

Dear Teacher,

The following tools are additional support to enrich the teaching of the *Heads Up* lesson plan and student article “Prescription Pain Medications: What You Need to Know.”

What you'll find:

- 1A) Suggested Answers and Tiered Adaptations of Lesson Critical-Thinking Questions
- 1B) Suggested Answers for Student Work Sheet
- 2) Academic and Domain-Specific Vocabulary Lists
- 3) Additional Writing Prompts
- 4) Expanded Paired-Text Reading Suggestions
- 5) Expanded Standards Charts for Grades 6–12

For copies of the Teacher’s Guide and student article, visit scholastic.com/headsup/opioids.

Note on Text Complexity: The student article “Prescription Pain Medications: What You Need to Know” was written for middle and high school students. For readers at a lower reading level, a grades 4–5 version of the article is available at scholastic.com/headsup/opioids/leveled.

1A Suggested Answers and Tiered Adaptations of Lesson Critical-Thinking Questions

scholastic.com/headsup/opioids

Have students use evidence from the text of the article “Prescription Pain Medications: What You Need to Know” when responding to the Critical-Thinking Questions. Suggested answers are provided in italics after each question.

Question 1:

- **Grades 6–8:** Explain three reactions that can happen in the body when a person takes opioids.
- **Grades 9–10:** Explain how opioid medications work in the brain. How are they different from natural endorphins in the brain? Cite evidence from the text.
- **Grades 11–12:** Explain how misusing prescription opioids could lead to addiction.

(Prescription opioids have a similar structure to endorphins, a type of chemical in the brain and body that blocks pain and contributes to feelings of pleasure and relaxation. Opioid medications act on the same receptors in the brain, brain stem, spinal cord, and other

parts of the nervous system as endorphins do. When a person takes opioid drugs (medications or illegal drugs), it activates the reward system and causes feelings of pleasure, affects signals in the brain stem that slow breathing and cause relaxation, and reduces pain by acting on receptors in the spinal cord. Opioid medications and drugs, however, have a stronger effect than endorphins; they are capable of blocking severe pain and flooding the brain’s reward center with large amounts of dopamine, which puts a person at risk for addiction. If too much is taken, these drugs can cause a person to stop breathing.)

(Additional Answer Information for Grades 11–12:

Misusing prescription opioids could cause a person to develop physical dependence, so he or she experiences withdrawal symptoms if he or she stops using the opioids. This could lead to further opioid misuse and the development of habitual drug taking. If the habit of drug taking becomes strong enough, addiction can develop, and the person will continue to take drugs despite negative consequences.)

Question 2:

- **Grades 6–8:** What is the risk of misusing opioid medicines?
- **Grades 9–10:** What are three examples of prescription opioid misuse and/or abuse? Cite evidence from the article.
- **Grades 11–12:** Why do you think it’s important to have programs to take back unused pills from opioid prescriptions? Support your answer with evidence from the text.

(Examples of opioid misuse are taking medication that was prescribed to anyone other than yourself, taking medication at higher doses than was prescribed, and taking medication not to treat pain but to experience a high. If a person takes too much of an opioid drug, it can lead to a deadly overdose by causing the person to stop breathing. Misusing the drugs can increase the risk of dependence and addiction.)

(Additional Answer Information for Grades 11–12:

Having unused prescriptions around makes it easier for people to misuse them either accidentally or intentionally.)

Question 3:

- **Grades 6–10:** Explain how a person could become physically dependent on an opioid drug, and how this impacts a person’s body.
- **Grades 11–12:** Why might abuse of prescription opioids lead a person to start using heroin?

(If a person takes an opioid medication for a long time, his or her body can develop a tolerance to the drug, meaning he or she needs to take more of the drug to achieve the same result. Long-term use can also cause the body to produce fewer endorphins and opioid receptors. This is called physical dependence. The result is that when people go off the drug, they experience withdrawal symptoms.)

(Additional Answer Information for Grades 11–12: *If a person becomes addicted to opioids, he or she may seek out any way possible to satisfy his or her cravings for the drugs. Prescription opioid pain medications and heroin are both opioids and therefore have similar effects on the body. If a person becomes addicted to prescription opioids, he or she may start taking heroin to satisfy his or her craving for opioids and avoid withdrawal.)*

