UNIT 4 – SCREEN TIME AND THE DEVELOPING BRAIN (READING AND RESEARCH)

<table>
<tr><td rowspan="4">Established Goals: (Standards)

CCSS.ELA-Literacy.RL.7.10
By the end of the year, read and comprehend literature, including stories, dramas, and poems, in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
CCSS.ELA-Literacy.RI.7.1
Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS.ELA-Literacy.RI.7.7
Compare and contrast a text to an audio, video, or multimedia version of the text, analyzing each medium's portrayal of the subject (e.g., how the delivery of a speech affects the impact of the words).
CCSS.ELA-Literacy.RI.7.8
Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.
CCSS.ELA-Literacy.RI.7.9
Analyze how two or more authors writing about the same topic shape their presentations of key information by emphasizing different evidence or advancing different interpretations of facts.
CCSS.ELA-Literacy.RI.7.10
By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
CCSS.ELA-Literacy.W.7.1
Write arguments to support claims with clear reasons and relevant evidence.
CCSS.ELA-Literacy.W.7.4
Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1-3 above.)
CCSS.ELA-Literacy.W.7.5
With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed. (Editing for conventions should demonstrate</td><td colspan="2">Transfer</td></tr>
<tr><td colspan="2">Students will be able to:

Demonstrate the ideas and evidence of their AAP recommendation position papers in a multimedia format. Students will be crafting and sharing a visual representation of their position papers, including their claim, reasons, and evidence based on their research and the decision-making process in Unit 2.</td></tr>
<tr><td colspan="2">Meaning</td></tr>
<tr><td>ENDURING UNDERSTANDING</td><td>ESSENTIAL QUESTIONS</td></tr>
<tr><td>● The teenage brain is in a period of dynamic growth and change that is unique to this stage of life.
● Researchers wonder how screen time affects the development of adolescents.
● Effective arguments include sound, relevant, and sufficient evidence.</td><td>● How is the adolescent brain changing?
● Should screen time be limited? Why or why not?
● How can I make an informed decision about an issue and then effectively argue my position?</td></tr>
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command of Language standards 1-3 up to and including grade 7 here.) **CCSS.ELA-Literacy.W.7.6** Use technology, including the Internet, to produce and publish writing and link to and cite sources as well as to interact and collaborate with others, including linking to and citing sources **CCSS.ELA-Literacy.W.7.7** Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation. **CCSS.ELA-Literacy.W.7.8** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation. **CCSS.ELA-Literacy.W.7.9** Draw evidence from literary or informational texts to support analysis, reflection, and research. **CCSS.ELA-Literacy.W.7.10** 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.	**Acquisition**	
	KNOWLEDGE	SKILLS
	Students will know how to…	*Students will be skilled at…*
	● compare and contrast different media versions of informational text (written vs. audio vs. film vs. staged, etc.). ● analyze impact of the techniques unique to each medium. ● identify the argument and specific claims in a text. ● evaluate the argument and specific claims in a text for sound reasoning and relevant, sufficient evidence. ● contrast how multiple authors emphasize evidence or interpret facts differently when presenting information on the same topic. ● read grade-level informational texts proficiently and independently. ● read above-grade-level texts with scaffolding and support. ● conduct short research projects to answer a question. ● use several sources in research. ● generate additional questions for further research. ● gather relevant information from a variety of sources. ● use search terms effectively. ● evaluate the credibility and accuracy of each source. ● quote or paraphrase others' work while avoiding plagiarism. ● use a standard format for citation. ● effectively engage in discussions with diverse partners about seventh-grade topics, texts, and issues. ● express my own ideas clearly during discussions. ● build on others' ideas during discussions.	● citing several pieces of text-based evidence to support an analysis of informational text. ● determining a theme or the central ideas informational text. ● analyzing the development of central ideas in a text. ● determining the meaning of words and phrases in text (figurative, connotative, and technical meanings). ● analyzing the impact of word choice on meaning and tone in an informational text. ● analyzing the organization of an informational text (including how the major sections contribute to the whole and to the development of the ideas). ● writing arguments to support claims with clear reasons and relevant evidence. ● producing clear and coherent writing that is appropriate to task, purpose, and audience. ● using a writing process to ensure that purpose and audience have been addressed. ● selecting evidence from literary or informational texts to support analysis, reflection, and research. ● adjusting my writing practices for different timeframes, tasks, purposes, and audiences. ● analyzing the main ideas and supporting details presented in different media and formats. ● explaining how ideas presented in different media and formats clarify a topic, text, or issue.

