

Heads Up: Real News About Drugs and Your Body

Brought to you by Scholastic and the scientists at the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services

STUDENT ARTICLES INSIDE

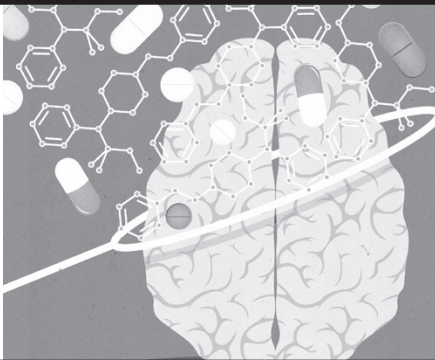
The Real Risks of Marijuana

PAGE 2



Opioids: What You Need to Know

PAGE 4



Can Too Much Screen Time Harm You?

PAGE 6



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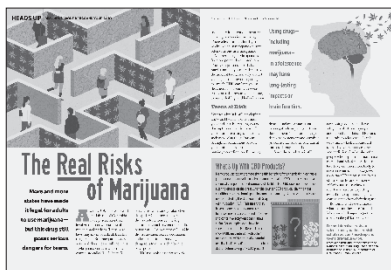
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For this Heads Up **Teacher Edition Compilation**, refer to **NIH Pub No. 20-DA-8070B**.

For the accompanying Heads Up **Student Edition Compilation**, refer to **NIH Pub No. 20-DA-8070A**.



The Real Risks of Marijuana

As many states legalize the recreational use of marijuana for adults, teens may be getting the message that the drug is safe. While marijuana is the most commonly used illicit drug among middle and high school students, the drug poses serious health risks to teens. By sharing the student article “The Real Risks of Marijuana,” teaching the lesson, and engaging students with the activity sheet, you’ll help students understand the dangers of marijuana use.

Reading Comprehension Questions

1 How does marijuana affect the brain? *(The chemical compound THC alters the communication between neurons. This can affect coordination and reaction time, and is associated with problems with attention, memory, learning, and decision-making.)*

2 Why are teens more vulnerable to the harmful effects of marijuana? *(The brain continues to develop until the mid-20s. Using drugs—including marijuana—can negatively impact brain development. Since the adolescent brain is still developing, these changes may be long-lasting.)*

3 Why may CBD products not have the health benefits they claim? *(CBD products are not FDA-regulated, so they have not been rigorously tested by an independent agency to make sure they are safe and contain exactly what their labels claim.)*

Critical-Thinking Writing Prompts

Grades 6–8 Use your own words to explain how marijuana use can cause changes to a person’s brain.

Grades 9–10 Describe at least two ways marijuana use may negatively impact a person’s life in the long term.

Grades 11–12 Imagine that you have a friend who is using marijuana. What would you say to them to convince them to stop?

Paired Reading

“The Science of Marijuana: How THC Affects the Brain” (<http://heads-up.scholastic.com/students/the-science-of-marijuana>)

Writing Prompt Explain why using marijuana could have a negative impact on a student’s performance. Use evidence from “The Science of Marijuana: How THC Affects the Brain” and “The Real Risks of Marijuana” to support your reasoning.

Student Activity Sheet

Distribute the activity sheet before students read the article and direct them to record their answers in the Before Reading section. Then have them complete the activity after reading the article. Answers:

1. False. Supporting evidence may include: Marijuana today contains roughly three times the concentration of THC than the drug did 30 years ago. People can end up in the emergency room with severe symptoms after taking too much THC.

2. False. Supporting evidence may include: Teens who use marijuana recreationally are four to seven times more likely than adults to develop what is known as marijuana use disorder.

3. False. Supporting evidence may include: Marijuana is associated with problems with attention, memory, learning, and decision-making. Using marijuana can cause people to develop marijuana use disorder. The severe types of this disorder are considered addiction. Inhaling or ingesting too much THC can result in people ending up in the emergency room.

