

### Dear Teacher,

The following tools are additional support to enrich the teaching of the *Heads Up* lesson plan and student article “The Science of Decision Making and Peer Pressure”:

- Answer Key for Critical-Thinking Questions and Student Work Sheet
- Academic and Domain-Specific Vocabulary Lists
- Additional Writing Prompts
- Expanded Paired-Text Reading Suggestions
- Expanded Standards Charts for Grades 6–12

For copies of the Teacher’s Guide and student article, visit [scholastic.com/headsup/science-peer-pressure/lesson](http://scholastic.com/headsup/science-peer-pressure/lesson).

**Note on Text Complexity:** “The Science of Decision Making and Peer Pressure” student article has a text level optimized for students in grades 8–12. For readers at a lower reading level, a grades 4–5 version of the article is available at [scholastic.com/headsup/science-peer-pressure/leveled](http://scholastic.com/headsup/science-peer-pressure/leveled).

1A

### Suggested Answers and Tiered Adaptations of Lesson Critical-Thinking Questions

[scholastic.com/headsup/science-peer-pressure/lesson](http://scholastic.com/headsup/science-peer-pressure/lesson)

Have students use evidence from the text of the article “The Science of Decision Making and Peer Pressure” when responding to the Critical-Thinking Questions. Suggested answers are provided in *italics* after each question.

#### Question 1:

- **Grades 6–8:** How is the reward center of the brain different in adolescents than it is in adults?
- **Grades 9–10:** Why do teens have a stronger emotional reaction to their peers than adults or children do? Cite examples from the article.
- **Grades 11–12:** Why do teens have a stronger emotional reaction to their peers than adults or children do? What is one way this reaction to peers may positively affect the way a teen acts? What is one potential negative result?

*(During adolescence, the reward center in the teen brain has more dopamine receptors. Dopamine is a chemical that is released when a person has a positive experience. It makes people feel rewarded and happy. Because there are more receptors for the chemical in*

*the teen brain, an adolescent will have a stronger reaction to rewards. This includes the positive feelings produced by being around peers. The part of the brain that reacts to negative experiences is also more sensitive in adolescents than in adults. That means that rejection by peers causes a bigger negative emotional response in the teen brain.*

**Additional Information for Grades 11–12:** *The strong emotional response experienced by teens when around peers may cause them to seek out the approval of their peers and to avoid actions that would lead to disapproval. This may propel teens to do positive things, such as trying out for a play if a friend asks them to even though they are nervous. It also may cause them to give in to peer pressure and make dangerous decisions about drugs and alcohol in order to receive the approval of peers.)*

#### Question 2:

- **Grades 6–8:** How is the driving behavior of teens affected by the presence of their peers?
- **Grades 9–10:** What are two pieces of evidence from the article that suggest that teens make riskier decisions when they are with their friends than when they are alone?
- **Grades 11–12:** What evidence from the article suggests that teens make riskier decisions when they are with their friends than when they are alone? Is the risky behavior due to explicit peer pressure or not? Support your answer with evidence from the text.

*(In Steinberg’s study, teens playing a driving video game ran more yellow lights, risking an accident, when their friends were watching than when they were alone. When the teens were alone, they took no more risks than adults. In real life, teen drivers engage in riskier behavior if other teens are in the car. Driving statistics also show that teens are 2.5 times more likely to take risks when there is another teen passenger and three times more likely to take risks if two or more peers are in the car.*

**Additional Information for Grades 11–12:** *The teen drivers in Steinberg’s experiment made riskier decisions even when their friends were not talking to them. This means that their decision making wasn’t caused by their peers explicitly telling them to take risks. Instead, Steinberg says that the presence of friends increased the teens’ sensation of rewards. That increased their desire to get more rewards—such as earning money in the game or the excitement of driving faster.)*

1B

## Suggested Answers for Student Work Sheet

[scholastic.com/headsup/science-peer-pressure/worksheet](http://scholastic.com/headsup/science-peer-pressure/worksheet)

**Step 2:** Write a paragraph that explains why it may be difficult for Jesse to say no and what strategies he can use to help him stand up to peer pressure. Use facts from the article “The Science of Decision Making and Peer Pressure” to support your response.

*(Jesse is spending time with his peers, which activates the reward center in his brain. This reaction is particularly strong in the adolescent brain. He would like to stay with his friends so he can continue feeling happy. The desire to continue feeling rewarded and happy may cause Jesse to be less sensitive to the potential risks of going to the party, such as disappointing his parents and being punished, or being exposed to potentially dangerous situations at the party that may involve alcohol or drugs. Jesse may also be afraid that his friends will be angry or disapproving if he doesn't go. That rejection would cause a strong response in the part of the brain that controls negative emotions, so Jesse would want to avoid that bad feeling. The potential benefits of having fun with his friends at the party and getting their approval, as well as avoiding their rejection, may seem stronger than the potential risks. To avoid making a risky decision, Jesse could pause and remove himself from the situation for a moment to think through the potential risks. This may help him to make the more responsible decision and go home to avoid consequences from his parents.)*

**Step 3—Reality Check:** Write a few sentences that you would actually say in a similar situation to help you stand up to peer pressure.

