## During our conversations in this unit, I am expected to …

<table>
<thead>
<tr>
<th>Expectation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Present my knowledge in a focused, logical, and coherent manner</td>
<td></td>
</tr>
<tr>
<td>Incorporate relevant facts, descriptions, details, and examples to support claims</td>
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</tr>
<tr>
<td>Use appropriate eye contact</td>
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</tr>
<tr>
<td>Use adequate volume</td>
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</tr>
<tr>
<td>Use clear pronunciation</td>
<td></td>
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<tr>
<td>Use formal English:</td>
<td></td>
</tr>
<tr>
<td>• Academic and domain-specific vocabulary</td>
<td></td>
</tr>
<tr>
<td>• Language that expresses ideas precisely, eliminating wordiness and redundancy</td>
<td></td>
</tr>
<tr>
<td>Be an active listener: face the speaker, make eye contact, and make thoughtful statements/ask thoughtful questions.</td>
<td></td>
</tr>
</tbody>
</table>
AAP Policy Statement: “Children, Adolescents, and the Media”

Children, Adolescents, and the Media
COUNCIL ON COMMUNICATIONS AND MEDIA
Pediatrics; originally published online October 28, 2013;
DOI: 10.1542/peds.2013-2656

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/early/2013/10/24/peds.2013-2656

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AAP Policy Statement: "Children, Adolescents, and the Media"

POLICY STATEMENT

Children, Adolescents, and the Media

abstract

Media, from television to the "new media" (including cell phones, iPads, and social media), are a dominant force in children's lives. Although television is still the predominant medium for children and adolescents, new technologies are increasingly popular. The American Academy of Pediatrics continues to be concerned by evidence about the potential harmful effects of media messages and images; however, important positive and prosocial effects of media use should also be recognized. Pediatricians are encouraged to talk a media history and ask 2 media questions at every well-child visit: How much recreational screen time does your child or teenager consume daily? Is there a television set or internet-connected device in the child's bedroom? Parents are encouraged to establish a family media plan for all media. Media influences on children and teenagers should be recognized by schools, policymakers, product advertisers, and entertainment producers. Pediatrics 2013;122:958-961

INTRODUCTION

Media, from traditional television to the "new media" (including cell phones, iPads, and social media), are a dominant force in children's lives. Although media are not the leading cause of any major health problem in the United States, the evidence is now clear that they can and do contribute substantially to many different risks and health problems and that children and teenagers learn from, and may be negatively influenced by, the media. However, media literacy and prosocial uses of media may enhance knowledge, connectedness, and health. The overwhelming penetration of media into children's and teenagers' lives necessitates a renewed commitment to changing the way pediatricians, parents, teachers, and society address the use of media to mitigate potential health risks and foster appropriate media use.

According to a recent study, the average 8-to 10-year-old spends nearly 8 hours a day with a variety of different media, and older children and teenagers spend >11 hours per day.1 Presence of a television (TV) set in a child's bedroom increases these figures even more, and 71% of children and teenagers report having a TV in their bedroom. Young people now spend more time with media than they do in school—it is the leading activity for children and teenagers other than sleeping.1,3 In addition to time spent with media, what has changed dramatically is the media landscape.4 TV remains the predominant medium (>4 hours per day) but nearly one-third of TV programming is viewed on alternative platforms (computers, iPads, or cell phones). Nearly all children and teenagers have Internet access (88%), often high-speed, and one-third have

COUNCIL ON COMMUNICATIONS AND MEDIA

KEY WORDS
media, television, new technology, family media use plan, media history, media education

ABBREVIATION
AAP—American Academy of Pediatrics

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The recommendations in this statement do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

All policy statements from the American Academy of Pediatrics automatically expire 5 years after publication unless reaffirmed, revised, or retired at or before that time.

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AAP Policy Statement: “Children, Adolescents, and the Media”

For nearly 3 decades, the AAP has expressed concerns about the amount of time that children and teenagers spend with media and about some of the content they view. In a series of policy statements, the AAP has delineated its concerns about media violence, sex in the media, substance use, music and music videos, obesity and the media, and infant media use. At the same time, existing AAP policy discusses the positive, prosocial uses of media and the need for media education in schools and at home. Shows like “Sesame Street” can help children learn numbers and letters, and the media can also teach empathy, racial and ethnic tolerance, and a whole variety of interpersonal skills. Prosocial media may also influence teenagers. Helping behaviors can increase after listening to prosocial (rather than neutral) song lyrics, and positive information about adolescent health is increasingly available through new media, including YouTube videos and campaigns that incorporate cell phone test messages.

RECOMMENDATIONS FOR PEDIATRICIANS AND OTHER HEALTH CARE PROVIDERS

- Become educated about critical media topics (media use, violence, sex, obesity, substance use, new technology) via continuing medical education programs.
- Ask 2 media questions and provide age-appropriate counseling for families at every well-child visit: How much recreational screen time does your child or teenager consume daily? Is there a TV set or an Internet-connected electronic device (computer, iPad, cell phone) in the child’s or teenager’s bedroom? In a busy clinic or office, these 2 targeted questions are key. There is considerable evidence that a bedroom TV increases the risk for obesity, substance use, and exposure to sexual content.
- Take a more detailed media history with children or teenagers who demonstrate aggressive behavior, are overweight or obese, use tobacco, alcohol, or other drugs, or have difficulties in school.
- Examine your own media use habits; pediatricians who watch more TV are less likely to advise families to follow AAP recommendations.

PEdiATRICIANS SHOULD RECOMMEND THE FOLLOWING TO PARENTS

- Limit the amount of total entertainment screen time to <1 to 2 hours per day.
- Discourage screen media exposure for children <2 years of age.
- Keep the TV set and Internet-connected electronic devices out of the child’s bedroom.
- Monitor what media their children are using and accessing, including any Web sites they are visiting and social media sites they may be using.
- Coview TV, movies, and videos with children and teenagers, and use this as a way of discussing important family values.
- Model active parenting by establishing a family home use plan for all media. As part of the plan, enforce a reasonable family computer “curfew” for all children, including cell phones. Establish reasonable but firm rules about cell phones, Internet, and social media use.

RECOMMENDATIONS FOR SCHOOLS

Community-based pediatricians, especially those serving in an advisory role to schools, are influential voices in school and neighborhood forums and can work to encourage a team approach among the medical home, the school home, and the family home. So pediatricians, especially
AAP Policy Statement: “Children, Adolescents, and the Media”

those serving as school physicians or school medical advisors should:

- Educate school boards and school administrators about evidence-based health risks associated with unsupervised, unlimited media access and use by children and adolescents, as well as ways to mitigate those risks, such as violence prevention, sex education, and drug-use prevention programs.

- Encourage the continuation and expansion of media education programs, or initiate implementation of media education programs in settings where they are currently lacking.

- Encourage innovative use of technology where it is not already being used, such as online education programs for children with extended but medically justified school absences.

- Work collaboratively with parent-teacher associations to encourage parental guidance in limiting or monitoring age-appropriate screen times. In addition, schools that do use new technology like iPads need to have strict rules about what students can access.

PEDIATRICIANS SHOULD WORK WITH THE AAP AND LOCAL CHAPTERS TO CHALLENGE THE ENTERTAINMENT INDUSTRY TO DO THE FOLLOWING

- Establish an ongoing dialogue with health organizations like the AAP, the American Medical Association, the American Psychological Association, and the American Public Health Association to maximize prosocial content in media and minimize harmful effects (e.g., portrayals of smoking, violence, etc).

- Make movies smoke-free, without characters smoking or product placement.

- Make socially responsible decisions on marketing products to youth, betterment of their health is the ultimate goal.

- Advocate for a federal report within either the National Institutes of Health or the Institute of Medicine on the impact of media on children and adolescents that would establish a baseline of what is currently known and what new research needs to be conducted.

- Encourage the entertainment industry and the advertising industry to create more prosocial programming and to reassess the effects of their current programming.

- Issue strong regulations—self-regulation is not likely to work—that would restrict the advertising of junk food and fast food to children and adolescents.

- Establish an ongoing funding mechanism for new media research.

- Initiate legislation and rules that would ban alcohol advertising from television.

- Work with the Department of Education to support the creation and implementation of media education curricula for schoolchildren and teenagers.

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REFERENCES
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
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<tbody>
<tr>
<td>1. The statement begins by saying that although media does not <strong>cause</strong> health problems in children, the evidence is that media can <strong>contribute</strong> to those health problems. What is the difference between “causing” an outcome to happen and “contributing” to that outcome?</td>
<td></td>
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<tr>
<td>2. The text states we must “change the way pediatricians, parents, teachers, and society address the use of media to mitigate potential health risks and foster appropriate media use.” Using the context of the sentence, find synonyms for the words <strong>mitigate</strong> and <strong>foster</strong>.</td>
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<tr>
<td>Questions</td>
<td>Answers</td>
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<tr>
<td>3. What is the significant change being described in Paragraph 2?</td>
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<td>4. Paragraph 3 uses several pieces of evidence to illustrate the fact</td>
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<td>that the “media landscape has changed dramatically”: in other words,</td>
<td></td>
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<td>that the types of media being used by children have become very diverse.</td>
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<tr>
<td>Choose one of these pieces of evidence and describe how it supports the</td>
<td></td>
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<tr>
<td>fact.</td>
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<tr>
<td>Questions</td>
<td>Answers</td>
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<td>--------------------------------------------------------------------------</td>
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<tr>
<td>5. Paragraph 4 documents that many parents and families do not have guidelines in place for use of media. Why would the AAP feel the need to include this information in the introduction to its policy statement?</td>
<td></td>
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<tr>
<td>6. Paragraph 5 summarizes the statements the AAP has already made about media and children. Name one concern the AAP has about media and children, and one benefit the AAP has noted.</td>
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</tbody>
</table>
Name of Section Assigned

Below, jot down the main ideas and supporting details of the section you have just read.

<table>
<thead>
<tr>
<th>Main idea:</th>
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<tbody>
<tr>
<td>Supporting detail:</td>
<td>Supporting detail:</td>
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<td>Supporting detail:</td>
<td>Supporting detail:</td>
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<td>Supporting detail:</td>
<td>Supporting detail:</td>
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Explanation of the AAP Recommendation Process

Researchers identify problems they want to study and seek funding from private and public (like the federal government) sources.

Researchers publish findings in medical journals, and other researchers try to replicate and test their findings. They also present their findings at conferences. This is called the peer review process.

The American Academy of Pediatrics appoints an Expert Advisory Committee to comb through medical journals and find those studies that have been peer-reviewed and proved to be sound. The Expert Advisory Committee focuses on one specific aspect of pediatric care and is made up of experts in that field.

The Expert Advisory Committee decides what recommendation should be made using several criteria. Among the questions members ask themselves:

1. How strong is the evidence that this recommendation should be made?
2. What is the balance between potential harm and potential benefit?
3. What has been recommended before? Is there new information that should change the existing recommendation?
4. How important is this to public health? How many people will this affect?
5. How likely is this recommendation going to address the health problem?

Finally the Expert Advisory Committee writes the recommendation, and the AAP disseminates the information to physicians and the public.
You are part of the Children and Media Expert Advisory Committee. Your job is to help the American Academy of Pediatrics revisit the recommendation that children older than 2 should spend no more than two hours a day on entertainment screen time. After examining both the potential benefits and risks of entertainment screen time, particularly to the development of teenagers, make a recommendation: **Should the AAP raise its recommended daily entertainment screen time from two hours to four hours?**
When you find a text you think you might use for research, you first need to assess it by asking these questions.

1. Assess the Text’s Accessibility
   - Am I able to read and comprehend the text easily?
   - Do I have adequate background knowledge to understand the terminology, information, and ideas in the text?

