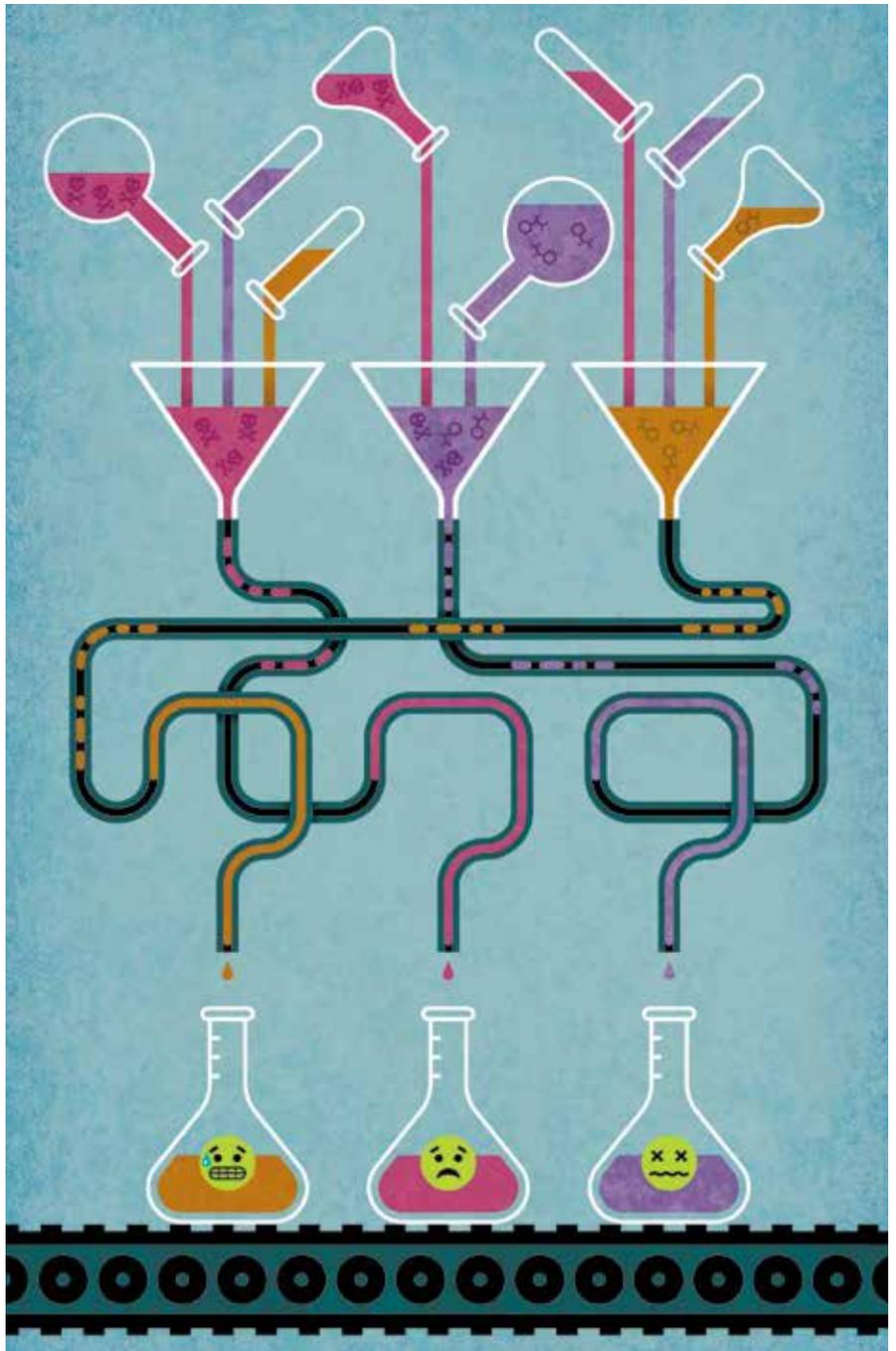


NOT FIT FOR HUMAN CONSUMPTION

You probably know that drugs that don't come from a pharmacy or other legal distributor can be dangerous. But they also may not be what they seem.