	● present claims and findings with descriptions, facts, details, and examples. ● use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). ● include multimedia components and visual displays in a presentation to clarify claims and to add emphasis ● adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate	● outlining a speaker's argument and specific claims. ● evaluating the reasoning and evidence presented for soundness, relevance, and sufficiency. ● using a variety of strategies to determine the meaning of unknown words or phrases. ● accurately using seventh-grade academic vocabulary to express my ideas. ● using resources to build my vocabulary.

Unit	Vocabulary	Instruction and Pacing (suggested order to teach)
1	main idea, neurological development, central idea, supporting details; (from "Teens and Decision Making") neurons (para. 3), electrochemical impulse (para. 3), neurotransmitters, (para. 3) prefrontal cortex (para. 6), limbic system (para. 6); (from homework) neurologist, pediatric neurologist, neuroscientists, frontal lobes, myelin or "white matter," neural insulation, brain chemistry, cognitive deficits, cognitive baseline, (from "Teens and Decision Making") neural impulse (para. 9), axons (para. 10), dendrites (para. 10), synapse (para. 10), myelination (para. 11), synaptic pruning (para. 11), brain pathways (para. 12); (from homework) reckless, localization, regenerate, solidifies	**Weeks 1–2 (Unit 1: Building Background Knowledge: Development of the Adolescent Brain)** ● Building background knowledge about adolescent brain development ● Read various informational sources on the brain development of adolescents. ● Introduce Domain-Specific Vocabulary anchor chart ● Introduce the Brain Development anchor chart ● Listening for main ideas and supporting details ● Start Thinking Log and neurologist's notebooks ● Continue building background knowledge of adolescent development and how it is affected by screen time. ● Launch independent reading.

2	AAP (American Academy of Pediatrics), pediatrician, screen time, peer review, substantially, prosocial, penetration, necessitates, mitigate, argument writing, informational writing, claim, evidence, evaluate, sound reasoning, unsound reasoning, relevant, sufficient, logical; captivate, refute, sound reasoning, unsound reasoning, relevant, claim, reason, evidence, overarching research question, supporting research questions, consequence, paraphrase, contrast, positive consequences, virtual, accuracy, credibility, student-selected vocabulary, effect, result, or outcome; cascading	**Weeks 3-7 (Unit 2: Research Study: The Effects of Screen Time on the Developing Brain)** ● Introduce Evaluating an Argument anchor chart ● Trace the arguments of several informational texts ● Listen for arguments in informational videos ● Compare and contrast authors' use of evidence in several different text pairings ● Start research on the effects of entertainment screen time on the adolescent brain, including teaching the following skills: –Evaluating the credibility of sources – Generating supporting research questions – Quoting or paraphrasing others' work ● Introduce the researcher's notebook and researcher's roadmap ● Practice comparing authors' use of evidence ● Continue gathering information on the effects of screen time on the developing brain. ● Use search terms effectively ● Conduct Internet-based research ● Use dictionaries to confirm or revise inferred meanings of words. ● Introduce the decision-making process including Cascading Consequences chart and Comparing Risks and Benefits chart ● Weighing the evidence: Fishbowl discussion on whether or not the recommended time should change ● Creating a visual display for a presentation ● Formal presentations of claims about whether the AAP should raise the recommended daily entertainment screen time from two hours to four hours.

3	sustainable, advocates, low-flow shower heads, appliances, textile, wet-processing, applicable, claim, evidence, parentheses, cheat sheet, evaluative/evaluate, concise,	**Weeks 7-8 (Performance Task)** ● Analyze model position paper for argument and structure ● Plan position paper using Screen Time Recommendation Position Paper Planner ● Introduce Steps to Writing a Position Paper anchor chart ● Engage in peer feedback to strengthen argument in position papers. ● Cite sources correctly ● Draft the position paper ● Create final independent reading product ● Revise position paper based on teacher feedback ● Reflect on the steps to writing a position paper ● Craft visual representation of position paper ● Publish visual representations and share with class in a Gallery Walk

