their brains are rewarded not for staying on task but for jumping to the next thing,” says Michael Rich, a professor at Harvard Medical School and head of the Center on Media and Child Health in Boston. “The worry is we’re raising a generation of kids in front of screens whose brains are going to be wired differently.”

(7) But even as some educators express unease about students’ digital diets, they are increasingly using technology in the classroom, seeing it as a way to connect with students and give them the skills they need. Across the country, schools are equipping themselves with computers, Internet, and mobile devices.

(8) It is a tension on vivid display at Vishal’s school, Woodside High School in Redwood City, California. Here, as elsewhere, it’s not uncommon for students to send hundreds of text messages a day or spend hours playing video games, and virtually everyone is on Facebook.
27,000 Texts a Month

(9) Allison Miller, 14, sends and receives 27,000 texts a month. She texts between classes, the moment soccer practice ends, while being driven to and from school, and often while studying. But it comes at a cost: She blames multitasking for the three B’s on her recent progress report.

(10) “I’ll be reading a book for homework and I’ll get a text message and pause my reading and put down the book, pick up the phone to reply to the text message, and then 20 minutes later realize, ‘Oh, I forgot to do my homework.’”

(11) Some shyer students do not socialize through technology—they recede into it. Ramon Ochoa-Lopez, 14, plays six hours of video games on weekdays and more on weekends, leaving homework to be done in the bathroom before school.

(12) Students say that their parents, worried about the distractions, try to police their computer time. But it’s trickier with cellphones, since a lot of parents want to be able to call their children at any time, so simply taking the phone away isn’t an option.

(13) Sam Crocker, Vishal’s closest friend, who has straight A’s but lower SAT scores than he would like, blames the Internet’s distractions for his inability to finish either of his two summer-reading books.

(14) “Facebook is amazing because it feels like you’re doing something and you’re not doing anything,” Sam says. “It’s the absence of doing something, but you feel gratified anyway.”

(15) He concludes: “My attention span is getting worse.”

No Downtime

(16) That’s what has doctors worried. “Downtime is to the brain what sleep is to the body,” says Dr. Rich of Harvard Medical School. “But kids are in a constant mode of stimulation.”

(17) Rich isn’t suggesting young people toss out their phones and computers, but that they take a more balanced approach to what he says are powerful tools necessary to compete and succeed in modern life.

(18) Vishal has mixed feelings about technology. “If it weren’t for the Internet, I’d focus more on school and be doing better academically,” he says. But thanks to the Internet, he says, he’s discovered and pursued his passion: filmmaking.
(19) Vishal often spends hours working on music videos or film projects with sophisticated film editing software that he taught himself how to use—and then he’s focused in a way he rarely is when doing homework. He hopes colleges will be so impressed by his portfolio that they’ll overlook his school performance.

(20) Some teachers are alarmed by what they see. Marcia Blondel, a veteran English teacher, has resorted to having students read aloud in class because many lack the attention span to read assignments on their own.

(21) “You can’t become a good writer by watching YouTube, texting, and e-mailing a bunch of abbreviations,” says Blondel.

(22) By late October, Vishal’s grades began to slip. Vishal says he’s investing himself more in his filmmaking. But he is also using Facebook late at night and surfing for videos on YouTube. Evidence of the shift comes in a string of Facebook updates.

(23) Saturday, 11:55 p.m.: Editing, editing, editing.

(24) Sunday, 3:55 p.m.: 8+ hours of shooting, 8+ hours of editing. All for just a three-minute scene. Mind = Dead.