2. Assess the Text’s Credibility and Accuracy
   - Is the author an expert on the topic?
   - Is the purpose to inform or to persuade/sell?
   - When was the text first published?
   - How current is the information on the topic?
   - Does the text have specific facts and details to support the ideas?
   - Does the information in this text expand on or contradict what I already know about the topic?

3. Assess the Text’s Relevance
   - Does the text have information that helps me answer my research questions? Is it information that I don’t have already?
   - How does the information in the text relate to other texts I have found?

Informed by “Assessing Sources,” designed by Odell Education
Read this quote from the AAP policy statement:

“They [teenagers] are also avid multitaskers, often using several technologies simultaneously, but multitasking teenagers are inefficient. For example, using a mobile phone while driving may result in both poor communication and dangerous driving.”

How could the following aspects of adolescent neurology possibly explain, or connect to, the phenomenon described above?

<table>
<thead>
<tr>
<th>Adolescent Neurology</th>
<th>How It Might Connect to the AAP Quote</th>
</tr>
</thead>
<tbody>
<tr>
<td>The still-developing pre-frontal cortex</td>
<td></td>
</tr>
<tr>
<td>The dopamine-based limbic system (also called the “risk/reward system”)</td>
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</tbody>
</table>
Consider this argument, given by a middle school student to his parents:

“I should not have to limit my video game playing. First, I love my video games more than I love my own family. Plus, it’s annoying to have to turn my Xbox off. I finish my homework before I play any games anyway, so it shouldn’t matter if I limit my screen time or not. How dangerous can it actually be for me?”
Argument B

Now consider this argument, given by a middle school student to her little brother:

“It’s important to limit your video game playing. First, playing video games isn’t good for your mind. It exposes young people to violence. Violent video games have been linked to aggression in kids. Also, it isn’t good for your health. The more video games you play, the less physical activity you are getting. Obesity and levels of video game playing are linked in research. Finally, playing video games limits the important social interactions you have in real life with friends and family. We miss talking with you around here because you’re always playing games!”
<table>
<thead>
<tr>
<th>Relevant Evidence</th>
<th>Sufficient Evidence</th>
<th>Sound Reasoning</th>
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</table>
1. It’s a pattern as old as time. Somebody makes an important scientific breakthrough, which explains a piece of the world. But then people get caught up in the excitement of this breakthrough and try to use it to explain everything.

2. This is what’s happening right now with neuroscience. The field is obviously incredibly important and exciting. From personal experience, I can tell you that you get captivated by it and sometimes go off to extremes, as if understanding the brain is the solution to understanding all thought and behavior.

3. This is happening at two levels. At the lowbrow level, there are the conference circuit neuro-mappers. These are people who take pretty brain-scan images and claim they can use them to predict what product somebody will buy, what party they will vote for, whether they are lying or not, or whether a criminal should be held responsible for his crime.

4. At the highbrow end, there are scholars and theorists that some have called the “nothing buttists.” Human beings are nothing but neurons, they assert. Once we understand the brain well enough, we will be able to understand behavior. We will see the chain of physical causations that determine actions. We will see that many behaviors like addiction are nothing more than brain diseases. We will see that people don’t really possess free will; their actions are caused by material processes emerging directly out of nature. Neuroscience will replace psychology and other fields as the way to understand action.

5. These two forms of extremism are refuted by the same reality. The brain is not the mind. It is probably impossible to look at a map of brain activity and predict or even understand the emotions, reactions, hopes and desires of the mind.

6. The first basic problem is that regions of the brain handle a wide variety of different tasks. As Sally Satel and Scott O. Lilienfeld explained in their compelling and highly readable book, “Brainwashed: The Seductive Appeal of Mindless Neuroscience,” you put somebody in an fMRI machine and see that the amygdala or the insula lights up during certain activities. But the amygdala lights up during fear, happiness, novelty, anger or sexual arousal (at least in women). The insula plays a role in processing trust, insight, empathy, aversion and disbelief. So what are you really looking at?
7. Then there is the problem that one activity is usually distributed over many different places in the brain. In his book, “Brain Imaging,” the Yale biophysicist Robert Shulman notes that we have this useful concept, “working memory,” but the activity described by this concept is widely distributed across at least 30 regions of the brain. Furthermore, there appears to be no dispersed pattern of activation that we can look at and say, “That person is experiencing hatred.”

8. Then there is the problem that one action can arise out of many different brain states and the same event can trigger many different brain reactions. As the eminent psychologist Jerome Kagan has argued, you may order the same salad, but your brain activity will look different, depending on whether you are drunk or sober, alert or tired.

9. Then, as Kagan also notes, there is the problem of meaning. A glass of water may be more meaningful to you when you are dying of thirst than when you are not. Your lover means more than your friend. It’s as hard to study neurons and understand the flavors of meaning as it is to study Shakespeare’s spelling and understand the passions aroused by Macbeth.

10. Finally, there is the problem of agency, the problem that bedevils all methods that mimic physics to predict human behavior. People are smokers one day but quit the next. People can change their brains in unique and unpredictable ways by shifting the patterns of their attention.

11. What Satel and Lilienfeld call “neurocentrism” is an effort to take the indeterminacy of life and reduce it to measurable, scientific categories.

12. Right now we are compelled to rely on different disciplines to try to understand behavior on multiple levels, with inherent tensions between them. Some people want to reduce that ambiguity by making one discipline all-explaining. They want to eliminate the confusing ambiguity of human freedom by reducing everything to material determinism.

13. But that is the form of intellectual utopianism that always leads to error. An important task these days is to harvest the exciting gains made by science and data while understanding the limits of science and data. The next time somebody tells you what a brain scan says, be a little skeptical. The brain is not the mind.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
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<tbody>
<tr>
<td>1. The text states that the author sometimes becomes excited, <em>captivated</em> by brain research, and goes to an extreme, trying to use it to explain everything about human behavior. Use your knowledge of the verb <em>capture</em> to make a prediction about what the verb <em>captivate</em> might mean.</td>
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<tr>
<td>2. The author’s main claim is in Paragraph 5. What do you think it is?</td>
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<td>3. How does the first sentence, “The brain is not the mind,” relate to the second sentence, “It is probably impossible to look at a map of brain activity and predict or even understand the emotions, reactions, hopes and desires of the mind”?</td>
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<td>4. How does the claim “the brain is not the mind” relate to the brain science that you have been learning so far?</td>
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<tr>
<td>Questions</td>
<td>Answers</td>
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<tr>
<td>5. To support his claim, what is the reason the author gives in Paragraph 6?</td>
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<td>6. Give an example in Paragraph 6 of evidence that supports the reason.</td>
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<tr>
<td>7. To support his claim, what is the reason the author gives in Paragraph 7?</td>
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<td>8. Give an example in Paragraph 7 of evidence that supports the reason.</td>
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### Part 1

<table>
<thead>
<tr>
<th>Name of Text/Excerpt/Clip:</th>
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<table>
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<tr>
<th>Author/Speaker's Name:</th>
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<th>Claim:</th>
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<tr>
<th>Reason, Paragraph 6:</th>
<th>Reason, Paragraph 7:</th>
<th>Reason, Paragraph 8:</th>
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</thead>
<tbody>
<tr>
<td>One brain region can handle many different tasks.</td>
<td>One activity occurs in many different places in the brain.</td>
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<thead>
<tr>
<th>Supporting Evidence 1</th>
<th>Supporting Evidence 2</th>
<th>Supporting Evidence 3</th>
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<tr>
<td>Is this evidence relevant?</td>
<td>Yes / No</td>
<td>Explain why this evidence is or is not relevant to the claim:</td>
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<tr>
<td>If ...</td>
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<td>If ... you cannot predict from a person’s brain scan what is happening to the person.</td>
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<td>If ... you cannot predict from a person’s brain scan what is happening to the person.</td>
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<th>Explain why this evidence is or is not relevant to the claim:</th>
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<tbody>
<tr>
<td>If ...</td>
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<td>If ... you cannot predict from a person’s brain scan what is happening to the person.</td>
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Part 2

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
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<tr>
<td>Did the author provide sufficient evidence? Explain why or why not.</td>
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<tr>
<td>Was the reasoning sound? Explain why or why not.</td>
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<tr>
<td>Overall, does the author successfully prove the claim? Why or why not?</td>
<td>Refer to what you wrote above about relevant and sufficient evidence and sound reasoning.</td>
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</table>
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.
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.

From Upfront, October 4, 2010. Copyright © 2010 by Scholastic Inc. Reprinted by permission of Scholastic Inc.
What are the potential benefits and risks of entertainment screen time, particularly to the development of teenagers?
Good researchers stop often to look around and see where they are, check their maps, and set their course toward their final destination. They sometimes take side trips, but they use their route-finding tools to reach their destinations.

**INITIATING INQUIRY**

**Step 1:** Set a purpose for research: What is the overarching research question? What information do you need to find? Why does this inquiry matter?

**Step 2:** Gather background information about your topic from a reliable source and generate supporting research questions.
- Relevant
- Specific
- Answerable

**ANALYZING SOURCES**

**Step 4:** Use your sources. For each source:
- Skim the source to see if it is useful for you.
- If it is useful, read it and mark parts of the text that are relevant to your research.
- On your note-taking sheet, record the source information and take notes in your own words on ideas and information that are relevant.

**EVALUATING RESEARCH**

**Step 5:** After you are done reading a source, step back and evaluate:
- Which of my supporting research questions have I answered, either partially or completely?
- What additional supporting research questions did I generate?
- How thorough is my answer to the overarching research question?
- Which source might I use next?

**GATHERING SOURCES**

**Step 3:** Gather a variety of reliable and relevant sources.

**DEVELOPING AN EVIDENCE-BASED PERSPECTIVE**

**Step 6:** When you have enough information, synthesize and share your findings.
This is your place to gather information, generate questions, and keep track of your findings as you complete this research project. This will help you practice for and write your position paper and demonstrate your progress toward the following learning targets:

- I can conduct short research projects to answer a question. (W.7.7)
- I can generate additional questions for further research. (W.7.7)
- I can gather relevant information from a variety of sources. (W.7.8)
- I can evaluate the credibility and accuracy of each source. (W.7.8)
- I can quote or paraphrase others’ work while avoiding plagiarism. (W.7.8)
- I can use a variety of strategies to determine the meaning of unknown words or phrases. (L.7.4)

**RESEARCH QUESTION(S):** What are the potential benefits and risks of entertainment screen time, particularly to the development of teenagers?

The following pages will help you organize your notes on your sources and your ideas about them.
# Section 1

This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.

**Track the bibliographic information for this source. The first entry has been mostly filled out for you:**

<table>
<thead>
<tr>
<th>Title:</th>
<th>“The Many Benefits, for Kids, of Playing Video Games”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author:</td>
<td>Peter Gray</td>
</tr>
<tr>
<td>Print or Digital</td>
<td>Digital</td>
</tr>
<tr>
<td>Source Type:</td>
<td><em>Psychology Today</em> (magazine, online)</td>
</tr>
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<td>Credible?</td>
<td>Yes</td>
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**My notes from this source:**

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### Brain Connections:

Remember to write connections in the “if/then” format.

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### Vocabulary:

Identify a word from the text that is new to you:

What is your initial idea of its meaning?

What strategy did you use to determine an initial meaning for this word?