*(Jesse could say: “Thanks for the invite, but I need to get home. If I'm not home after the game, I'll get grounded forever. Besides, it's just not my scene.”)*

2

## Academic and Domain-Specific Vocabulary Lists

[scholastic.com/headsup/science-peer-pressure/article](http://scholastic.com/headsup/science-peer-pressure/article)

The vocabulary words below are drawn from “The Science of Decision Making and Peer Pressure” student article and work sheet. This vocabulary can be previewed with students prior to reading or reinforced with students afterward. Encourage students to incorporate these words into their writing and discussion of “The Science of Decision Making and Peer Pressure” article and work sheet.

Leveled definitions are provided for grades 6–8 and 9–12. Unless otherwise noted, all definitions below are sourced or adapted from:

- **Grades 6–8:** *Wordsmyth Children's Dictionary*
- **Grades 9–12:** *Merriam-Webster Collegiate Edition*

**Suggested Methods of Learning and Reinforcement:**

Students can construct understanding by drawing the words' definitions; organizing concept maps that include word parts, synonyms, antonyms, and examples; composing memory aids that explain the words or use them in a meaningful context; and employing the words to create newspaper articles, stories, or poems.

**Tip:** The vocabulary sheet that follows on the next page can be folded in half and reproduced for distribution to students. The blank part of the paper can be used for students to record notes or questions.

Fold here before reproducing



## Vocabulary From “The Science of Decision Making and Peer Pressure”

### Grades 6–8

- **conduct** (*verb*): to organize something and carry it out
- **facilitate** (*verb*): to make something easier
- **influence** (*verb*): to have an effect on someone or something
- **potential** (*adjective*): possible but not yet actual or real
- **psychologist** (*noun*): a person who is trained to study people’s brains and how emotions influence behaviors
- **rational** (*adjective*): able to think clearly and logically
- **risk** (*noun*): the possibility of loss or harm; danger
- **sensitive** (*adjective*): highly aware or feeling things strongly
- **transmit** (*verb*): to send or pass from one place to another

## Vocabulary From “The Science of Decision Making and Peer Pressure”

### Grades 9–12

- **conduct** (*verb*): to direct or take part in the organization, operation, or management of something
- **facilitate** (*verb*): to make easier, to help bring about
- **influence** (*verb*): to have an effect or to alter something in an indirect way
- **potential** (*adjective*): having or showing the capacity to become or develop into something in the future
- **psychologist** (*noun*): a person who is trained to study the brain and the influence of emotions on behavior
- **rational** (*adjective*): involving reason and logic and judgment
- **risk** (*noun*): the possibility of loss or injury
- **sensitive** (*adjective*): highly responsive or susceptible to a stimulus
- **transmit** (*verb*): to send from one person or place to another

3

### Expanded Writing Prompts for “The Science of Decision Making and Peer Pressure”

[scholastic.com/headsup/science-peer-pressure/article](http://scholastic.com/headsup/science-peer-pressure/article)

To encourage and assess close reading of the student article “The Science of Decision Making and Peer Pressure,” use the following writing prompts for quick five-minute “freewrites” of a few sentences each. Instruct students to include evidence from the text in their responses.

#### Grades 6–8:

- **[Skill: Textual Evidence/Making Inferences]** The decision-making process in teens is strongly affected by rewards and peers. How might this impact teens in both positive and negative ways?
- **[Skill: Persuasive Writing]** How might you tell a friend that it is important to pause and think when they need to make a decision about potentially risky situations? What evidence about the teen brain helps support your suggestion?

#### Grades 9–10:

- **[Skill: Textual Evidence/Making Inferences]** Peer pressure can challenge teens to take beneficial risks, or it can drive them to make decisions they regret. How can teens prepare themselves to resist negative peer pressure yet remain open to positive influences?
- **[Skill: Persuasive Writing]** Explain to a friend why it is important to prepare a script and plan for what they might say or do in a risky situation involving peers. What brain evidence supports the need for a plan that is determined before the situation arises?

#### Grades 11–12:

- **[Skill: Textual Evidence/Making Inferences]** Today’s teens don’t only interact in person. How do you think peer influence through social media and texting might impact teens’ decision making, and what positive and negative consequences could result? Consider what you have learned about how the presence of teens can impact risky behavior.
- **[Skill: Persuasive Writing/Supporting Evidence]** Should there be laws about whether or not teens can drive with friends in the car? What scientific evidence helps support the existence of these laws?

4

### Expanded Paired-Text Reading Suggestions for “The Science of Decision Making and Peer Pressure”

[scholastic.com/headsup/science-peer-pressure/article](http://scholastic.com/headsup/science-peer-pressure/article)

Deepen student learning of “The Science of Decision Making and Peer Pressure” with the following paired-text reading suggestions and prompts for writing and discussion.