IN RECENT YEARS, emergency room doctors have reported a growing number of overdoses related to the use of certain types of **synthetic drugs**. Most drugs—even the ones that help people—are synthetic, which means that they're produced by mixing and creating chemicals in laboratories. The ones that are prescribed by doctors and bought in pharmacies or other legal retailers are tested to make sure that they are safe.

But now synthetic drugs are also being made in illegal or unregulated laboratories, mostly in foreign countries. The makers of these drugs create chemicals that act like other drugs, such as marijuana or prescription pain medications. The drugs are then sold on the street, online, or in gas stations or other stores, and are often marked with misleading labels.



While many drugs pose a risk for addiction and overdose if they are misused, these counterfeit synthetic drugs can carry additional risks. There is no way to know what chemicals the drugs contain or in what amounts. A product bought on the street or online may look the same as a familiar drug. It may even look identical to a pill a person

would buy in a pharmacy. But the drugs can contain completely different chemicals and be much more powerful, and potentially deadly.

Read the sidebar below to learn more about the dangers of counterfeit synthetic drugs.

Bottom line: Never take any prescription drug that is not prescribed for you and is not bought in a pharmacy.

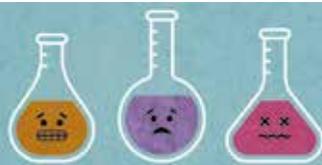
TAKE ACTION



» If someone you know has a bad reaction to what you think is a synthetic drug, **call your local poison control center at 1-800-222-1222.**

» If they stop breathing, collapse, or have a seizure, **call 911 immediately.**

DANGEROUS EFFECTS OF SYNTHETIC DRUGS



OPIOIDS

Example: Fentanyl

Opioids are powerful drugs that doctors prescribe to relieve pain. They can be **extremely addictive** and even **deadly** if they are misused. **Fentanyl** is a synthetic opioid that is much stronger than other opioids. It is prescribed only to treat extreme pain in patients with cancer or following surgery.

Recently, there has been a rise in the illegal production of fentanyl. Illegally made fentanyl is often mixed with other drugs or hidden in fake prescription medications that are sold on the street. Users may not know they are taking it.

A surge in deadly overdoses related to opioids has been linked in part to products that contain hidden fentanyl. It is never safe to take prescription drugs that are not prescribed for you or that are bought anywhere other than at an official pharmacy because you don't know what chemicals they really contain.

CANNABINOIDS

Examples: Spice, K2

Often called "synthetic marijuana," these drugs are made of dried plant material that is sprayed with chemicals. These chemicals, called **synthetic cannabinoids**, are similar to THC, the main active ingredient in marijuana. But they are much more powerful than THC. The drugs can cause **paranoia and violent behavior** as well as serious health problems, including **seizures, heart attacks, and death**. Studies have also shown that the drug called Spice can be **addictive**.

130 people were treated over three days in New York City in 2016 for **overdosing on synthetic cannabinoids**. Health officials believe that the cause was a powerful batch of **K2**. Because the laboratories that make these products are not regulated, each batch can be very different, even if the packaging looks the same.

CATHINONES

Example: "Bath Salts"

Fake "bath salts" are different from the products used in your bathtub. These bath salts are synthetic drugs that contain chemicals called **cathinones**, which are designed to be similar to stimulant drugs such as amphetamine and MDMA (also known as Ecstasy or Molly). But these drugs can have more powerful effects. They can **increase heart rate and blood pressure** as well as **cause hallucinations and paranoia**.

Intense cravings have been reported by people who use bath salts. That's a sign that they have become **dependent on the drug**.

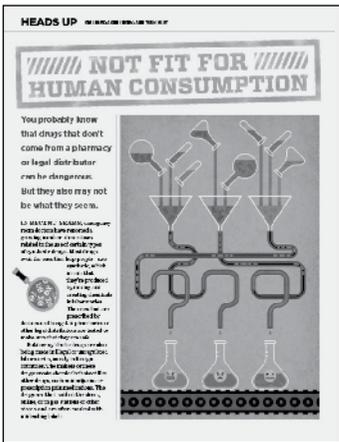
Makers of illegal synthetic drugs, including bath salts, sometimes try to avoid the law by labeling products as "Not for Human Consumption." Many states have passed laws to stop this practice.