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word?
Paragraph to sum up new information from this text about the benefits of video games:

Questions I now have (keep these relevant, specific, and answerable):
Section 2

Name of Text: “Gaming Can Make a Better World”

Author/Speaker’s Name: Jane McGonigal

Claim:

<table>
<thead>
<tr>
<th>Supporting Evidence 1</th>
<th>Supporting Evidence 2</th>
<th>Supporting Evidence 3</th>
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What type of evidence is this? (Circle one)

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<tr>
<th>anecdote</th>
<th>analogy/metaphor</th>
<th>fact/statistic</th>
<th>testimony</th>
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<td>Supporting Evidence 4</td>
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What type of evidence is this? (Circle one)
- anecdote
- analogy/metaphor
- fact/statistic
- testimony

What type of evidence is this? (Circle one)
- anecdote
- analogy/metaphor
- fact/statistic
- testimony

What type of evidence is this? (Circle one)
- anecdote
- analogy/metaphor
- fact/statistic
- testimony
### Section 3

**Name of Text/Excerpt/Clip:** “Video Games Benefit Children, Study Finds.”

**Author/ Speaker’s Name:** Medical Xpress  

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**Supporting Evidence**  
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<td>Explain why this evidence is or is not relevant to the claim:</td>
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<td>Then ...</td>
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1. **Read for gist.** Is this a source that is relevant to your topic and questions?

2. **Reread the text** to find **key vocabulary** (enter below) and **information about the effects of screen time**. While you read, text-code important passages.

3. After you’ve read, **paraphrase the excerpt** by using one of these sentence stems:

<table>
<thead>
<tr>
<th>According to +</th>
<th>source</th>
<th>+ paraphrased fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source +</td>
<td>writes illustrates notes observes states reports claims</td>
<td>+ paraphrased fact</td>
</tr>
</tbody>
</table>

Example:
According to the New York Times, the ways we currently use technology are unhealthy.

According to the interview with Peter Gray, we need to think more about how we use video games.
<table>
<thead>
<tr>
<th>Section 4</th>
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<tbody>
<tr>
<td>This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.</td>
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</table>

**Track the bibliographic information for this source:**

- Title: 
- Author: 
- Print or Digital: 
- Source Type: 
- Credible?: 
- Page #(s): 

**Use the steps on page 19 to help you paraphrase this source.**

**Paraphrased information from this text about screen time:**

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**Brain Connections:**
Remember to write connections in the “if/then” format.

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**Vocabulary:**

Identify a word from the text that is new to you: ____________________________

What is your initial idea of its meaning? ____________________________

What strategy did you use to determine an initial meaning for this word? ____________________________

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word? ____________________________
Questions that will guide my further research (remember to keep these relevant, specific, and answerable):

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Section 5

This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.

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Use the steps on page 19 to help you paraphrase this source.

Paraphrased information from this text about screen time:

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**Brain Connections:**
Remember to write connections in the “if/then” format.

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**Vocabulary:**
Identify a word from the text that is new to you:  **virtual**

What is your initial idea of its meaning? 

What strategy did you use to determine an initial meaning for this word? 

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word? 
Questions that will guide my further research (remember to keep these relevant, specific, and answerable):

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<table>
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**Use the steps on page 19 to help you paraphrase this source.**

**Paraphrased information from this text about screen time:**

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**Brain Connections:**
Remember to write connections in the “if/then” format.

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**Vocabulary:**

Identify a word from the text that is new to you: ______________________________________

What is your initial idea of its meaning? ________________________________________________

What strategy did you use to determine an initial meaning for this word? 

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word? __________________________________________________________
Questions that will guide my further research (remember to keep these relevant, specific, and answerable):

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This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.

**Track the bibliographic information for this source:**

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Vocabulary:

Identify a word from the text that is new to you: ________________________________

What is your initial idea of its meaning? ________________________________

What strategy did you use to determine an initial meaning for this word? ________________________________

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word? ________________________________

Questions that will guide my further research (remember to keep these relevant, specific, and answerable):

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This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.

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| Name of Sponsoring Institution (if any): |  |
| Date of Publication: |  |
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| Credible? |  |

**Use the steps on page 19 to help you paraphrase this source.**
Paraphrased information from this text about screen time:
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Brain Connections:
Remember to write connections in the “if/then” format.
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**Vocabulary:**

Identify a word from the text that is new to you:  
What is your initial idea of its meaning?  
What strategy did you use to determine an initial meaning for this word?  

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word?  

**Questions that will guide my further research (remember to keep these relevant, specific, and answerable):**

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53
Section 9—Internet Research

This text will help you learn information about screen time. This will help you begin to generate relevant questions about your topic.

**Track the bibliographic information for this source:**

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<td>Credible?</td>
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**Use the steps on page 19 to help you paraphrase this source.**
Paraphrased information from this text about screen time:

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Brain Connections:
Remember to write connections in the “if/then” format.

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**Vocabulary:**

Identify a word from the text that is new to you:  

What is your initial idea of its meaning?  

What strategy did you use to determine an initial meaning for this word?  

Look this word up in a reference (dictionary, thesaurus, glossary). What is the definition of this word?  

**Questions that will guide my further research (remember to keep these relevant, specific, and answerable):**

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Quite a few parents have asked me, at talks I've given, about the advisability of their limiting their kids' computer play. Others have told me that they do limit their kids' computer play, or their total daily "screen time," in a tone that seemed to suggest that any reasonable parent would do that. People who have been reading this blog can probably guess my reaction. I have a very high opinion of children's abilities to make good choices about how to use their free time, as long as they really have choices. Some kids go through long periods of doing what seems like just one thing, and then some adults think there's something wrong, because they (the adults) would not make that choice. But in my experience, if kids are really free to play and explore in lots of different ways, and they end up playing or exploring in what seems to be just one way, then they are doing that because they are getting something really meaningful out of it. For a nice example of this, you might watch the film on the home page of the Sudbury Valley School website, where a young man describes his year of doing almost nothing but computer play.

It is always a mistake, I think, to tell kids what they must or must not do, except in those cases where you are telling them that they must do their share of the chores around the house or must not do things that hurt you or other people. Whenever we prevent our kids from playing or exploring in the ways they prefer, we place another brick in a barrier between them and us. We are saying, in essence, "I don't trust you to control your own life." Children are suffering today not from too much computer play or too much screen time. They are suffering from too much adult control over their lives and not enough freedom (see essay on rise of depression and anxiety).
Kids who are really free know what is best for them, especially concerning how they should spend their free time. Every kid is different, just as every adult is, and we can't get into their heads and find out just what they are getting out of something that we don't understand. I know well a kid who, for years, spent hours per day watching television shows that I thought were really disgustingly dumb; but, over time, I discovered that she was getting a lot out of them. They were making her think in new ways. She understood all the ways in which the shows were dumb, at least as well as I did; but she also saw ways in which they were smart, and she analyzed them and learned from them. They contributed greatly to her abilities as an actress (she eventually had major parts in high-school plays), because she acted out the parts vicariously, in her mind, as she watched. They also contributed to her fascination with certain aspects of human psychology. She now wants to go into clinical psychology as a career.

I've also known kids who spent huge amounts of time reading—just sitting and reading, "doing nothing!" for maybe 10 hours a day. There were always some kids like that, even when I was a kid. I could never understand why they would want to just sit and read when they could go fishing with me instead. What a waste of time. However, I've never known a parent to limit their kids' reading time. Why is it any better to limit TV or computer time than to limit book-reading time? Why do we worry about a kid's spending maybe 4 or 5 hours a day at a computer screen, doing what he wants to do, but don't worry about the same kid sitting at school for 6 hours a day and then doing homework for another couple of hours—doing what others are forcing him to do? I ask you to consider the possibility that the kid is learning more valuable lessons at the computer than at school, in part because the computer activity is self-chosen and the school activity is not.
Computers are the most important tools of modern society. Why would we limit kids' opportunities to play with them?

Why would we want to limit a kid's computer time? The computer is, without question, the single most important tool of modern society. Our limiting kids' computer time would be like hunter-gatherer adults limiting their kids' bow-and-arrow time. Children come into the world designed to look around and figure out what they need to know in order to make it in the culture into which they are born. They are much better at that than adults are. That's why they learn language so quickly and learn about the real world around them so much faster than adults do. That's why kids of immigrant families pay more attention to the language spoken by their new peers, in the new culture, than to the old language spoken by their parents. That's also why, whenever there's a new technological innovation, kids learn how to use it more quickly than their parents do. They know, instinctively, what they must learn in order to succeed.

Why do we keep hearing warnings from "authorities"—including the American Academy of Pediatricians—that we must limit kids' computer play? Some of the fear mongering comes, I think, from a general tendency on the part of us older folks to distrust any new media. Plato, in The Republic, argued that plays and poetry should be banned because of their harmful effects on the young. When writing came about and became technically easier, and was enthusiastically seized upon by the young, some of their elders warned that this would rot their minds; they would no longer have to exercise their memories. When printed novels became available to the masses, many warned that these would lead the young, especially girls and young women, to moral degeneracy. When televisions began to
The Many Benefits, for Kids, of Playing Video Games
Peter Gray

appear in people's homes, all sorts of dire warnings were sounded about the physical, psychological, and social damage they would cause.

Video games have been under attack by the fear-mongers ever since they first appeared, and the attacks have not diminished. If you Google around the Internet using harmful effects of video games as a search phrase, you will find all sorts of frightening claims. One site warns that video games can cause depression, physical aggression, poor sleep, somatic complaints, obesity, attention disorders, and ... the list went on. The only malady they seemed to have left out was housemaid's knee. The most common complaints about video games are that they (1) are socially isolating, (2) reduce opportunities for outdoor activities and thereby lead to obesity and poor physical health, and (3) promote violence in kids, if the games have violent content. On the face of it, of course, the first two of these claims should be truer of book reading than of video gaming. Concerning the third claim, I don't see any obvious reason why pretend murder of animated characters in video games should be any more likely to provoke real murder than, say, reading Shakespeare's account of Hamlet's murder of his stepfather. Yet we make kids read Hamlet in school.

Research refutes the frightening myths about harmful effects of computer games.
If you look into the actual research literature, you find very little if any evidence supporting the fear-mongers claims, and considerable evidence against those claims. In fact, systematic surveys have shown that regular video-game players are, if anything, more physically fit, less likely to be obese, more likely to also enjoy outdoor play, more socially engaged, more socially well-adjusted, and more civic minded than are their non-gaming peers.[1] A large-scale study in four cities in Holland showed—
contrary to what I assume was the initial hypothesis—that kids who had a computer and/or a television set in their own room were significantly more likely to play outside than were otherwise similar kids who didn’t have such easy and private access to screen play.[2] A study by the Pew Research Center concluded that video games, far from being socially isolating, serve to connect young people with their peers and to society at large.[3] Other research has documented, qualitatively, the many ways that video games promote social interactions and friendships.[4] Kids make friends with other gamers, both in person and online. They talk about their games with one another, teach one another strategies, and often play together, either in the same room or online.

Concerning violence, meta-analyses of the many studies designed to find effects of violent video games on real-world violence have concluded that, taken as a whole, there is precious little or no evidence at all of such effects.[5] It’s interesting, also, to note that over the decades in which violent video gaming has been steadily rising, there has been a steady and large decline in real-world violence by youth.[6] I’m not about to claim that the decline in real-world violence is in any significant way caused by the rise in violent video games, but, there is some evidence that playing such games helps people learn how to control their hostility. In one experiment, college students were presented with a frustrating mental task and then were assessed for their feelings both of depression and hostility. The significant finding was that regular players of violent video games felt less depressed and less hostile 45 minutes after the frustrating experience than did otherwise similar students who didn’t play such games.[7]
I have to admit that I personally hate graphic depictions of violence, in games or anywhere else, but I claim no moral virtue in that. I'm just squeamish. My wife and step-kids, who are every bit as nonviolent in real life as I am, tease me about it. They talk about screening movies for me, and they have gotten used to going to certain movies without me.