1B Suggested Answers for Student Work Sheet

scholastic.com/headsup/opioids/worksheet

1. Roughly how many more prescriptions for opioids were given out by pharmacies in the U.S. in 2013 compared with 1991? *(Roughly 206,000,000 in 2013, minus 75,000,000 in 1991 = 131,000,000 more prescriptions in 2013.)*
2. Approximately how many more people died from prescription opioid overdoses in 2013 than 2001? *(Roughly 16,000 in 2013, minus 5,500 in 2001 = 10,500 more deaths in 2013.)*
3. Use data from the second graph to describe how the number of prescription opioid overdose deaths has changed over time for both men and women. *(The number of opioid overdose deaths has increased in both men and women between 2001 and 2013. In the last few years, the numbers of deaths of men has dropped slightly.)*
4. What evidence suggests that the number of opioid prescriptions could be linked to the number of overdose deaths? Use evidence from the graphs and the article “Prescription Pain Medications: What You Need to Know” to explain your answer. *(The number of opioid overdose deaths has increased at the same time as the number of prescriptions of these drugs has increased. Misusing these medications increases a person’s risk of overdose and addiction. If there are more prescriptions for opioids, there are a greater number of people using them, and thus a greater number at risk for misusing them and overdosing.)*

5. Many scientists are urging the medical community to improve the way prescription opioids are prescribed. That may include using other, less-powerful medications more often. Do you agree with this recommendation? What factors might scientists and doctors be considering? Use evidence from the graphs and from the article to support your answer. *(Answers will vary but may include that the number of opioid overdose deaths has increased in recent years. At the same time, the number of prescriptions of these drugs has increased. Opioids are very powerful, which makes them an important tool for treating patients’ severe pain, but these drugs have a high risk for addiction. If they are used less often, there may be fewer people who become addicted to them or who have an overdose. Doctors should only prescribe them when there is no other alternative. Doctors should closely monitor people who are taking them to make sure abuse is not occurring.)*

2 Academic and Domain-Specific Vocabulary Lists

scholastic.com/headsup/opioids/article

The vocabulary words below are drawn from the “Prescription Pain Medications: What You Need to Know” 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 “Prescription Pain Medications: What You Need to Know” 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 “Prescription Pain Medications: What You Need to Know” Grades 6–8

- **activation** (*noun*): the process of causing something to turn on or work
- **addictive** (*adjective*): habit-forming, causing an irresistible need. People who suffer from drug addiction have trouble stopping their drug use even when they really want to and even after it causes terrible consequences to their health and other parts of their lives. This is because addiction is a disease that changes how the brain works.
- **brain stem** (*noun*): the lower part of the brain that connects to the spinal cord and controls some automatic functions, such as breathing
- **compulsively** (*adverb*): uncontrollably
- **dopamine** (*noun*): a chemical that helps transmit signals in the brain and is associated with feelings of pleasure
- **endorphin** (*noun*): a natural chemical in the brain that causes feelings of relaxation, pleasure, and pain relief
- **opioid** (*noun*): a chemical that produces relaxation, pleasure, and pain relief
- **overdose** (*noun, verb*): a larger amount of a drug than prescribed by a doctor; to take too much of a drug so that you become sick or die
- **perception** (*noun*): awareness through the senses
- **quadruple** (*verb*): to multiply something by four
- **receptor** (*noun*): a structure on the surface of a cell that binds to specific chemicals to send messages within the body
- **regulate** (*verb*): to control
- **substance use** (*noun*): drug or alcohol use
- **substance use disorder** (*noun*): a brain disorder that leads to the repeated use of drugs and/or alcohol despite significant harm, such as health problems, disability, and failure to meet major responsibilities in life. Addiction is a substance use disorder.

Vocabulary From “Prescription Pain Medications: What You Need to Know” Grades 9–12

- **activation** (*noun*): the process of causing something to turn on or work
- **addictive** (*adjective*): habit-forming, causing an irresistible need. People who suffer from drug addiction have trouble stopping their drug use even when they really want to and even after it causes terrible consequences to their health and other parts of their lives. This is because addiction is a disease that changes how the brain works.
- **brain stem** (*noun*): the lower part of the brain that connects to the spinal cord and controls some automatic functions, such as breathing
- **compulsively** (*adverb*): uncontrollably
- **dopamine** (*noun*): a neurotransmitter that helps relay signals in the brain and is associated with feelings of pleasure
- **endorphin** (*noun*): a natural chemical in the brain that attaches to opioid receptors and produces pain relief and pleasure
- **opioid** (*noun*): a chemical that binds to opioid receptors in the human body, causing relaxation, pleasure, and pain relief
- **overdose** (*noun, verb*): a lethal or toxic amount of a drug; to take a lethal or toxic amount of a drug
- **perception** (*noun*): awareness through the senses
- **quadruple** (*verb*): to multiply something by four
- **receptor** (*noun*): a protein on the surface of a cell that binds to specific chemicals in order to transmit messages within the body
- **regulate** (*verb*): to control or adjust so that a certain standard is maintained
- **substance use** (*noun*): drug or alcohol use
- **substance use disorder** (*noun*): a brain disorder in which long-lasting changes to brain circuits cause compulsive drug seeking and drug use, despite negative consequences such as health problems, disability, and failure to meet major responsibilities at work, school, or home. Addiction is a substance use disorder.