MORE INFO: For additional facts about drugs and health, visit scholastic.com/headsup and teens.drugabuse.gov.

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

TEACHER'S GUIDE

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Subjects

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

Common Core State Standards

- RST.6-8.1 / RST.9-10.1
- Cite specific textual evidence to support analysis of science and technical texts
- W.6-8.1 / W.9-10.1
- Write arguments to support claims, using valid reasoning and relevant and sufficient evidence

Next Generation Science Standards

- MS-PS.1.A / HS-PS1.A
- Structure and Properties of Matter
- MS-LS.3.B / HS-LS3.B
- Information Processing

National Science Education Standards

- Properties and Changes of Properties in Matter/ Structure and Properties of Matter
- Personal Health

National Council for the Social Studies

- 4. Individual Development and Identity
- 8. Science, Technology, and Society

Not Fit for Human Consumption

In recent years, there has been a rise in the number of health emergencies and overdoses related to drugs that are made illegally in laboratories. Synthetic drugs are created in these labs to mimic the effects of other, more commonly known substances, such as marijuana and prescription pain medications. But these unregulated drugs can be even more dangerous than their counterparts. In “Not Fit for Human Consumption” students will learn what synthetic drugs are and why they are dangerous. You can help students stay safe from synthetic drugs by sharing the article and paired worksheet (see reverse side), and teaching the lesson below.



Critical-Thinking Questions

- 1) Why might a synthetic drug pose more health risks than its more familiar counterpart? Use evidence from the text to support your answer. *(Answers may include: Synthetic drugs made in illegal laboratories may have different chemicals that make them more powerful. There is no way to know what chemicals the drugs contain and in what amounts. The chemicals in synthetic drugs can have different or stronger effects on the body. For example, synthetic cannabinoids have a stronger effect on the brain than THC, the main active ingredient in marijuana.)*
- 2) Officials try to reduce the misuse of drugs by regulating their use and making them illegal. Why is this approach difficult with synthetic drugs? *(Answers may include that the makers of synthetic drugs can add misleading labels to products, such as “Not Fit for Human Consumption.”)*
- 3) Why is it important to use only prescription medications that have been prescribed by a doctor and bought directly from a pharmacy? *(Answers may include that medications such as pills bought on the street or online may be counterfeit. The effects of these medications can be unpredictable and may be deadly because they may contain hidden chemicals such as fentanyl.)*

Writing Prompts

- **Grades 6–8:** Explain what a synthetic drug is and how it is different from the drug it is designed to mimic.
- **Grades 9–10:** The article states that the effect of synthetic drugs is unpredictable. Use evidence from the text to support this statement.
- **Grades 11–12:** The U.S. is currently experiencing an overdose crisis related to opioids. How might synthetic drugs play

a role in this crisis? Use evidence from the text to support your answer.

Student Worksheet

The worksheet on the reverse side includes fill-in-the-blank questions to reinforce comprehension of the article. It also includes a prompt for students to use the information they have learned to create a poster warning teens about the dangers of synthetic drugs.

Answers—Part 1:

1. laboratories; designed. 2. powerful.
3. Spice; K2; cannabinoids. 4. THC.
5. “bath salts.” 6. Counterfeit; fentanyl.
7. misleading. 8. addiction; overdose.

Part 2: Each student poster, flyer, or meme should include elements that grab the reader’s attention, such as startling facts or statistics or eye-catching visuals. It should include facts about why synthetic drugs are dangerous and advice about how to stay safe.

Tiered Vocabulary Tools

Visit scholastic.com/headsup/not_fit_for_human_consumption for a tiered vocabulary list to support this article.

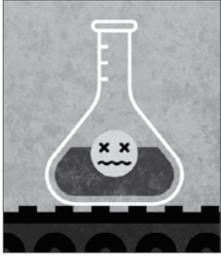
Paired Reading

- “Drug Facts: Spice” (<https://teens.drugabuse.gov/drug-facts/spice>)
- **Writing Prompt:** Explain the dangers of the synthetic drug Spice. Include why it may affect a person’s body differently than marijuana. Use text evidence from “Not Fit for Human Consumption” and “Drug Facts: Spice” to support your answer.

Additional Teaching Resources

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

HOW MUCH DO YOU KNOW ABOUT SYNTHETIC DRUGS?