**Video games have been shown to have many positive effects on brainpower.**
Quite a few well-controlled research studies have documented positive effects of video games on mental development. Repeated experiments have shown that playing fast-paced action video games can quite markedly increase players' scores on tests of visuospatial ability, including tests that are used as components of standard IQ tests.[8] Other studies suggest that, depending on the type of game, video games can also increase scores on measures of working memory (the ability to hold several items of information in mind at once), critical thinking, and problem solving.[9] In addition, there is growing evidence that kids who previously showed little interest in reading and writing are now acquiring advanced literacy skills through the text-based communication in online video games.[10]

When kids are asked, in focus groups and surveys, what they like about video games, they generally talk about freedom, self-direction, and competence.[11] In the game, they make their own decisions and strive to meet challenges that they themselves have chosen. At school and in other adult-dominated contexts they may be treated as idiots who need constant direction, but in the game they
are in charge and can solve difficult problems and exhibit extraordinary skills. In the game, age does not matter, but skill does. In these ways, video games are like all other forms of true play.

**The special benefits of MMORPGs**

Over time, video games have become increasingly complex and multifaceted. Perhaps the most interesting games today are the so-called Massively Multiplayer Online Role Playing Games (MMORPGs), such as *World of Warcraft*, which are even more social than were previous video games and offer endless opportunities for creativity and problem solving.[12]

In these online games, players create a character (an avatar), which has unique physical and psychological traits and assets, and, with that character, enter a complex and exciting virtual world that is simultaneously occupied by countless other players, who in their real-life forms may be sitting anywhere on the planet. Players go on quests within this virtual world, and along the way they meet other players, who might become friends or foes. Players may start off playing solo, avoiding others, but to advance to the higher levels they have to make friends and join with others in mutual quests. Making friends within the game requires essentially the same skills as making friends in the real world. You can't be rude. You have to understand the etiquette of the culture you are in and abide by that etiquette. You have to learn about the goals of a potential friend and help that individual to achieve those goals. Depending on how you behave, players may put you on their *friends* list or their *ignore* list, and they may communicate positive or negative information about you to other
The Many Benefits, for Kids, of Playing Video Games
By Peter Gray

players. The games offer players endless opportunities to experiment with different personalities and ways of behaving, in a fantasy world where there are no real-life consequences for failing.

Players in these games can also join special-interest groups called guilds. To join a guild, a player (or, more accurately, the player's avatar) must fill out an application form, much like a job application, explaining why he or she would be a valuable member. Guilds generally have structures that are similar to companies in the real world, with leaders, executive boards, and even recruitment personnel. Such games are, in many ways, like the imaginative sociodramatic games of preschool children, but played in a virtual world, with communication by online text, and raised up many notches in sophistication to fit the interests and abilities of the older children, teenagers, and adults who play them. Like all sociodramatic games, they are very much anchored in an understanding of the real world, and they exercise concepts and social skills that are quite relevant to that world. In fact, a study commissioned by the IBM Corporation concluded that the leadership skills exercised within MMORPGs are essentially the same as those required to run a modern company.[13]

Used with permission by Peter Gray.

*Peter Gray is a research professor of psychology at Boston College and author of the recent book Free to Learn: Why Unleashing the Instinct to Play Will Make Our Children Happier, More Self-Reliant, and Better Students for Life.
Which of these criteria describe all good research questions?

a. relevant  
b. long  
c. specific  
d. answerable  
e. complicated  
f. broad
Entry Task, Lesson 5

Name:

Date:

Answer these questions in a few brief sentences:

What is a consequence?

When have you or someone you know experienced a consequence in your life? What was it?
Children could be better off playing video games this holiday season than watching television, a QUT (Queensland University of Technology) study shows.

Dr. Penny Sweetser, Dr. Daniel Johnson and Dr. Peta Wyeth, from QUT's Games Research and Interaction Design (GRID) Lab, investigated the amount of time children spent watching television and DVDs compared to video game and computer use.

The paper, “Active versus Passive Screen Time for Young Children,” published in the *Australian Journal for Early Childhood*, showed the majority of children aged two to five exceeded government recommendations of a maximum of one hour of “screen time” per day.

Their analysis of data from the Longitudinal Study of Australian Children found children in this age group spent, on average, some two to three hours watching television compared to less than a half hour playing video games or using computers.

Dr. Johnson said while watching television was a “passive” experience, video and computer games were interactive, with research showing it boosted children's self-esteem, cognitive skills such as problem-solving and, in some cases, physical activity levels.

“There is a lot of negative press about gaming and that's not well-supported. Where there is a negative effect, research shows it's on the minority of people," he said.

"Video games are a mainstream pastime. More than 92 percent of Australian homes have at least one device for playing video games.

"Emerging research has shown that active video games such as Nintendo Wii, Sony PlayStation Move, and the Xbox Kinect can be used to motivate young children to exercise and be more active outside of the game setting."

Dr. Sweetser said computer use and video game play should not be classed as the same type of activity as watching television.

She said screen-time recommendations, which are based on the sum of all screen-related activities, should be divided into two categories, active and passive screen time.

The research found active screen time involved cognitively or physically engaging screen-based activities, such as playing video games or completing homework on a computer.
"This distinction provides a more accurate classification of screen time and a better lens through which to consider the benefits and detrimental effects for young children," she said.

Dr. Sweetser said parents should monitor the amount of time and type of games children play on game consoles and computers.

"Clearly, certain forms of media such as violent video games are not appropriate for children, and games should be played in moderation," she said.
Read the quote from “Gaming Can Make a Better World” below. Then, on the lines below, paraphrase the excerpt in your own words.

“Gamers love to be attached to awe-inspired missions.”
Complete this statement in your own words:

When you contrast two things, it means that you are ...
Common claim: Playing video games has benefits for the players and their world.

Evidence ONLY from the video  Evidence from BOTH the video and the article  Evidence ONLY from the article
# Four Types of Evidence/Identify the Evidence Note-catcher

## Side A

**Name:**

**Date:**

<table>
<thead>
<tr>
<th>Type of Evidence</th>
<th>Definition</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>anecdote</td>
<td>a brief story about something interesting or funny in real life that may give an example of the author's claim or serve as evidence for a claim</td>
<td>“There’s a reason World of Warcraft gamers play 22 hours a week.... It’s because we know we are happier working hard than just ‘relaxing’ or ‘hanging out.’”</td>
</tr>
<tr>
<td>analogy/metaphor</td>
<td>a comparison between two things that allows the reader to understand the author’s evidence or claim in a clear way</td>
<td>“Gamers are virtuosos at weaving a tight social fabric.”</td>
</tr>
<tr>
<td>fact/statistic</td>
<td>a piece of information about something, presented as true and accurate, that supports the author’s claim. A statistic specifically counts something by number.</td>
<td>10,000 hours of game play by the age of 21</td>
</tr>
<tr>
<td>expert testimony</td>
<td>a statement that supports the author’s claim, made by a person with special skill or knowledge</td>
<td>“There is a lot of negative press about gaming and that’s not well-supported. Where there is a negative effect, research shows it’s on the minority of people,” Dr. Johnson said.</td>
</tr>
</tbody>
</table>
Identify the Evidence Mini-Game:
Below are four examples of evidence. Label each with the correct type.

“Research indicates that we like someone better after we’ve played a game with them.”

“So what do these four superpowers of gamers add up to?”

“Some of you may have heard of Malcolm Gladwell’s book, Outliers. So you would have heard of his theory of success.”

“This is a portrait by a photographer named Phil Toledano. He wanted to capture the emotion of gaming, so he set up a camera in front of gamers while they were playing.”
<table>
<thead>
<tr>
<th>Question</th>
<th>Video</th>
<th>Article</th>
</tr>
</thead>
<tbody>
<tr>
<td>What types of evidence are used the most?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What types of evidence are used the least?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you see any other patterns in the types of evidence used?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Why do you think the author chose the evidence he/she did?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Go ahead—check those notifications. According to a new pilot study conducted by Dr. Alice Good of the University of Portsmouth, the vast majority of Facebook users use the social network to lift their spirits when they’re feeling down by navigating their old photos and wall posts in which they’ve interacted with family and friends—a “self-soothing” coping mechanism somewhat akin to flipping through a photo album or watching old home videos.

Researchers argue that that could be a big boost for users who are prone to anxiety or depression by providing a healthy emotional conduit for reminiscing about the good times in one’s life. The findings also shed new light into what, exactly, users are looking to achieve when they use social media to share their feelings and experiences:

Psychologist Dr. Clare Wilson, also of the University of Portsmouth, said: “Although this is a pilot study, these findings are fascinating.

“Facebook is marketed as a means of communicating with others. Yet this research shows we are more likely to use it to connect with our past selves, perhaps when our present selves need reassuring.

“The pictures we often post are reminders of a positive past event. When in the grip of a negative mood, it is too easy to forget how good we often feel. Our positive posts can remind us of this.”

Dr. Good’s study has concluded that looking at comforting photos, known as reminiscent therapy, could be an effective method of treating mental health. [...] 

The act of self-soothing is an essential tool in helping people to calm down, especially if they have an existing mental health condition.

The findings are particularly interesting given past studies that have indicated that Facebook users end up feeling depressed after a browsing session. For instance, one German study found that “one in three people felt worse after visiting the site and more dissatisfied with their lives, while people who browsed without contributing were affected the most.”
But those findings derived from users’ envy at their friends’ vacations, life milestones, and various successes. The new preliminary data from Dr. Good’s study suggests that, used in a different way—i.e., actively “self-soothing” rather than passively sulking—browsing through one’s Facebook history could be a net benefit. And that could be very good news from a global mental health perspective for the social network, which has over a billion users worldwide and counting.
The article “Why Facebook Could Actually Be Good for Your Mental Health” states: “The vast majority of Facebook users use the social network to lift their spirits when they’re feeling down by navigating their old photos and wall posts in which they’ve interacted with family and friends—a ‘self-soothing’ coping mechanism somewhat akin to flipping through a photo album or watching old home videos.”

1. What do you think the word *akin* means in this context? Write your ideas below:

2. Now look up the word *akin* in a dictionary. Potentially there will be several different definitions. Read all of them, then select what you think is the best definition for this context.

3. Write the definition you chose here:

4. Explain how you determined that this is the correct definition:
SAN FRANCISCO—When one of the most important e-mail messages of his life landed in his in-box a few years ago, Kord Campbell overlooked it. Not just for a day or two, but 12 days. He finally saw it while sifting through old messages: a big company wanted to buy his Internet start-up.

“I stood up from my desk and said, ‘Oh my God, oh my God, oh my God,’” Mr. Campbell said. “It’s kind of hard to miss an e-mail like that, but I did.”

The message had slipped by him amid an electronic flood: two computer screens alive with e-mail, instant messages, online chats, a Web browser and the computer code he was writing. (While he managed to salvage the $1.3 million deal after apologizing to his suitor, Mr. Campbell continues to struggle with the effects of the deluge of data. Even after he unplugs, he craves the stimulation he gets from his electronic gadgets. He forgets things like dinner plans, and he has trouble focusing on his family.

His wife, Brenda, complains, “It seems like he can no longer be fully in the moment.”

This is your brain on computers.

Scientists say juggling e-mail, phone calls and other incoming information can change how people think and behave. They say our ability to focus is being undermined by bursts of information.

These play to a primitive impulse to respond to immediate opportunities and threats. The stimulation provokes excitement—a dopamine squirt—that researchers say can be addictive. In its absence, people feel bored.

The resulting distractions can have deadly consequences, as when cellphone-wielding drivers and train engineers cause wrecks. And for millions of people like Mr. Campbell, these urges can inflict nicks and cuts on creativity and deep thought, interrupting work and family life.

While many people say multitasking makes them more productive, research shows otherwise. Heavy multitaskers actually have more trouble focusing and shutting out irrelevant information, scientists say, and they experience more stress.
And scientists are discovering that even after the multitasking ends, fractured thinking and lack of focus persist. In other words, this is also your brain off computers.