**Informational Text:** “6 Tactful Tips for Resisting Peer Pressure to Use Drugs and Alcohol,” [teens.drugabuse.gov/blog/category/340](http://teens.drugabuse.gov/blog/category/340)

#### Writing Prompt for Grades 6–8:

- What is the author’s purpose in writing “6 Tactful Tips for Resisting Peer Pressure to Use Drugs and Alcohol”? How does it compare to the purpose of “The Science of Decision Making and Peer Pressure”?
- Based on Steinberg’s advice on peer influence, explain why he might recommend reading “6 Tactful Tips for Resisting Peer Pressure to Use Drugs and Alcohol” after reading “The Science of Decision Making and Peer Pressure.”

#### Writing Prompt for Grades 9–12:

- Combine what you learned in “The Science of Decision Making and Peer Pressure” and “6 Tactful Tips for Resisting Peer Pressure to Use Drugs and Alcohol” to develop a plan for what to do when you are faced with a risky situation.
- Think about what you learned in “The Science of Decision Making and Peer Pressure.” What advice in “6 Tactful Tips for Resisting Peer Pressure to Use Drugs and Alcohol” do you think is best supported by scientific evidence discussed in the article?

**Informational Text:** “Let’s Talk: How Do You Avoid Peer Pressure?” [teens.drugabuse.gov/blog/post/lets-talk-how-do-you-avoid-peer-pressure](http://teens.drugabuse.gov/blog/post/lets-talk-how-do-you-avoid-peer-pressure)

#### Writing Prompt for Grades 6–8:

- Based on what you learned in “The Science of Decision Making and Peer Pressure,” what would you write in the comment section of the article “Let’s Talk: How Do You Avoid Peer Pressure?”

- Explain how the peer pressure described in “Let’s Talk: How Do You Avoid Peer Pressure?” isn’t the only type of peer influence. Use evidence from “The Science of Decision Making and Peer Pressure” to support your answer.

**Writing Prompt for Grades 9–12:**

- Think about what you learned in “The Science of Decision Making and Peer Pressure.” Why might teens be more susceptible to the type of peer pressure described in “Let’s Talk: How Do You Avoid Peer Pressure?” than adults?
- Do you think understanding the science about the brain can help teens avoid peer pressure? What would you write if you were to comment on the article “Let’s Talk: How Do You Avoid Peer Pressure?”

**Informational Text:** “Teen Brain, a Work in Progress,” [teens.drugabuse.gov/blog/post/teen-brain-work-progress](https://teens.drugabuse.gov/blog/post/teen-brain-work-progress)

**Writing Prompt for Grades 6–8:**

- Explain how the teen brain’s reward center is different from that of an adult. Use evidence from “The Science of Decision Making and Peer Pressure” and “Teen Brain, a Work in Progress.”
- Using evidence from “The Science of Decision Making and Peer Pressure” and “Teen Brain, a Work in Progress,” explain why teens might make riskier decisions about drugs and alcohol. Then give tips about how they can avoid doing that.

**Writing Prompt for Grades 9–12:**

- Use evidence from “The Science of Decision Making and Peer Pressure” and “Teen Brain, a Work in Progress” to explain two reasons why a teen may be more likely to be unable to judge when to stop drinking alcohol at a party.
- Suppose a person begins using drugs as a young person. Do you think they will be more likely to make riskier decisions as an adult? Support your answer with evidence from “The Science of Decision Making and Peer Pressure” and “Teen Brain, a Work in Progress.”

**5 Expanded Grades 6–12 Standards Chart**  
[scholastic.com/headsup/science-peer-pressure/lesson](https://scholastic.com/headsup/science-peer-pressure/lesson)

“The Science of Decision Making and Peer Pressure” article, lesson plan, work sheet, and Additional Tools document support higher standards by giving students opportunities to practice key literacy skills while acquiring scientific knowledge relevant to health, life skills, and current events.

Subject	Common Core State Standards for English Language Arts	Next Generation Science Standards	National Science Education Standards	National Council for the Social Studies
<ul style="list-style-type: none"> <li>• Science Literacy</li> <li>• English Language Arts</li> <li>• Health/ Life Skills</li> </ul>	<ul style="list-style-type: none"> <li>• RI.1 &amp; RST.1 Cite textual evidence</li> <li>• RI.2 &amp; RST.2 Central idea and details</li> <li>• W.1 Write arguments</li> <li>• W.7 Synthesize multiple texts when writing</li> <li>• W.9 Use evidence in analytical writing</li> <li>• RST.4 Domain-specific vocabulary</li> <li>• RST.6 Author’s purpose</li> <li>• RST.8 Evaluate a claim</li> <li>• RST.9 Compare and contrast two texts</li> </ul>	<ul style="list-style-type: none"> <li>• LS1.A Structure and Function</li> <li>• LS1.D Information Processing</li> </ul>	<ul style="list-style-type: none"> <li>• Structure and Function in Living Things</li> <li>• Personal and Community Health</li> </ul>	<ul style="list-style-type: none"> <li>• Individual Development and Identity</li> </ul>