Part 1: Use the information from the article “Not Fit for Human Consumption” to answer the questions below about synthetic drugs and their effects.

THC	cannabinoids	laboratories	stimulant	counterfeit	designed
K2	addiction	misleading	overdose	cathinones	powerful
Spice	synthetic	natural	“bath salts”	fentanyl	reduce

- Synthetic drugs made in illegal _____ can contain chemicals _____ to act like other drugs.
- One reason synthetic drugs are dangerous is they often have added chemicals that make them more _____.
- _____ and _____ are drugs made of dried plant leaves sprayed with synthetic _____ that can cause dangerous health problems, including heart attacks.
- _____ is the main active ingredient in marijuana.
- Like the stimulant drugs they mimic, _____ contain chemicals called cathinones, which can cause hallucinations, paranoia, and a dangerous increase in heart rate.
- _____ prescription medications sold on the street have been found to contain hidden amounts of the powerful synthetic opioid _____.
- The producers of illegal synthetic drugs sometimes package the drugs with labels that are _____.
- Both legitimate and illegal synthetic opioids can pose a high risk for _____ and _____.

Part 2: Use the information in the article and your own Internet research from reliable sources to create a poster, flyer, or meme warning other teens about the dangers of synthetic drugs.

Points to consider: What images can you use to grab the reader’s attention? What important facts do you think people need to know? What advice would you give teens about synthetic drugs?

VOCABULARY LIST

GRADES 6-12

Dear Teacher,

The vocabulary list on the following pages is drawn from the “Not Fit for Human Consumption” student article and “How Much Do You Know About Synthetic Drugs?” worksheet.

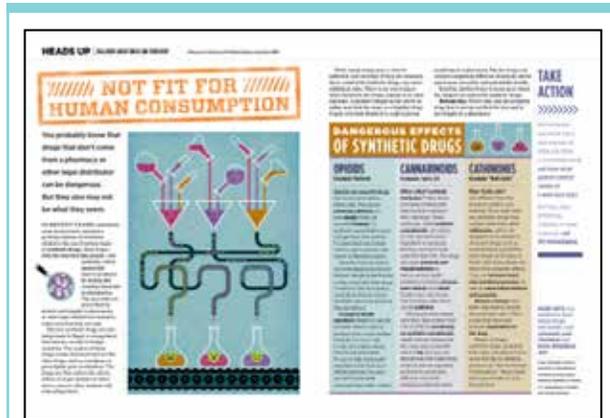
This vocabulary can be previewed with students prior to reading or reinforced with students afterward. Encourage students to incorporate these words into their writing and discussion of the article and worksheet.

The vocabulary list integrates vocabulary words that would be used across several content areas, such as *consumption*, *legitimate*, and *misleading*, and domain-specific words, such as *opioid*, *stimulant*, and *synthetic*.

Some suggestions for students to help their understanding include:

- 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;
- employing the words to create newspaper articles, stories, or poems.

Sources: Unless otherwise noted, definitions are sourced or adapted from: *Merriam-Webster Collegiate Dictionary* and *Scholastic Children's Dictionary*.



Supplement for “Not Fit for Human Consumption”

- Student Article: [scholastic.com/headsup/not_fit_for_human_consumption](https://www.scholastic.com/headsup/not_fit_for_human_consumption)
- Teacher's Guide (includes work sheet): [scholastic.com/headsup/teachers/not_fit_for_human_consumption](https://www.scholastic.com/headsup/teachers/not_fit_for_human_consumption)

Continue to vocabulary sheet on next page.