“The technology is rewiring our brains,” said Nora Volkow, director of the National Institute of Drug Abuse and one of the world’s leading brain scientists. She and other researchers compare the lure of digital stimulation less to that of drugs and alcohol than to food and sex, which are essential but counterproductive in excess.

Technology use can benefit the brain in some ways, researchers say. Imaging studies show the brains of Internet users become more efficient at finding information. And players of some video games develop better visual acuity.

More broadly, cellphones and computers have transformed life. They let people escape their cubicles and work anywhere. They shrink distances and handle countless mundane tasks, freeing up time for more exciting pursuits.

For better or worse, the consumption of media, as varied as e-mail and TV, has exploded. In 2008, people consumed three times as much information each day as they did in 1960. And they are constantly shifting their attention. Computer users at work change windows or check e-mail or other programs nearly 37 times an hour, new research shows.

The nonstop interactivity is one of the most significant shifts ever in the human environment, said Adam Gazzaley, a neuroscientist at the University of California, San Francisco. “We are exposing our brains to an environment and asking them to do things we weren’t necessarily evolved to do,” he said. “We know already there are consequences.”

Mr. Campbell, 43, came of age with the personal computer, and he is a heavier user of technology than most. But researchers say the habits and struggles of Mr. Campbell and his family typify what many experience—and what many more will, if trends continue.

For him, the tensions feel increasingly acute, and the effects harder to shake.
Attached to Technology and Paying the Price

The Campbells recently moved to California from Oklahoma to start a software venture. Mr. Campbell’s life revolves around computers. (He goes to sleep with a laptop or iPhone on his chest, and when he wakes, he goes online. He and Mrs. Campbell, 39, head to the tidy kitchen in their four-bedroom hillside rental in Orinda, an affluent suburb of San Francisco, where she makes breakfast and watches a TV news feed in the corner of the computer screen while he uses the rest of the monitor to check his e-mail.

Major spats have arisen because Mr. Campbell escapes into video games during tough emotional stretches. On family vacations, he has trouble putting down his devices. When he rides the subway to San Francisco, he knows he will be offline 221 seconds as the train goes through a tunnel.

Their 16-year-old son, Connor, tall and polite like his father, recently received his first C’s, which his family blames on distraction from his gadgets. Their 8-year-old daughter, Lily, like her mother, playfully tells her father that he favors technology over family.

“I would love for him to totally unplug, to be totally engaged,” says Mrs. Campbell, who adds that he becomes “crotchety until he gets his fix.” But she would not try to force a change.

“He loves it. Technology is part of the fabric of who he is,” she says. “If I hated technology, I’d be hating him, and a part of who my son is too.”

Always On

Mr. Campbell, whose given name is Thomas, had an early start with technology in Oklahoma City. When he was in third grade, his parents bought him Pong, a video game. Then came a string of game consoles and PCs, which he learned to program.

In high school, he balanced computers, basketball and a romance with Brenda, a cheerleader with a gorgeous singing voice. He studied too, with focus, uninterrupted by e-mail. “I did my homework because I needed to get it done,” he said. “I didn’t have anything else to do.”

He left college to help with a family business, then set up a lawn mowing service. At night he would read, play video games, hang out with Brenda and, as she remembers it, “talk a lot more.”

In 1996, he started a successful Internet provider. Then he built the start-up that he sold for $1.3 million in 2003 to LookSmart, a search engine.
Mr. Campbell loves the rush of modern life and keeping up with the latest information. “I want to be the first to hear when the aliens land,” he said, laughing. But other times, he fantasizes about living in pioneer days when things moved more slowly: “I can’t keep everything in my head.”

No wonder. As he came of age, so did a new era of data and communication.

At home, people consume 12 hours of media a day on average, when an hour spent with, say, the Internet and TV simultaneously counts as two hours. That compares with five hours in 1960, say researchers at the University of California, San Diego. Computer users visit an average of 40 Web sites a day, according to research by RescueTime, which offers time-management tools.

As computers have changed, so has the understanding of the human brain. Until 15 years ago, scientists thought the brain stopped developing after childhood. Now they understand that its neural networks continue to develop, influenced by things like learning skills.

So not long after Eyal Ophir arrived at Stanford in 2004, he wondered whether heavy multitasking might be leading to changes in a characteristic of the brain long thought immutable: that humans can process only a single stream of information at a time.

Going back a half-century, tests had shown that the brain could barely process two streams, and could not simultaneously make decisions about them. But Mr. Ophir, a student-turned-researcher, thought multitaskers might be rewiring themselves to handle the load.

His passion was personal. He had spent seven years in Israeli intelligence after being weeded out of the air force—partly, he felt, because he was not a good multitasker. Could his brain be retrained?

Mr. Ophir, like others around the country studying how technology bent the brain, was startled by what he discovered.

The Myth of Multitasking

The test subjects were divided into two groups: those classified as heavy multitaskers based on their answers to questions about how they used technology, and those who were not.
Attached to Technology and Paying the Price

In a test created by Mr. Ophir and his colleagues, subjects at a computer were briefly shown an image of red rectangles. Then they saw a similar image and were asked whether any of the rectangles had moved. It was a simple task until the addition of a twist: blue rectangles were added, and the subjects were told to ignore them. (The multitaskers then did a significantly worse job than the non-multitaskers at recognizing whether red rectangles had changed position. In other words, they had trouble filtering out the blue ones—the irrelevant information.

So, too, the multitaskers took longer than non-multitaskers to switch among tasks, like differentiating vowels from consonants and then odd from even numbers. The multitaskers were shown to be less efficient at juggling problems. (Other tests at Stanford, an important center for research in this fast-growing field, showed multitaskers tended to search for new information rather than accept a reward for putting older, more valuable information to work.

Researchers say these findings point to an interesting dynamic: multitaskers seem more sensitive than non-multitaskers to incoming information.

The results also illustrate an age-old conflict in the brain, one that technology may be intensifying. A portion of the brain acts as a control tower, helping a person focus and set priorities. More primitive parts of the brain, like those that process sight and sound, demand that it pay attention to new information, bombarding the control tower when they are stimulated.

Researchers say there is an evolutionary rationale for the pressure this barrage puts on the brain. The lower-brain functions alert humans to danger, like a nearby lion, overriding goals like building a hut. In the modern world, the chime of incoming e-mail can override the goal of writing a business plan or playing catch with the children.

“Throughout evolutionary history, a big surprise would get everyone’s brain thinking,” said Clifford Nass, a communications professor at Stanford. “But we’ve got a large and growing group of people who think the slightest hint that something interesting might be going on is like catnip. They can’t ignore it.”

Mr. Nass says the Stanford studies are important because they show multitasking’s lingering effects: “The scary part for guys like Kord is, they can’t shut off their multitasking tendencies when they’re not multitasking.”
Attached to Technology and Paying the Price

Melina Uncapher, a neurobiologist on the Stanford team, said she and other researchers were unsure whether the muddied multitaskers were simply prone to distraction and would have had trouble focusing in any era. But she added that the idea that information overload causes distraction was supported by more and more research.

A study at the University of California, Irvine, found that people interrupted by e-mail reported significantly increased stress compared with those left to focus. Stress hormones have been shown to reduce short-term memory, said Gary Small, a psychiatrist at the University of California, Los Angeles.

Preliminary research shows some people can more easily juggle multiple information streams. These “supertaskers” represent less than 3 percent of the population, according to scientists at the University of Utah.

Other research shows computer use has neurological advantages. In imaging studies, Dr. Small observed that Internet users showed greater brain activity than nonusers, suggesting they were growing their neural circuitry.

At the University of Rochester, researchers found that players of some fast-paced video games can track the movement of a third more objects on a screen than nonplayers. They say the games can improve reaction and the ability to pick out details amid clutter.

“In a sense, those games have a very strong both rehabilitative and educational power,” said the lead researcher, Daphne Bavelier, who is working with others in the field to channel these changes into real-world benefits like safer driving.

There is a vibrant debate among scientists over whether technology’s influence on behavior and the brain is good or bad, and how significant it is.

“The bottom line is, the brain is wired to adapt,” said Steven Yantis, a professor of brain sciences at Johns Hopkins University. “There’s no question that rewiring goes on all the time,” he added. But he said it was too early to say whether the changes caused by technology were materially different from others in the past.

Mr. Ophir is loath to call the cognitive changes bad or good, though the impact on analysis and creativity worries him.
He is not just worried about other people. Shortly after he came to Stanford, a professor thanked him for being the one student in class paying full attention and not using a computer or phone. But he recently began using an iPhone and noticed a change; he felt its pull, even when playing with his daughter.

“The media is changing me,” he said. “I hear this internal ping that says: check e-mail and voice mail.”

“I have to work to suppress it.”

Kord Campbell does not bother to suppress it, or no longer can.

**Interrupted by a Corpse**

It is a Wednesday in April, and in 10 minutes, Mr. Campbell has an online conference call that could determine the fate of his new venture, called Loggly. It makes software that helps companies understand the clicking and buying patterns of their online customers.

Mr. Campbell and his colleagues, each working from a home office, are frantically trying to set up a program that will let them share images with executives at their prospective partner.

But at the moment when Mr. Campbell most needs to focus on that urgent task, something else competes for his attention: “Man Found Dead Inside His Business.”

That is the tweet that appears on the left-most of Mr. Campbell’s array of monitors, which he has expanded to three screens, at times adding a laptop and an iPad.

On the left screen, Mr. Campbell follows the tweets of 1,100 people, along with instant messages and group chats. The middle monitor displays a dark field filled with computer code, along with Skype, a service that allows Mr. Campbell to talk to his colleagues, sometimes using video. The monitor on the right keeps e-mail, a calendar, a Web browser and a music player.

Even with the meeting fast approaching, Mr. Campbell cannot resist the tweet about the corpse. He clicks on the link in it, glances at the article and dismisses it. “It’s some article about something somewhere,” he says, annoyed by the ads for jeans popping up.

The program gets fixed, and the meeting turns out to be fruitful: the partners are ready to do business. A colleague says via instant message: “YES.”
Other times, Mr. Campbell’s information juggling has taken a more serious toll. A few weeks earlier, he once again overlooked an e-mail message from a prospective investor. Another time, Mr. Campbell signed the company up for the wrong type of business account on Amazon.com, costing $300 a month for six months before he got around to correcting it. He has burned hamburgers on the grill, forgotten to pick up the children and lingered in the bathroom playing video games on an iPhone.

Mr. Campbell can be unaware of his own habits. In a two-and-a-half hour stretch one recent morning, he switched rapidly between e-mail and several other programs, according to data from RescueTime, which monitored his computer use with his permission. But when asked later what he was doing in that period, Mr. Campbell said he had been on a long Skype call, and “may have pulled up an e-mail or two.”

The kind of disconnection Mr. Campbell experiences is not an entirely new problem, of course. As they did in earlier eras, people can become so lost in work, hobbies or TV that they fail to pay attention to family.

Mr. Campbell concedes that, even without technology, he may work or play obsessively, just as his father immersed himself in crossword puzzles. But he says this era is different because he can multitask anyplace, anytime.

“It’s a mixed blessing,” he said. “If you’re not careful, your marriage can fall apart or your kids can be ready to play and you’ll get distracted.”

**The Toll on Children**

Father and son sit in armchairs. Controllers in hand, they engage in a fierce video game battle, displayed on the nearby flat-panel TV, as Lily watches.

They are playing Super Smash Bros. Brawl, a cartoonish animated fight between characters that battle using anvils, explosives and other weapons.

“Kill him, Dad,” Lily screams. To no avail. Connor regularly beats his father, prompting expletives and, once, a thrown pillow. But there is bonding and mutual respect.