4. True. Supporting evidence may include: Marijuana can lead to problems with attention, memory, and learning. These effects may last for days or weeks.

5. True. Supporting evidence may include: Marijuana (specifically, the presence of THC in the brain) can impact a person’s coordination and reaction time, making it dangerous to drive a car.

6. False. Supporting evidence may include: Teens are more susceptible to the effects of drugs like marijuana because their brains are still developing. Drug use during the time of adolescent brain development may have long-lasting impacts on brain function. Because their brains are still developing, teens also have a higher risk of becoming addicted to marijuana.

Subject Areas

- Science Literacy
- English Language Arts
- Health/Life Skills

Standards

Common Core State Standards (CCSS)

RST.6-8.1 / RST.9-10.1

- ▶ Cite specific textual evidence to support analysis of science and technical texts

Next Generation Science Standards (NGSS)

Practice Obtaining, Evaluating, and Communicating Information

Crosscutting Concept Cause and Effect: Mechanism and Prediction

Core Idea LS1.A: Structure and Function

National Council for the Social Studies (NCSS)

8. Science, Technology, and Society

Additional Lesson Resources

- ▶ Tiered Vocabulary Tools: Visit scholastic.com/headsup/realrisksofmarijuana for a vocabulary list to support this article.
- ▶ heads-up.scholastic.com/teachers
- ▶ teens.drugabuse.gov



Learn the Truth About Marijuana



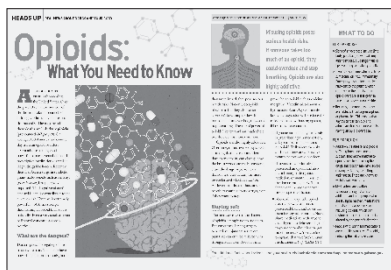
Directions: Before reading “The Real Risks of Marijuana,” read the statements below and note whether you think they are true or false in the column to the left. Then, read the article.

After you have finished, reread the statements and record the correct answers based on what you learned. In the right-hand column, record at least one piece of evidence from the article that supports your answer for each statement.

BEFORE READING	CLAIM	AFTER READING	SUPPORTING EVIDENCE
<input type="radio"/> TRUE <input type="radio"/> FALSE	1. Marijuana is safer today than it was in the past.	<input type="radio"/> TRUE <input type="radio"/> FALSE	
<input type="radio"/> TRUE <input type="radio"/> FALSE	2. Marijuana is not addictive.	<input type="radio"/> TRUE <input type="radio"/> FALSE	
<input type="radio"/> TRUE <input type="radio"/> FALSE	3. Using marijuana is now legal in many states because, unlike other illicit drugs, it is completely safe.	<input type="radio"/> TRUE <input type="radio"/> FALSE	
<input type="radio"/> TRUE <input type="radio"/> FALSE	4. Using marijuana could affect a person’s performance in school.	<input type="radio"/> TRUE <input type="radio"/> FALSE	
<input type="radio"/> TRUE <input type="radio"/> FALSE	5. Using marijuana can affect a person’s ability to drive.	<input type="radio"/> TRUE <input type="radio"/> FALSE	
<input type="radio"/> TRUE <input type="radio"/> FALSE	6. Teens are less susceptible to the effects of marijuana than adults.	<input type="radio"/> TRUE <input type="radio"/> FALSE	

For more information, visit [scholastic.com/headsup](https://www.scholastic.com/headsup)

From Scholastic and the scientists of the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services



Opioids: What You Need to Know

Your students may have already heard about the opioid crisis. An average of 130 people die every day from an overdose. But even if students have seen the headlines, they might not know what these drugs are—and their dangers. The student article “Opioids: What You Need to Know” and activity sheet “What Causes Addiction?” will help students understand important facts about opioids and guide them on how to be safe. Sharing these materials with your students will support them in making smart decisions and staying healthy.