addiction (*noun*): a brain disorder or illness associated with compulsive (uncontrollable) behavior, such as drug use, despite negative consequences

addictive (*adjective*): something, such as a drug, that causes changes to the brain that result in compulsive (uncontrollable) behavior despite negative consequences

amphetamine (*noun*): a type of stimulant drug that increases certain brain activity

anxiety (*noun*): a feeling of fear or worry

“bath salts” (*noun*): a name given to a drug made from synthetic cathinones

cannabinoid (*noun*): a chemical that is found naturally in hemp plants and causes changes in the brain and behavior

cathinone (*noun*): a chemical found naturally in the leaves of the khat plant that increases certain activity in the brain and nervous system

chemical (*noun*): a substance, such as an element or a mix of elements (compound), that is made by a chemical process

consumption (*noun*): the act of eating, drinking, or using up something

counterfeit (*adjective*): made in imitation of something else with the goal of deceiving or cheating

craving (*noun*): an intense or abnormal desire for something

dependent (*adjective*): having a need for a drug because of repeated use so that physical withdrawal symptoms are experienced if the drug is removed

designed (*adjective*): created to have a certain purpose or function

disguised (*adjective*): having the true state or character concealed or hidden

distributor (*noun*): a company that buys products from one company and arranges for other companies or individuals to sell them

dose (*noun*): the measured amount of a chemical such as a drug to be taken at one time

ensure (*verb*): to make sure

fentanyl (*noun*): an opioid drug made in laboratories that is much stronger (50 to 100 times) than other legal opioids. It is prescribed only to treat very severe pain.

hallucination (*noun*): the perception of objects that are not real

hydrocodone (*noun*): an opioid drug that is used as a painkiller and prescribed by doctors for moderate to severe pain

illegal (*adjective*): against the law

ingredient (*noun*): something that is a part of a combination or mixture

K2 (*noun*): the name sometimes given to a drug made from dried plant leaves sprayed with synthetic cannabinoid chemicals that are similar to THC

laboratory (*noun*): a place where scientific experiments are done or products such as drugs are made

legal (*adjective*): allowed by the law

legitimate (*adjective*): being exactly as described, not false

marijuana (*noun*): dried leaves and flowers of the hemp plant which can be used as a drug

MDMA (Ecstasy or Molly) (*noun*): an illegal stimulant drug that gives feelings of pleasure and excitement

medication (*noun*): a chemical or substance that is used to treat a disease or medical condition

misleading (*adjective*): giving the wrong idea or inaccurate information about something, usually on purpose

misuse (*verb*): to use something in a way that is unintended or harmful, such as misuse of a prescription drug

morphine (*noun*): an opioid drug that is used as a painkiller and is prescribed by doctors for moderate to severe pain

natural (*adjective*): existing in or produced by nature

Norco (*noun*): a brand-name version of the drug hydrocodone

official (*adjective*): of or having to do with someone in a position of authority

opioid (*noun*): one of a group of drugs that produce relaxation, pleasure, and pain relief. Opioids can be addictive and potentially deadly due to overdoses.

overdose (*noun*): a lethal or toxic amount of a drug; (*verb*): to take a lethal or toxic amount of a drug

paranoia (*noun*): a tendency for extreme and unreasonable distrust or suspicion of other people

pose (*verb*): to present or create

potent (*adjective*): having a powerful effect

potentially (*adverb*): possibly, but not yet actual

prescribe (*verb*): to write or give medical instructions, such as regarding the use of certain medications

prescription drug (*noun*): a medication that must be ordered by a doctor before it can be dispensed

regulate (*verb*): to bring under control of the law or rules

regulation (*noun*): a rule that deals with details and procedures, such as those that are used to make sure something is safe

respond (*verb*): to react to something

retailer (*noun*): of or having to do with the sale of goods directly to customers

risk (*noun*): the possibility of loss or injury; danger

seizure (*noun*): a sudden attack caused by abnormal activity in the brain that causes convulsions or loss of consciousness

severe (*adjective*): of a great degree

Spice (*noun*): the name sometimes given to a drug made from dried plant leaves sprayed with synthetic cannabinoid chemicals that are similar to THC

stimulant (*noun*): a drug that causes a temporary increase in activity in parts of the brain and body

substance (*noun*): a material with a specific chemical makeup

surge (*verb*): to rise suddenly to an excessive or abnormal amount

synthetic (*adjective*): produced by a chemical process

THC (*noun*): a type of natural cannabinoid chemical that is the main active ingredient in marijuana

treat (*verb*): to care for or deal with medically; to act upon something with an agent such as a chemical to improve or alter

undergo (*verb*): to go through or experience

unpredictable (*adjective*): not able to be known in advance

unregulated (*adjective*): not controlled by rules or methods that are used to make sure certain standards of safety or quality are met

version (*noun*): a different form or type of something