“He’s a lot more tactical,” says Connor. “But I’m really good at quick reflexes.”
Attached to Technology and Paying the Price

Screens big and small are central to the Campbell family’s leisure time. Connor and his mother relax while watching TV shows like “Heroes.” Lily has an iPod Touch, a portable DVD player and her own laptop, which she uses to watch videos, listen to music and play games.

Lily, a second-grader, is allowed only an hour a day of unstructured time, which she often spends with her devices. The laptop can consume her.

“When she’s on it, you can holler her name all day and she won’t hear,” Mrs. Campbell said.

Researchers worry that constant digital stimulation like this creates attention problems for children with brains that are still developing, who already struggle to set priorities and resist impulses.

Connor’s troubles started late last year. He could not focus on homework. No wonder, perhaps. On his bedroom desk sit two monitors, one with his music collection, one with Facebook and Reddit, a social site with news links that he and his father love. His iPhone availed him to relentless texting with his girlfriend.

When he studied, “a little voice would be saying, ‘Look up’ at the computer, and I’d look up,” Connor said. “Normally, I’d say I want to only read for a few minutes, but I’d search every corner of Reddit and then check Facebook.”

His Web browsing informs him. “He’s a fact hound,” Mr. Campbell brags. “Connor is, other than programming, extremely technical. He’s 100 percent Internet savvy.”

But the parents worry too. “Connor is obsessed,” his mother said. “Kord says we have to teach him balance.”

So in January, they held a family meeting. Study time now takes place in a group setting at the dinner table after everyone has finished eating. It feels, Mr. Campbell says, like togetherness.

No Vacations

For spring break, the family rented a cottage in Carmel, Calif. Mrs. Campbell hoped everyone would unplug.
But the day before they left, the iPad from Apple came out, and Mr. Campbell snapped one up. The next night, their first on vacation, “We didn’t go out to dinner,” Mrs. Campbell mourned. “We just sat there on our devices.”

She rallied the troops the next day to the aquarium. Her husband joined them for a bit but then begged out to do e-mail on his phone.

Later she found him playing video games.

The trip came as Mr. Campbell was trying to raise several million dollars for his new venture, a goal that he achieved. Brenda said she understood that his pursuit required intensity but was less understanding of the accompanying surge in video game use.

His behavior brought about a discussion between them. Mrs. Campbell said he told her that he was capable of logging off, citing a trip to Hawaii several years ago that they called their second honeymoon.

“What trip are you thinking about?” she said she asked him. She recalled that he had spent two hours a day online in the hotel’s business center.

On Thursday, their fourth day in Carmel, Mr. Campbell spent the day at the beach with his family. They flew a kite and played whiffle ball.

Connor unplugged too. “It changes the mood of everything when everybody is present,” Mrs. Campbell said.

The next day, the family drove home, and Mr. Campbell disappeared into his office.

Technology use is growing for Mrs. Campbell as well. She divides her time between keeping the books of her husband’s company, homemaking and working at the school library. She checks e-mail 25 times a day, sends texts and uses Facebook.

Recently, she was baking peanut butter cookies for Teacher Appreciation Day when her phone chimed in the living room. She answered a text, then became lost in Facebook, forgot about the cookies and burned them. She started a new batch, but heard the phone again, got lost in messaging, and burned those too. Out of ingredients and shamed, she bought cookies at the store.
Attached to Technology and Paying the Price

She feels less focused and has trouble completing projects. Some days, she promises herself she will ignore her device. “It’s like a diet—you have good intentions in the morning and then you’re like, ‘There went that,’” she said.

Mr. Nass at Stanford thinks the ultimate risk of heavy technology use is that it diminishes empathy by limiting how much people engage with one another, even in the same room.

“The way we become more human is by paying attention to each other,” he said. “It shows how much you care.”

That empathy, Mr. Nass said, is essential to the human condition. “We are at an inflection point,” he said. “A significant fraction of people’s experiences are now fragmented.”

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Text-Dependent Questions:
“Attached to Technology and Paying the Price”

Name:  
Date:  

<table>
<thead>
<tr>
<th>Questions</th>
<th>Answers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Guessing from context and using your resources, determine what the word <em>priorities</em> might mean.</td>
<td></td>
</tr>
<tr>
<td>2. How do the researchers’ concerns voiced here connect with what you have learned about the teen brain?</td>
<td></td>
</tr>
<tr>
<td>3. What were some of the consequences of Connor’s use of technology?</td>
<td></td>
</tr>
</tbody>
</table>
Common Claim:

- Evidence ONLY from Video
- Evidence in BOTH
- Evidence ONLY from Article
What search terms would you type in if you were researching this question: “How much screen time does the average American teenager have in his/her day?”

<table>
<thead>
<tr>
<th>Search Term 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Search Term 2</td>
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<tr>
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<td>Search Term 3</td>
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<td>Search Term 4</td>
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<td>Search Term 5</td>
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<td>Search Term 6</td>
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<td>Search Term 7</td>
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<td>Search Term 8</td>
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<tr>
<td></td>
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<tr>
<td>Search Term 9</td>
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<tr>
<td></td>
</tr>
</tbody>
</table>
Title of Independent Reading
Book:

FICTION: Below, write a few sentences about how the actions of a character in your book might reflect the brain science we have learned about so far. Use specific examples from the text.

NON-FICTION: Below, write a few sentences about how an event or information in your book might reflect the concept of consequences. Use specific examples from the text.
<table>
<thead>
<tr>
<th>I have the first card ...</th>
<th>I have a claim.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who has a statement in an argument that something is true?</td>
<td>Who has evidence that relates to the claim, proves the point, and supports an argument?</td>
</tr>
<tr>
<td>I have relevant evidence.</td>
<td>I have assess whether it is strong and successful at proving its claim.</td>
</tr>
<tr>
<td>Who has how to evaluate an argument?</td>
<td>Who has enough evidence to prove the claim?</td>
</tr>
<tr>
<td>I have sufficient evidence.</td>
<td>I have sound reasoning.</td>
</tr>
<tr>
<td>Who has reasoning that makes sense and is logical?</td>
<td>Who has the first card?</td>
</tr>
</tbody>
</table>
Long-Term Learning Targets Assessed:

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

Part A: Delineating and Evaluating a Speaker’s Argument

1. Watch the video two times and checkmark any details it mentions.
   - Neuroplasticity is not related to how our brains respond to screen time.
   - The ability to pay “deep attention” activates our critical thinking and conceptual knowledge.
   - If we spend too much time online, we lose the ability to read.
   - Even as adults, our brains are plastic: We can train them to respond in certain ways.
   - It is certain that technology will evolve to help us concentrate, instead of making concentration more difficult.
   - When we spend too much time online, we are not exercising our ability to pay “deep attention.”
   - Our brains are “plastic” when we are children, but not as adults.
   - Technology encourages us to shift our attention quickly and sort through bits of information at a rapid pace.
   - As we spend more and more time online, our brains are trained to have shorter attention spans.
   - The iPad is destroying our children’s ability to concentrate.

2. Watch the video again and write the central claim that you think the author is trying to make and support with evidence.

   Claim:
3. Write three pieces of evidence the author uses. Then respond to whether that particular piece of evidence is relevant to the claim and why or why not.

<table>
<thead>
<tr>
<th>Supporting Evidence 1</th>
<th>Supporting Evidence 2</th>
<th>Supporting Evidence 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


4. Does the author provide sufficient evidence? Explain why or why not.


5. Was the reasoning sound? Explain why or why not.
Part B: Delineating and Evaluating a Writer’s Argument

Text: “Can You Unplug for 24 Hours?”

6. Read and think closely about the text. Then, mark the central claim that you think the author is trying to make and support with evidence.
   - Unplugging allows us to regain and reinforce necessary human relationships.
   - We should only take breaks once in a while from technology.
   - Unplugging allows us to enjoy more physical activities, like skiing.
   - It is extremely difficult to turn off all our technological devices.

7. Write three pieces of evidence the author uses to support her claim and tell whether the evidence is relevant and sufficient and whether the argument is sound.

<table>
<thead>
<tr>
<th>Supporting Evidence 1</th>
<th>Supporting Evidence 2</th>
<th>Supporting Evidence 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


8. Does the author provide sufficient evidence? Explain why or why not.
9. Was the reasoning sound? Explain why or why not.
Can You Unplug for 24 Hours?

by: Heidi Sinclair

I asked my 17-year-old son this the other night. At first he said "no way." Then he thought about it and said "yes, because it is Friday night to Saturday night and I don't need to go on the Internet for school." But when I said it meant texting too, he balked. "I could never do that!"

I make my living promoting technology, but I am going to unplug. My husband is going to unplug and I am hoping my children can figure out how to unplug in order to experience the third annual National Day of Unplugging fully. I am going on Facebook and Twitter to encourage everyone in my community to take the causes.com pledge. We need a break, we need to unplug and get to know ourselves and one another—the real us.

The National Day of Unplugging was created by Reboot, a non-profit organization that encourages the hyper-connected to take a respite from all things digital, to leave the virtual world and get real.

Getting real and having real relationships in our digitally connected lives was the topic of avowed technologist Sherry Turkle at TED last month. Sherry spent the past fifteen years studying the effect of personal technology devices on adults and teenagers, then wrote about it in her powerful book Alone Together. What she discovered is that by letting technology into our lives in an unbounded fashion, we are not only losing the art of conversation and the ability to truly relate to one another, we are losing our emotional lives. Sherry says the answer is in putting the technology in its place: to unplug, to use it to facilitate intimacy, not replace it. It is time for all of us to unplug for one day. Here is how I plan to spend those 24 hours:

Friday night, I am going to go to dinner with my husband, and if we get lost going to the restaurant, well then maybe we will discover something new. We'll come home and play cards. I will beat my husband, again. I won't check my email or texts in the middle of dinner or before I go to bed. My phones, my tablet, my computer will be turned off.

I think we'll go skiing on Saturday and we won't check the snow report every 20 minutes. We'll see what comes our way. I won't stop mid-run and answer the phone like I did last time I skied, only to have some guy shoot down that unpatched line of powder I had my eye on.
Saturday evening, we'll take supper over to my parents. My dad is battling multiple myeloma and I cherish a quiet evening to rehash the week together more than anything. Come Sunday, I am thinking I will not rush to turn on again. I will ease slowly back into that busy, frenetic world that lies just at my fingertips.

Mid-Unit 2 Assessment, Part 2: Simulated Research Task:
Screen Time

**Long-Term Learning Targets Assessed:**
- I can contrast how multiple authors emphasize evidence or interpret facts differently when presenting information on the same topic. (RI.7.9)
- I can conduct short research projects to answer a question. (W.7.7)
- I can generate additional questions for further research. (W.7.7)
- I can gather relevant information from a variety of sources. (W.7.8)
- I can use search terms effectively. (W.7.8)
- I can evaluate the credibility and accuracy of each source. (W.7.8)
- I can quote or paraphrase others’ work while avoiding plagiarism. (W.7.8)
- I can use a variety of strategies to determine the meaning of unknown words or phrases. (L.7.4)
Directions: Fill out the graphic organizer based on “Guest Opinion: Step Away from the Screen.”

<table>
<thead>
<tr>
<th>Name of Text: “Guest Opinion: Step Away from the Screen”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author/Speaker’s Name: Margaret Desler</td>
</tr>
<tr>
<td>Claim: Engaging in “screen-free” time has many benefits.</td>
</tr>
<tr>
<td>Supporting Evidence 1</td>
</tr>
<tr>
<td>What type of evidence is this? (Circle one)</td>
</tr>
<tr>
<td>anecdote</td>
</tr>
<tr>
<td>analogy/metaphor</td>
</tr>
<tr>
<td>fact/statistic</td>
</tr>
<tr>
<td>testimony</td>
</tr>
</tbody>
</table>
1. In “Guest Opinion: Step Away from the Screen,” Margaret Desler uses which evidence to support her claim? (Circle all that apply.) (RI.7.9)

   a. Current television programming for kids is of low quality.
   
   b. Creativity is limited by too much screen time.
   
   c. Screen time for children under three is linked to poor impulse control.
   
   d. Increased screen time is linked to childhood obesity.
2. Briefly **paraphrase** this excerpt from Margaret Desler’s “Guest Opinion: Step Away from the Screen.”