Common Misconceptions	Proper Conceptions
Students might think that the theme of the story is the same thing as the main idea of a story.	A theme is a lesson learned from a story, whereas the main idea is what a story is mostly about.
Students might think they only need to know a word's definition to successfully understand the word in a story.	Some words have multiple definitions and the context of the word is very important.
Students may want to support their positions with only their own opinions.	Students should be able to support their positions using the text.
Students might choose text support that doesn't relate to the topic.	Students must choose text support and be able to explain how the details support their point.
Students might summarize a text by choosing minor details.	Students should summarize a text by addressing key points.
Students may write narratives with incorrectly punctuated dialogue.	Students must punctuate dialogue correctly with quotes.
Students might write narratives which include too much dialogue that is confusing to follow.	Students should use dialogue with purpose and to drive the plot.
When engaging in discussion, students might feel it is OK to talk over each other or to interrupt the other person.	Students must learn to listen respectfully to others opinions and to take turns during discussions.

Students often write in an informal style, inappropriate to the audience.	Students must be cognizant of their purpose for writing and address the audience with the correct formality as needed.
When drafting writing, particularly if typing, students might be too cautious about correcting mistakes as they go.	Students should understand that the writing process has several steps and that getting your rough ideas down does not require perfection.
When publishing writing students often believe that they need to use colored, fancy, fonts, and pictures to supplement their ideas.	Students in the middle grades should understand that their words can make their writing come to life and that a formal style is needed when publishing an essay or other formal writing piece.

Resources

Texts

"Beyond the Brain," David Brooks (RI, 1260L)

• "What's Going On in Your Brain?" Linda Bernstein (RI, 1180L)

• "Can You Unplug for 24 Hours?" Heidi St. Clair (RI, 1140L)

• "What You Should Know about Your Brain," Judy Willis (RI, 1120L)

• "You Trouble," Justin O'Neill (RI, 1080L)

• "Teens and Decision Making: What Brain Science Reveals," Scholastic Inc. and National Institute on Drug Abuse (RI, 1060L)

• "Attached to Technology and Paying a Price," Matt Richtel (RI, 980L)

• "Is Google Making Us Stupid?" Nicholas Carr and Peter Norvig (RI, 960L)

• "The Teen Brain: It's Just Not Grown Up Yet," 2. Richard Knox (RI, 940)

Web Sites to Support Research

http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/view/

http://www.news.com.au/lifestyle/parenting/is-technology-damaging-teen-brains/story-fnet08ui-1226467121484

http://articles.washingtonpost.com/2013-03-13/news/37675597_1_teens-cellphones-video-games

http://www.npr.org/2013/10/20/238095806/when-playing-video-games-means-sitting-on-lifes-sidelines

http://www.psychologytoday.com/blog/health-matters/201006/the-teenagers-brain

http://harvardmagazine.com/2008/09/the-teen-brain.html

http://www.nytimes.com/2010/06/07/technology/07brainside.html?_r=0

http://www.pbs.org/newshour/rundown/2011/01/miles-obrien-teen-brains-on-technology.html

http://science.howstuffworks.com/life/teenage-brain3.htm

http://ngm.nationalgeographic.com/2011/10/teenage-brains/dobbs-text?rptregcta=reg_free_np&rptregcampaign=20131016_rw_membership_r1p_us_se_w#close-modal (may need to register with National Geographic)

http://online.wsj.com/news/articles/SB10001424052970203806504577181351486558984

http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/

http://www.loni.ucla.edu/~thompson/MEDIA/WP/wp1.html

Other

Graphic organizers

Guided Research

Research Folder

Researcher's Notebook

Research texts

Reading calendar

Differentiation and Accommodations

Accommodations
Provide graphic organizers
Provide additional examples and opportunities for additional problems for repetition
Provide tutoring opportunities
Provide retesting opportunities after remediation (up to teacher and district discretion)
Teach for mastery not test
Teaching concepts in different modalities
Adjust pace and homework assignments

Advanced Options
Students could create a poster or presentation for their peers about the development of the teen brain and effective habits for caring for the growing brain.
Students could spend a week "screen free" and write a journal on their experience (this extension could also be done alongside Unit 2).
Students could write a short story centered on one of the individuals from the audio slideshow featured in Lessons 6–8. Then they could write an author's note that explains how they used the character's actions to illustrate their knowledge of the developing brain and how it may affect teenager behavior. They may also use the characters to illustrate the issues surrounding screen time. Unit 3 of Module 3A has lessons specifically designed to help students write a short story. They could be adapted for this activity.
Students could return to some of the texts from past modules to analyze the characters in light of their brain development. For example, students may explain how the characters' behavior reflects an underdeveloped prefrontal cortex or a propensity to seek novel information and thrills. Module 1, 2A, and 2B are particularly suited to this task.
Students could reflect on their own behavior and how it does or does not support their learning regarding adolescent brain development.