(25) Sunday, 11:00 p.m.: Fun day, finally got to spend a day relaxing ... now about that homework ...
Definitions in “Growing Up Digital”
(For Teacher Reference)

**stark:** strong

**gratification:** pleasure, especially the satisfaction of a desire

**stimuli:** something (as an environmental change) that acts to partly change bodily activity (as by exciting a sensory organ); heat, light, and sound are common physical *stimuli*

**tension:** when something is stretched, stressed, “tense”
Text-Dependent Questions: “Growing Up Digital”

Name: 

Date: 

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<tr>
<th>Questions</th>
<th>Write the answer to each question below.</th>
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<tr>
<td>1. <strong>After Paragraph 4:</strong></td>
<td>How does the story of Vishal help us visualize and understand the main idea in Paragraph 4?</td>
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<td>2. <strong>After Paragraph 8:</strong></td>
<td>Why would the use of technology in school be described as a “tension”?</td>
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<td>3. <strong>After Paragraph 16:</strong></td>
<td>Why would the author choose to use quotations from doctors and researchers in this article?</td>
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<td><strong>4. After Paragraph 19:</strong> What is the point of describing the <em>benefits</em> of technology, such as Vishal’s filmmaking, in an article about the <em>dangers</em> of technology?</td>
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<td><strong>5. In this article, how does technology affect Vishal?</strong> How do you think it might affect his brain? What do you know about the adolescent brain that makes you think this?</td>
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Text-Dependent Questions: “Growing Up Digital”  
(Answers, for Teacher Reference)

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<td><strong>1. After Paragraph 4:</strong> How does the story of Vishal help us visualize and understand the main idea in Paragraph 4?</td>
<td>Vishal puts a human face on the central idea. It draws us into the story of the text and makes us want to know more.</td>
</tr>
<tr>
<td><strong>2. After Paragraph 8:</strong> Why would the use of technology in school be described as a “tension”?</td>
<td>Tension is when something is stressed or stretched tight. Technology gives benefits to school, but it also has dangers. This is a tension.</td>
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<tr>
<td><strong>3. After Paragraph 16:</strong> Why would the author choose to use quotations from doctors and researchers in this article?</td>
<td>Expert opinions that agree with the main idea are one way the central idea is made stronger and more valid.</td>
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Text-Dependent Questions: “Growing Up Digital”
(Answers, for Teacher Reference)

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<td>4. <strong>After Paragraph 19:</strong> What is the point of describing the <em>benefits</em> of technology, such as Vishal’s filmmaking, in an article about the <em>dangers</em> of technology?</td>
<td>The article is addressing the ideas that technology can be beneficial in order to point out how difficult it is to resist technology and create balance.</td>
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<tr>
<td>5. In this article, how does technology affect Vishal? How do you think it might affect his brain? What do you know about the adolescent brain that makes you think this?</td>
<td>Vishal has found a passion for filmmaking through technology, and identifies himself as a filmmaker. He may get strong doses of dopamine from his film work. However, he may not have enough development in his prefrontal lobe to be able to make balanced decisions about how he spends his time online.</td>
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**Neurologist’s Notebook #5:**  
“Growing Up Digital”

**Directions:** Use this note-catcher to get the gist of the reading. Remember that the main idea and supporting details are often not just a single sentence of the text; rather, they may involve multiple sentences.

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<tr>
<th>Main idea:</th>
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<td>Brief background:</td>
<td>Supporting idea/detail:</td>
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<th><strong>Main idea:</strong></th>
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<tr>
<td><strong>Teen students distracted by technology may be rewiring their brains, making it difficult to concentrate on anything.</strong></td>
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<th><strong>Brief background:</strong></th>
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<tr>
<td><strong>Experts worry that because their brains are “rewarded” for jumping to new tasks, teens are rewiring their attention spans to be shorter permanently.</strong></td>
<td><strong>Schools are “wiring up,” but teachers express ambivalence about the effects of technology on their students.</strong></td>
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<td><strong>Real teens like Sam, Allison, Ramon, and Vishal all struggle with balancing school and technology in different ways.</strong></td>
<td><strong>Parents find it challenging to help kids cut down on technology when it is such an important part of their lives.</strong></td>
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<td><strong>Experts suggest downtime is important to the brain.</strong></td>
<td><strong>There are also positives to technology, and students may follow their passions.</strong></td>
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