“For older children, screen time not only exposes them to a slew of fast food and snack food ads, it replaces time that used to be spent running around and playing.”

Use the sentence stems from your researcher’s notebook, below. (W.7.8)

<table>
<thead>
<tr>
<th>According to +</th>
<th>source</th>
<th>+ paraphrased fact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source +</td>
<td>writes illustrates notes observes states reports claims</td>
<td>+ paraphrased fact</td>
</tr>
</tbody>
</table>
3. Reread the following sentence from “Guest Opinion: Step Away from the Screen,” then answer the questions that follow. (L.7.4)

“The Campaign for a Commercial-Free Childhood has compiled an eye-opening list of research statistics on screen time and children.”

<table>
<thead>
<tr>
<th>1. What is your initial idea of the meaning of the word compiled?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. What strategy did you use to determine an initial meaning for this word?</td>
</tr>
<tr>
<td>3. Look this word up in a reference. What is the definition of this word?</td>
</tr>
</tbody>
</table>
4. List two pieces of information from each source that would help you answer the question: “Should the AAP raise the recommended daily entertainment screen time from two hours to four hours?” (W.7.8)

<table>
<thead>
<tr>
<th>“Can You Unplug for 24 Hours?”</th>
<th>1.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.</td>
</tr>
<tr>
<td>“Guest Opinion: Step Away from the Screen”</td>
<td>1.</td>
</tr>
<tr>
<td></td>
<td>2.</td>
</tr>
</tbody>
</table>
5. Use the Venn diagram below to compare and contrast how Sinclair and Desler use evidence to support their claims about screen time. (RI.7.9)

“Can You Unplug for 24 Hours?”

“Step Away from the Screen”
6. To find more information about the effects of screen time on the developing brains of children, which of these sources would most likely be accessible, credible, and relevant? (W.7.8) (Circle all that apply.)
   a. A blog about screen time written by a college student
   b. A brochure published by the Unplug Forever Campaign
   c. An article from an educational magazine focused on the effects of screen time
   d. A book published by a neurology professor

Please explain your choice, keeping in mind the likely accessibility, credibility, and relevancy of the source.

7. To find more information to answer the question: “Should the AAP raise the recommended daily entertainment screen time from two hours to four hours?” which of these would be good search terms? (Circle all that apply.) (W.7.8)
   a. Adolescent neurology
   b. Video games
   c. Education screen time
   d. Computers
   e. Screen time effects on the brain
8. Based on the excerpts from “Can You Unplug for 24 Hours?” and “Guest Opinion: Step Away from the Screen,” write two additional supporting research questions. (W.7.7)

1. 

2. 

9. Based on **these two texts**, how would you answer the question: “Should the AAP raise the recommended daily entertainment screen time from two hours to four hours?”

   Use evidence from the texts to support your answer. (W.7.7). ( 
"Guest Opinion: Step Away from the Screen"
Margaret Desler
Contra Costa Times

About this time every spring, parents and children across the country take part in a healthy challenge. They pledge to step away from entertainment found on televisions, hand-held devices, and computer screens—and rediscover the joys of entertaining themselves. They play board games, read out loud, take walks, or cook a family meal together. They agree to be screen-free for one week.

This year's Screen-Free Week runs April 29 through May 5, but the Campaign for a Commercial-Free Childhood (which organizes the annual event) hopes the effects of the week will last year-round.

As a pediatrician at the Kaiser Permanente Medical Center in Richmond who works on combating pediatric obesity, and as a mother of four children, I'm a strong supporter of Screen-Free Week. I know the amount of time our children spend in front of digital screens has increased tremendously over the years, and it's harming their health in many ways. I also think it's stealing a precious resource: the chance for children to be bored, and then dream up creative ways to have fun.

The Campaign for a Commercial-Free Childhood has compiled an eye-opening list of research statistics on screen time and children.

☐ On any given day, 64 percent of babies and toddlers are watching TV and videos, averaging slightly over two hours of watching a day.
☐ Depending on the study cited, preschoolers spend between 2.2 and 4.6 hours per day using screen media.
☐ Including time spent multi-tasking, 8- to 18-year-olds take in an average of 7.2 hours of screen media per day—an increase of 2.5 hours in 10 years.
WHY WE CARE

Research also shows that babies and preschoolers who spend time in front of a screen spend less time interacting with their parents and less time in creative play—activities that are essential for learning and development. Studies show that screen time for children under 3 is linked to language delays.

For older children, screen time not only exposes them to a slew of fast food and snack food ads, it replaces time that used to be spent running around and playing. So it’s not surprising that studies find screen time is an important risk factor in childhood obesity. According to one study, for each hour of television viewing per day, children consume an additional 167 calories on average. That’s a little more than the calories found in a 1-ounce bag of cheese puffs.

On the positive side, research also finds that children who spend less time watching television early on tend to do better in school, have a healthier diet, and be more physically active. Because Kaiser Permanente wants to help keep your child as healthy as possible, we recommend that parents and guardians limit screen time for children to no more than one to two hours a day, with no screen time for children under age 3. And we recommend that parents keep televisions and other screens out of their children’s bedrooms.

GET READY TO GO SCREEN-FREE

Screen-Free Week is a great opportunity to get a taste of life away from the screen. But as a parent, I caution you, it’s best to go into the week prepared. Start by committing to lead by example, and then sit down with your family and make a list of things you might do to entertain yourselves. You could check out books or CDs from the library, rediscover card games, launch a lemonade stand, take a hike, or introduce your children to the joy of flying a kite.

Even if you can’t manage being 100 percent screen-free, I challenge you and your family to step out of your comfort zone and give it a try. It might open your eyes to the realization that good things can come from taking a break from our screens.

Imagine you are deciding whether to get an after-school job.

List all the consequences (effects) of this decision.

Based on these consequences, what would you decide?

Why would you make that decision?
Sample Cascading Consequence Chart

If I get an after-school job, then...

- I won’t have to fight with my sister for computer time
- I may be able to buy a new computer
- I may be distracted and do worse on my homework
- I may have to sleep less
- I will be tired and may do worse in school
- I may earn worse grades
- I might not get into a good college
- I may have stronger friendships

- The house may be more peaceful
- I won’t have to ask my parents for money
- I can save for college
- I will earn money

- I won’t be as fit
- I will have less time to practice basketball
- I may not make the team
- I may be disappointed

- I may feel left out
- I may have time for only a few friends
- I may have less friends

I may do better on my homework
Directions: Use this list of sources to help you brainstorm consequences. You will not put all of them on your Cascading Consequences chart. Instead, brainstorm all possible consequences and choose the five strongest to “cascade” out.

<table>
<thead>
<tr>
<th>Source</th>
<th>Consequence (write at least two for each source)</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Teens and Decision Making”</td>
<td></td>
</tr>
<tr>
<td>“Insight into the Teenage Brain”</td>
<td></td>
</tr>
<tr>
<td>“The Digital Revolution and the Evolution of the Adolescent Mind”</td>
<td></td>
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<tr>
<td>“Growing Up Digital”</td>
<td></td>
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<tr>
<td>AAP recommendation</td>
<td></td>
</tr>
<tr>
<td>“The Many Benefits of Playing Video Games”</td>
<td></td>
</tr>
<tr>
<td>“Children Could Be Better Off Playing Video Games”</td>
<td></td>
</tr>
<tr>
<td>Source</td>
<td>Consequence (write at least two for each source)</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
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<tr>
<td>“Gaming Can Make a Better World”</td>
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<tr>
<td>Aric Sigman video</td>
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<tr>
<td>“Attached to Technology and Paying the Price”</td>
<td></td>
</tr>
<tr>
<td>“Guest Opinion: Step Away from the Screen”</td>
<td></td>
</tr>
<tr>
<td>Another source:</td>
<td></td>
</tr>
<tr>
<td>Another source:</td>
<td></td>
</tr>
</tbody>
</table>
What is the option being considered? To get an after-school job

<table>
<thead>
<tr>
<th>Is the consequence positive or negative?</th>
<th>In what way will the stakeholder be affected?</th>
<th>Is this an intended or unintended consequence?</th>
<th>How serious is this consequence?</th>
<th>Is this consequence outweighed by other consequences? If so, which ones?</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>I will have more money—so then I’ll be able to save up money for a computer.</td>
<td>intended</td>
<td>3</td>
<td>No</td>
</tr>
<tr>
<td>-</td>
<td>I will have less time to do homework—so then I will have to do it before school.</td>
<td>unintended</td>
<td>3</td>
<td>Yes—the money I will have. I can wake up early.</td>
</tr>
<tr>
<td>-</td>
<td>I will have less time to practice basketball so then I won’t get as much exercise.</td>
<td>unintended</td>
<td>2</td>
<td>Yes—the money I will have.</td>
</tr>
</tbody>
</table>
## Comparing Risks and Benefits Chart for Teens on Screens

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
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<table>
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<tr>
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<th>Is this consequence outweighed by other consequences? If so, which ones?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>“___ so then _____”</td>
<td></td>
<td>1-not so much</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2-somewhat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3-very</td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
## Comparing Risks and Benefits Chart for Teens on Screens

<table>
<thead>
<tr>
<th>Is the consequence positive or negative?</th>
<th>In what way will the stakeholder be affected? “____ so then ______”</th>
<th>Is this an intended or unintended consequence?</th>
<th>How serious is this consequence?</th>
<th>Is this consequence outweighed by other consequences? If so, which ones?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>3-very</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2-somewhat</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1-not so much</td>
<td></td>
</tr>
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</tbody>
</table>
Prompt:
You are part of the Children and Media Expert Advisory Committee. Your job is to help the American Academy of Pediatrics decide whether to make an official endorsement of Facebook’s current policy that children must be 13 to get a Facebook account. After examining both the potential benefits and risks of a Facebook account, particularly to the neurological development of teenagers, make a recommendation. Should the American Academy of Pediatrics officially recommend that Facebook raise the minimum age to 18 or endorse the policy as it stands at the age of 13?

Here is a sample body paragraph. Can you see the cascading consequences chart at work?

The third reason that the AAP should recommend that Facebook raise its minimum age has to do with synaptic pruning. The adolescent brain is in a dynamic stage of development. It is pruning unnecessary synapses and cementing other neurological pathways (Teens and Decision Making). A large part of our brain is dedicated to reading social cues because this skill is very important to leading a successful life (Giedd). However, this skill is not automatic. A teenage brain needs time and practice to build these pathways. There are many social skills that cannot be learned online because they are very subtle and require physical proximity (Giedd). These are such things as reading body language, facial expressions, or tone of voice. If someone is spending many hours a day interacting with others on Facebook, then he or she is missing out on an opportunity to build in-person skills. As Facebook becomes more and more popular, teens may use it as a substitute for in-person socializing and spend less time together. If they do that, then they will be pruning very important synapses that are necessary for human interacting. If the age limit for Facebook is raised, then teenagers will be more likely to find a social outlet that nourishes that part of the brain.
Directions:
During your discussion today, you will want to back up your evidence and reasoning with sources. Each time you refer to a source, put a checkmark next to it. Use your researcher’s notebook, neurologist’s notebook, or Brain Development anchor chart to help you.