3

Expanded Writing Prompts for “Prescription Pain Medications: What You Need to Know”

scholastic.com/headsup/opioids/article

To encourage and assess close reading of the student article “Prescription Pain Medications: What You Need to Know,” 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]** What are the risks of misusing prescription opioid pain medications? Use evidence from the article to support your answer.
- **[Skill: Persuasive Writing]** Suppose someone you know was prescribed an opioid medication for severe pain. What advice might you give him or her?

Grades 9–10

- **[Skill: Textual Evidence/Making Inferences]** Explain why the author called opioid drugs “master impersonators.”
- **[Skill: Persuasive Writing]** Use evidence from the article to explain why prescription drug abuse is as dangerous to your health as illegal drug abuse.

Grades 11–12

- **[Skill: Textual Evidence]** How is dependence different from addiction?
- **[Skill: Persuasive Writing]** Automatic refills of certain powerful drugs are not allowed. If a patient needs more of these medications, they need to be seen again by a doctor. Do you think all opioids should be regulated in this way? Support your answer with evidence from the text.

4

Expanded Paired-Text Reading Suggestions for “Prescription Pain Medications: What You Need to Know”

scholastic.com/headsup/opioids/article

Deepen student learning of “Prescription Pain Medications: What You Need to Know” with the following paired-text reading suggestions and prompts for writing and discussion.

Informational Text: “Mind Over Matter: Opioids” teens.drugabuse.gov/educators/nida-teaching-guides/mind-over-matter-teaching-guide-and-series/opioids

Writing Prompt for Grades 6–8:

- What are two facts about how opioids affect the body that are supported both by “Mind Over Matter: Opioids” and “Prescription Pain Medications: What You Need to Know”?

Writing Prompt for Grades 9–12:

- Using the information in “Mind Over Matter: Opioids” and “Prescription Pain Medications: What You Need to Know,” craft a persuasive argument convincing a friend not to try opioids outside of a doctor’s care.

Informational Text: “Straight Talk on Prescription Drugs” headsup.scholastic.com/students/straight-talk-on-prescription-drugs

Writing Prompt for Grades 6–8:

- Synthesize facts from both “Straight Talk on Prescription Drugs” and “Prescription Pain Medications: What You Need to Know” to explain how prescription pain medications affect how the brain works. Provide examples on how these changes could affect a person’s life.

Writing Prompt for Grades 9–12:

- Synthesize what you learned in both “Straight Talk on Prescription Drugs” and “Prescription Pain Medications: What You Need to Know” to explain why it is especially important for parents to dispose of unused prescription opioid medications.

Informational Text: “Prescription Stimulants” headsup.scholastic.com/students/prescription-stimulants

Writing Prompt for Grades 6–8:

- Explain how the effect of stimulants on the body is similar to and different from that of opioid medications. Use evidence from “Prescription Stimulants” and “Prescription Pain Medications: What You Need to Know” to support your answer.

Writing Prompt for Grades 9–12:

- Compare the ways “Prescription Stimulants” and “Prescription Pain Medications: What You Need to Know” explain how prescription medications can be misused. What is one fact about prescription drug abuse that you understand better by reading both texts?

5 Expanded Grades 6–12 Standards Chart

scholastic.com/headsup/opioids

The “Prescription Pain Medications: What You Need to Know” student 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
<ul style="list-style-type: none"> • Science Literacy • English Language Arts • Health/Life Skills • Math (Graphs and Statistics) 	<ul style="list-style-type: none"> • RI.1 & RST.1 Cite textual evidence • RI.2 & RST.2 Central idea and details • RST.7 Integrate information from a text and graph • W.1 Write arguments • W.7 Synthesize multiple texts when writing • W.9 Draw evidence to support analysis and reflection • RST.4 Domain-specific vocabulary • RST.6 Author’s purpose • RST.8 Evaluate a claim • RST.9 Compare and contrast two texts 	<ul style="list-style-type: none"> • LS1.A Structure and Function • LS1.D Information Processing 	<p>Grades 6-8</p> <ul style="list-style-type: none"> • Structure and Function in Living Systems • Regulation and behavior • Personal Health <p>Grades 9-12</p> <ul style="list-style-type: none"> • Behavior of organisms • Personal and Community Health