Critical-Thinking Questions

1 Why have opioid overdoses increased? *(There has been a rise in the illegal importing of synthetic opioids such as fentanyl. These opioids are very powerful. Even a very small amount can cause someone to stop breathing.)*

2 What precautions should a person take if they are prescribed an opioid? *(Answers may include: share with their doctor any medical history that may make them more vulnerable to addiction, such as mental illness; follow doctor’s directions exactly; only take the drugs to treat pain.)*

3 How can medications help reduce the number of people who overdose from opioids? Describe two ways. *(If someone is experiencing an overdose, giving them a dose of naloxone can reverse the effects and save their life. Other medications can help someone who is addicted to opioids recover, reducing the risk that they will overdose.)*

Writing Prompts

Grades 6–8 Explain why opioids, including prescribed opioid medications as well as illegal heroin and fentanyl, pose health risks.

Grades 9–10 Explain how a person might increase their risk of health dangers associated with opioids. Consider both prescribed opioid medications as well as illegal heroin and fentanyl. Then, explain how they could reduce their risk.

Grades 11–12 What are some actions that people could take to help control the opioid overdose crisis, as related to both prescribed medications and

illegal opioids? Consider individuals, medical professionals, elected officials, community organizations, etc.

Paired Reading

“Sculpting Your Brain: The Science of Addiction” (teens.drugabuse.gov/blog/post/sculpting-your-brain-science-addiction)

This paired text explains how using drugs can affect brain development.

Writing Prompt Explain why teens are especially vulnerable to addiction. Use supporting text evidence from “Sculpting Your Brain: The Science of Addiction” and “Opioids: What You Need to Know.”

Activity Sheet Answers:

1) Dopamine is a chemical that helps signals pass between nerve cells. When dopamine levels rise because of a pleasurable experience, it helps your brain remember that activity to repeat it.

2) Activities like eating chocolate cause dopamine levels to rise, which makes you want to repeat it. But the increase in dopamine from using drugs is much higher. That can cause your brain to crave drugs over other pleasurable activities.

3) A person who is addicted to drugs has experienced changes in the way their brain works. The changes make the person crave drugs so that they continue to use them even if they experience negative consequences.

4) Answers will vary, but may include: Medications help a person stop misusing opioids, which can restore balance to brain circuits altered by their disorder. They may change the way that dopamine is processed in the brain so that the person experiences fewer drug cravings.

Subject Areas

- Science Literacy
- English Language Arts
- Health/Life Skills

Standards

Common Core State Standards (CCSS)

RST.6-8.1/RST.9-10.1

- Cite specific textual evidence to support analysis of science and technical texts

Next Generation Science Standards (NGSS) Practices

- Obtaining, evaluating, and communicating information

Crosscutting Concept

- Cause and effect: Mechanism and explanation

Core Idea

- MS-LS1.A/HS-LS1.A Structure and Function
- MS-LS1.D/HS-LS1.D Information Processing

National Council for the Social Studies (NCSS)

- 8. Science, Technology, and Society

Additional Lesson Resources

VOCABULARY SUPPORT

Download terms and definitions to support the article at scholastic.com/headsup/opioidsvocab

More Lessons on Drugs and Alcohol:

- headsup.scholastic.com/teachers
- teens.drugabuse.gov



National Institute on Drug Abuse

What Causes Addiction?