<table>
<thead>
<tr>
<th>My Sources</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Class Sources:</strong></td>
<td><strong>“Children Could Be Better Off Playing Video Games”</strong></td>
</tr>
<tr>
<td>“Teens and Decision Making”</td>
<td>“Gaming Can Make a Better World”</td>
</tr>
<tr>
<td>“Insights into the Teen Brain”</td>
<td>“Guest Opinion: Step Away from the Screen”</td>
</tr>
<tr>
<td>“The Digital Revolution and the Evolution of the Adolescent Mind”</td>
<td>“Attached to Technology and Paying the Price”</td>
</tr>
<tr>
<td>“Growing Up Digital”</td>
<td>Aric Sigman video</td>
</tr>
<tr>
<td>AAP recommendation</td>
<td>Other:</td>
</tr>
<tr>
<td>“Is Google Making Us Stupid?”</td>
<td></td>
</tr>
<tr>
<td>“The Many Benefits of Playing Video Games”</td>
<td></td>
</tr>
</tbody>
</table>

Sources I have read on my own:
What are the most compelling neurological consequences for screen time?

<table>
<thead>
<tr>
<th>Table Cards</th>
</tr>
</thead>
</table>

Discuss the *positive* consequences listed on your Cascading Consequences chart for screen time. How could these strengthen an argument to raise the recommended time? How could this weaken an argument to keep it at two hours?

<table>
<thead>
<tr>
<th>What are the most compelling neurological consequences for screen time?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discuss the <em>positive</em> consequences listed on your Cascading Consequences chart for screen time. How could these strengthen an argument to raise the recommended time? How could this weaken an argument to keep it at two hours?</td>
</tr>
</tbody>
</table>

Discuss the most *negative* consequences listed on your Cascading Consequences chart for screen time. How could these strengthen an argument to limit it to two hours? How could these weaken an argument to raise it to four hours?

<table>
<thead>
<tr>
<th>Discuss the most <em>negative</em> consequences listed on your Cascading Consequences chart for screen time. How could these strengthen an argument to limit it to two hours? How could these weaken an argument to raise it to four hours?</th>
</tr>
</thead>
</table>

Compare the risks to the benefits of screen time. Which benefits outweigh which risks? Which risks outweigh which benefits?

<table>
<thead>
<tr>
<th>Compare the risks to the benefits of screen time. Which benefits outweigh which risks? Which risks outweigh which benefits?</th>
</tr>
</thead>
</table>
## Review Your Discussion Protocols

- Present your claim and evidence in a focused, logical, coherent manner.
- Incorporate relevant facts, descriptions, details, and examples to support your claim.
- Use appropriate eye contact.
- Use adequate volume.
- Use clear pronunciation.
- Use formal English.
- Take notes on what your classmates are saying when it is not your turn to speak.
- Be an active listener: face the speaker, make eye contact, and make thoughtful statements/ask thoughtful questions.
**Claim:** The AAP should keep the recommended daily entertainment screen time at two hours.

<table>
<thead>
<tr>
<th>Evidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How does screen time affect the development of teenagers?</td>
<td>What are the negative consequences (or risks) for teens on screens?</td>
</tr>
<tr>
<td>What are the benefits of screen time that can still be obtained through two hours of daily use?</td>
<td>Using the information in the three other boxes, summarize here why the recommended daily entertainment screen time should be two hours.</td>
</tr>
<tr>
<td>If you are a listener instead of a participant in the Fishbowl discussion today, take notes on what you hear in this space.</td>
<td></td>
</tr>
</tbody>
</table>
**Claim:** The AAP should raise the recommended daily entertainment screen time to four hours.

<table>
<thead>
<tr>
<th>Evidence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>How does screen time affect the development of teenagers?</td>
<td>What positive consequences (benefits) are there for teens on screens?</td>
</tr>
<tr>
<td>In what specific ways do the benefits outweigh the negative consequences (risks) for teens on screens?</td>
<td>Using the information in the three other boxes, summarize here why the AAP should raise the recommended daily entertainment screen time.</td>
</tr>
<tr>
<td>If you are a listener instead of a participant in the Fishbowl discussion today, take notes on what you hear in this space.</td>
<td></td>
</tr>
</tbody>
</table>
Using your Teens and Screens Fishbowl graphic organizer, Part I or Part II as a guide, respond to one of the following prompts, depending on which topic you have been selected to defend:

- If you are supporting the claim that the AAP should keep the recommended screen time to two hours, respond to this prompt:

  Pretend it is just before class and a classmate in the hallway says, “The AAP should clearly raise its limit to four hours. It just makes sense!” Now, in a paragraph below, use logic and reasoning to prove your classmate wrong. Imagine you are responding to the comment and advocate for the position that the daily recommended screen time should be two hours.

- If you are supporting the claim that the AAP should raise the recommended screen time to four hours, respond to this prompt:

  Pretend it is just before class and a classmate in the hallway says, “The AAP should clearly keep the limit to two hours. It just makes sense!” Now, in a paragraph below, use logic and reasoning to prove your classmate wrong. Imagine you are responding to the comment and advocate for the position that the daily recommended screen time should be four hours.
Write your paragraph below:
## Review Your Discussion Protocols

- Present your claim and evidence in a focused, logical, coherent manner.
- Incorporate relevant facts, descriptions, details, and examples to support your claim.
- Use appropriate eye contact.
- Use adequate volume.
- Use clear pronunciation.
- Use formal English.
- Take notes on what your classmates are saying when it is not your turn to speak.
Long-Term Learning Targets Assessed:
• I can present claims and findings with descriptions, facts, details, and examples. (SL.7.4)
• I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.7.4)
• I can come to discussions prepared to refer to evidence on the topic, text, or issue that probes and reflects on ideas under discussion. (SL.7.1 and SL.7.1a)
• I can use my experience and knowledge of language and logic, as well as culture, to think analytically, address problems creatively, and advocate persuasively. (SL.7.9a)

Directions: In a Fishbowl discussion with your class, you will take a stand on one of the following prompts, assigned to you by your teacher. You may use your Teens and Screens Fishbowl graphic organizer and Fishbowl Statement to help you provide evidence when you speak. When it is not your turn to participate in the Fishbowl, you will take notes on what your classmates say (in a separate section of your graphic organizer) so you can add them later to your Comparing Risks and Benefits chart.

The Prompts:

1A. Defend this claim: Given the potential benefits and risks of entertainment screen time on the development of teenagers, the AAP should keep its recommended daily entertainment screen time to two hours.

   Use concrete evidence from your reading and research to support this claim.

1B. Defend this claim: Given the potential benefits and risks of entertainment screen time on the development of teenagers, the AAP should raise its recommended daily entertainment screen time to four hours.

   Use concrete evidence from your reading and research to support this claim.
The checklist below is how the teacher will assess you. When participating in the Fishbowl, keep the criteria below in mind.

<table>
<thead>
<tr>
<th>During the Fishbowl, I am expected to ...</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present my claim and evidence in a focused, logical, and coherent manner</td>
<td></td>
</tr>
<tr>
<td>Incorporate relevant facts, descriptions, details, and examples to support claim</td>
<td></td>
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<td>Use appropriate eye contact</td>
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<td>Use formal English:</td>
<td></td>
</tr>
<tr>
<td>• Academic and domain-specific vocabulary</td>
<td></td>
</tr>
<tr>
<td>• Language that expresses ideas precisely, eliminating wordiness and redundancy</td>
<td></td>
</tr>
<tr>
<td>Take notes on what my classmates are saying when it is not my turn to speak</td>
<td></td>
</tr>
</tbody>
</table>
First, consider your overarching research question:

After examining both the potential benefits and risks of entertainment screen time, particularly to the development of teenagers, make a recommendation. Should the AAP raise the recommended daily entertainment screen time from two hours to four hours?

Now, to help you decide on an answer, discuss these questions with a partner:

- How is the development of teens affected by screen time? Why?

- What are the most compelling negative consequences (or risks) of screen time on the developing brain?

- What are the most compelling positive consequences (or benefits) of screen time on the developing brain?

- Do the benefits outweigh the risks when the limit is two hours? Explain your reasoning.

- Do the benefits outweigh the risks when the limit is four hours? Explain your reasoning.
Overarching question: After examining both the potential benefits and risks of entertainment screen time, particularly to the development of teenagers, make a recommendation. Should the AAP raise its recommended screen time use from two hours to four hours?

<table>
<thead>
<tr>
<th>Reason 1:</th>
<th>Reason 2:</th>
<th>Reason 3:</th>
</tr>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Sources to review</th>
<th>Sources to review</th>
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</tr>
</thead>
</table>
Directions: Read over the feedback you received on the End of Unit 2 Assessment, Part 1 and the criteria that your teacher will use to assess your presentation (the End of Unit 2 Assessment, Part 2). Based on those documents, answer the questions below.

1. What is one skill that is a strength for you?

2. How will that skill help you in your presentation (End of Unit 2 Assessment, Part 2)?

3. What is one skill that is challenging for you?

4. What can you do to make sure you improve on that skill for your presentation (End of Unit 2 Assessment, Part 2)?
End of Unit 2 Assessment, Part 2:
Present Your Claim

Name:

Date:

**Long-Term Learning Targets:**

- I can present claims and findings with descriptions, facts, details, and examples. (SL.4)
- I can use effective speaking techniques (appropriate eye contact, adequate volume, and clear pronunciation). (SL.4)
- I can include multimedia components and visual displays in a presentation to clarify claims and to add emphasis. (SL.7.5)
- I can adapt my speech for a variety of contexts and tasks, using formal English when indicated or appropriate. (SL.6)

**Directions:** For this part of the assessment, you will formally present your research-based claim to an audience using your choice of visual aid to explain your idea. Your visual aid can include a part of your Cascading Consequences chart or your Comparing Risks and Benefits chart. You will use it to help explain your response to the position paper focusing question: “Should the AAP raise the recommended daily entertainment screen time from two hours to four hours?”

Be sure to examine it from a neurobiological standpoint. Also be sure to provide relevant and sufficient evidence and use sound reasoning to support your claim.

The checklist below is how the teacher will assess you. When preparing for and practicing your presentation, keep these criteria in mind.
In my presentation, I am expected to...

<table>
<thead>
<tr>
<th>Present my claim in a focused, coherent manner</th>
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<tbody>
<tr>
<td>Incorporate relevant facts, descriptions, details, and examples to support the claim and reasons for the claim</td>
</tr>
<tr>
<td>Use appropriate eye contact</td>
</tr>
<tr>
<td>Use adequate volume</td>
</tr>
<tr>
<td>Use clear pronunciation</td>
</tr>
<tr>
<td>Clarify my claim and add emphasis by using a visual display</td>
</tr>
<tr>
<td>Use formal English:</td>
</tr>
<tr>
<td>• Academic and domain-specific vocabulary</td>
</tr>
<tr>
<td>• Language that expresses ideas precisely, eliminating wordiness and redundancy</td>
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</table>
Congratulations! You have completed your presentation. Take a few minutes to reflect on how you did. Below each of the learning targets below, circle how well you feel you did.

- **I can present my claim about the AAP recommendation using facts, details, and examples.**
  
  I did very well.  I did well.  I did OK.  I struggled with this.

- **I can use effective speaking techniques in my presentation.**
  
  I did very well.  I did well.  I did OK.  I struggled with this.

- **I can include a multimedia visual display in my presentation to clarify my claim and add emphasis.**
  
  I did very well.  I did well.  I did OK.  I struggled with this.

- **I can use formal English in my presentation.**
  
  I did very well.  I did well.  I did OK.  I struggled with this.

- **I can use my experience and knowledge of language and logic to advocate persuasively.**
  
  I did very well.  I did well.  I did OK.  I struggled with this.
Exit Ticket

Name one thing you did today as a presenter or an audience member that you’re proud of:
Equal Opportunity Notice
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Human Resources Director, Cattaraugus-Allegany BOCES, 1825 Windfall Road, Olean, NY 14760; 716-376-8237.