Instructional Strategies

Fairfield Township School District recognizes the importance of the varying methodologies that may be successfully employed by teachers within the classroom and, as a result, identifies a wide variety of possible instructional strategies that may be used effectively to support student achievement. These may include, but not be limited to, strategies that fall into categories identified by the Framework for Teaching by Charlotte Danielson:

- Communicating with students
- Using questioning and discussion techniques
- Engaging students in learning
- Using assessment in instruction
- Demonstrating Flexibility and Responsiveness

Interdisciplinary Connections

This unit is designed to address English Language Arts standards as students read informational texts about adolescent brain development. This ELA module is designed to expose students to informational text from various sources and encourage the interaction with texts through multiple modalities (e.g. books, articles, electronic, digital). However, this ELA module does not supplant the regular science curriculum and instructional program at the local level. The informational text in this module intentionally incorporates Science concepts and themes to support potential cross-standards connections to this compelling content. These intentional connections are described below.

Standards in Science:

The Living Environment

Key Idea 1: Living Things are both similar to and different from each other and from nonliving things.

Performance Indicators 1.1; Major Understandings 1.1e, 1.1g, 1.1h

Performance Indicators 1.2; Major Understanding 1.2h

Key Idea 4: The continuity of life is sustained through reproduction and development.

Performance indicator 4.3 Major Understanding 4.3c

Big ideas and guiding questions are informed by the Next Generation Science Standards:

Science and Engineering Practices

21st Century Skills

- Critical thinking, problem solving, reasoning, analysis, interpretation, synthesizing information
- Research skills and practices, interrogative questioning
- Creativity, artistry, curiosity, imagination, innovation, personal expression
- Perseverance, self-direction, planning, self-discipline, adaptability, initiative
- Oral and written communication, public speaking and presenting, listening
- Leadership, teamwork, collaboration, cooperation, virtual workspaces
- Information and communication technology (ITC) literacy, media and internet literacy, visual interpretation, data interpretation and analysis, computer programming
- Civic, ethical, and social-justice literacy
- Economic and financial literacy, entrepreneurialism
- Global awareness, multicultural literacy, humanitarianism
- Scientific literacy and reasoning, the scientific method
- Environmental and conservation literacy, ecosystems understanding
- Health and wellness literacy, including nutrition, diet, exercise, and public health and safety

Performance Task

Visual Representation of Position Paper

This performance task gives students a chance to demonstrate the ideas and evidence of their AAP recommendation position papers in a multimedia format. Students will be crafting and sharing a visual representation of their position papers, including their claim, reasons, and evidence based on their research and the decision-making process in Unit 2.

ASSESSMENTS

Unit 1

Mid-Unit: “The Development of the Young Brain”: Listening for Main Idea and Supporting Details (RI.7.7 and SL.7.2) short constructed response

End of Unit: Analyzing the Main Idea and Supporting Details in “You Trouble” (RI.7.1, RI 7.2, RI.7.5, RI.7.6, and L.7.6)

note-taking and selected response

Unit 2

Mid-Unit: Part I: Tracing and Evaluating Arguments and Part II: Research Task: Comparing and Contrasting Texts (RI.7.8, SL.7.3, RI.7.9, W.7.7, W.7.8, L.7.4c, and L.7.4d) short constructed response

End of Unit: Making a Claim about the AAP Recommended Screen Time (SL.7.1, SL.7.1a, SL.7.1e, SL.7.3, SL.7.4, SL.7.5, SL.7.6, and RI.7.9) speaking and listening

Unit 3

Mid-Unit: First Draft of Position Paper (RI.7.1, W.7.1a, b, e, W.7.4, and W.7.9) scaffolded essay

End of Unit: Final Draft of Position Paper and Reflection on the Writing Process (RI.7.1, W.7.1c, d, W.7.4, W.7.5, and L.7.6)
scaffolded essay