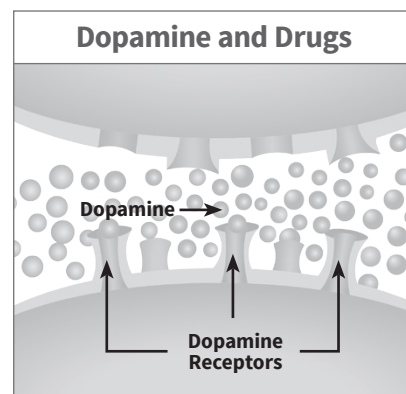
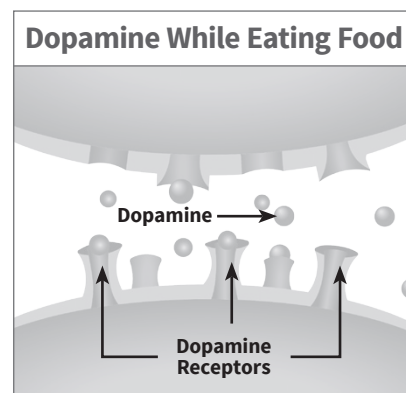
DIRECTIONS: Read the text passage and study the diagrams below to learn how drugs such as opioids change the way the brain works. Then, use the information along with what you learned in the article to answer the questions that follow.

DRUGS AND THE BRAIN

Drugs affect the way signals are sent in the brain's reward circuit, which is a network of structures that is activated when you do something pleasurable.

Dopamine is a chemical that helps signals pass between nerve cells in the brain. When you do something enjoyable, such as eating chocolate, dopamine levels increase in the brain (see top diagram). Receptors detect the rise in dopamine, which helps your brain remember the pleasurable behavior so that you are more likely to want to do it again.

Using drugs, including opioids, causes a rise in dopamine levels that is far greater than the increase from other enjoyable activities (see bottom diagram). When drugs are misused over time, the brain becomes used to the extreme surge of dopamine that drugs deliver. This leads to powerful cravings that make it very difficult to stop. The state of being ruled by these cravings is addiction.



THINK IT THROUGH

Use a separate sheet of paper to record your answers to the questions below.

1. What is dopamine? What role does it play in the brain?
2. Why are drugs more addictive than something else that gives pleasure, such as eating chocolate?
3. Explain why a person who is addicted to a drug might continue to use it even if they experience negative consequences, such as losing friends or a job?
4. In the article "Opioids: What You Need to Know," you learned that medications exist that can help treat addiction. Based on what you learned about the science of addiction above, how do you think they might work? Explain your answer.

For more information, visit scholastic.com/headsup.

From Scholastic and the scientists of the National Institute on Drug Abuse, National Institutes of Health, U.S. Department of Health and Human Services



Can Too Much Screen Time Harm You?

It's no secret that teens spend a lot of time viewing screens. In fact, the average teen spends over seven hours a day on screens for entertainment alone. But science increasingly shows that too much screen time can negatively affect teens' health. By sharing the article "Can Too Much Screen Time Harm You?" and the activity "Screen Time and Sleep Survey," you can help students understand how screen time may impact their physical and emotional well-being.

Reading Comprehension Questions

1 Explain why using your phone before bed might make it hard to sleep. *(You may become more alert because you are engaged in your phone. The bright light from the screen can also cause you to feel less sleepy because it reduces the amount of melatonin your body produces. Melatonin is a natural chemical that helps you fall and stay asleep.)*

2 What evidence have scientists collected that suggests a link between screen time and your psychological health? *(Some studies have shown a link between higher amounts of screen time and symptoms of depression; some kids who engage in excessive screen time have reported changes in their mood and behavior such as anxiety when they are away from their phone, neglecting responsibilities, and turning to screens to deal with stress.)*

3 Why do scientists think too much screen time can affect your brain development? *(A study showed that the brains of some kids who engaged in more than seven hours a day of screen time had a thinner cortex [outer layer of the brain] than those of kids who participated in less screen time. The cortex is the part of the brain that processes information and is an area that undergoes significant development during adolescence.)*

4 What are some ways teens can help reduce the impact of screen time on their health? *(Track screen time and*

set limits each day. Turn off screens 30 to 60 minutes before bed. Schedule time for non-screen-related activities. Keep track of emotions and mood related to screen time and ask for support if needed.)

Critical-Thinking Writing Prompts

Grades 6–8 How might spending too much time on screens affect your school performance? Use evidence to support your answer.

Grades 9–10 Explain why it is especially important for teens to balance screen time with other activities.

Grades 11–12 What are some of the ways excessive exposure to social media might negatively affect a teen's emotional well-being? What can teens do about this?

Paired Reading

"Getting Enough Sleep: The Impossible Dream?"
teens.drugabuse.gov/blog/post/getting-enough-sleep-impossible-dream

This paired text explains the importance of sleep and why many teens may be missing out.

Writing Prompt Explain why sleep is important and the factors that may prevent teens from getting enough. Use text evidence from "Can Too Much Screen Time Harm You?" and "Getting Enough Sleep: The Impossible Dream?" to support your answer.

Subject Areas

- Science Literacy
- English Language Arts
- Health/Life Skills

Standards

Common Core State Standards (CCSS)

RST.9, GRS. 6–10

- Compare and contrast the information gained from experiments with that gained from reading a text on the same topic.

RI.1, GRS. 6–12

- Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Next Generation Science Standards (NGSS) Practices

- Obtaining, evaluating, and communicating information
- Analyzing and interpreting data

Crosscutting Concept

- Patterns

Core Idea

MS-LS1.D/HS-LS1.D

- Information Processing

National Council for the Social Studies (NCSS)

- 8. Science, Technology, and Society

Additional Lesson Resources

Vocabulary Support

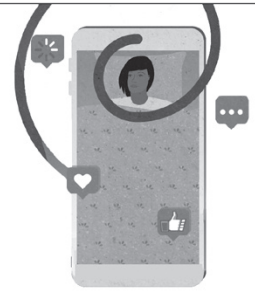
- Download terms and definitions at scholastic.com/headsup/screentime

More Lessons on Science and Health

- headsup.scholastic.com/teachers
- teens.drugabuse.gov

Screen Time and Sleep Survey

Do you know how much time you really spend on electronic devices each day? Conduct your own investigation to find out.



Step 1: Collect Data » For one week, carefully track your habits using the table below.

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
SCREEN TIME ACTIVITY » Record the screen time hours spent daily on each activity.							
Computer/ Phone/Tablet: <i>School-Related</i>							
Computer/ Phone/Tablet: <i>Entertainment</i>							
Watching TV							
Playing Games							
Total Hours of Screen Time							
MOOD » Record your mood at least twice a day.							
Morning							
Evening							
SLEEP TIMES » Record your total hours of sleep the night before each day.							
Bedtime (Night Before)							
Wake Time							
Total Hours of Sleep							

Step 2: Analyze Your Data (separate paper)

Graph your daily screen time and sleep for the week, then answer these questions:

1. What screen activity had the highest total?
2. Do you observe any relationship between screen time and sleep totals?
3. The Centers for Disease Control recommends teens get at least eight hours of sleep a night. Did you? What is one specific step you could take to

help yourself sleep better?

4. Did you observe a link between your mood and amount of sleep or screen time? Explain.

Step 3: Set a Challenge (separate paper)

Write down goals to reduce your weekly screen time. How much screen time will you allow each day? What activities will you cut back? Which will you increase? Track your activities for another week and compare your results.

For more information, visit scholastic.com/headsup.

MORE FREE TEACHER RESOURCES: [scholastic.com/headsup/teachers](https://www.scholastic.com/headsup/teachers)

Lessons, Texts & Printables



Science/ELA materials that teach important facts and elicit critical thinking

Videos



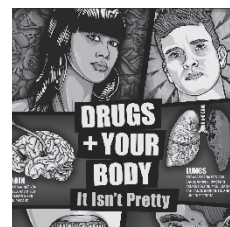
Classroom videos that illustrate the science of drug misuse

Interactives



Dynamic online supplements that engage students in core information

Poster/ Teaching Guides



Engaging visuals with activities for comprehension and reinforcement

COMPILATION 2019-20 Teacher Edition

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