

Lesson Plans for Student Activities

Lesson 1: What Do You Know About Teen Drug Trends?

OBJECTIVE Students learn about teen drug use trends and the dangers of drugs whose use is rising among teens or remaining stubbornly high.

NATIONAL SCIENCE EDUCATION STANDARDS

Life Science; Science in Personal and Social Perspective

WHAT YOU WILL DO

- Before the lesson begins, hold a class discussion based on these questions: “Do you think teen drug abuse is rising or falling?” “What’s your basis for judgment?” “What do you think causes increases and decreases in the rate of teen drug abuse?”
- Tell students that they are

going to determine how much they know about teen drug use trends and three substances that teens need to be more aware of: Vicodin, OxyContin, and inhalants. Distribute copies of Student Activity Reproducible 1. Tell students to write their names on the paper and label it No. 1. Then have them answer the questions. Collect and grade the papers.

- Have students read the article, “**Abuse of Inhalants and Prescription Drugs: Real Dangers for Teens.**” Next, hold a discussion based on these questions: “Why is it important that teens have the facts about inhalants and prescription painkillers?” “What risks do

these substances pose?”

- Next, tell students it’s time to see how much they’ve increased their knowledge. Give them a second copy of Student Activity Reproducible 1. Tell them to write their names on the paper and label it No. 2. When students have finished, collect the papers, score them, and record your data in the Assessment Guide below.
- Wrap up by discussing what students can do to keep their community free of abuse of inhalants, prescription drugs, and other drugs.

ANSWERS TO QUIZ QUESTIONS:

1. d; 2. a; 3. d; 4. b; 5. d; 6. d; 7. d; 8. d; 9. a; 10. b.

Lesson 2: How Inhalant Abuse Damages the Brain

OBJECTIVE Students use scientific data to draw conclusions about the effects of inhalants on brain functioning.

NATIONAL SCIENCE EDUCATION STANDARDS

Science as Inquiry; Science in Personal and Social Perspective

WHAT YOU WILL DO

- Tell students that new advances in imaging are letting scientists look directly into the living brain to figure out how and why drugs cause brain damage. Ask students how they think this capability has changed research.
- Explain that students will read about an experiment involving magnetic resonance imaging (MRI). Researchers compared the brains of solvent abusers

(solvents are a type of inhalant) to the brains of cocaine abusers. The study subjects were also given cognitive tests. The researchers wanted to see how the MRI findings and cognitive test results compared in the two groups. Generate discussion about how such an experiment should be set up to ensure the results are valid. Also, ask students why it’s important to learn how particular drugs damage the brain.

- Distribute Student Activity Reproducible 2. Have students complete it.
- Wrap up the lesson by asking students: “What kind of experiment could Dr. Rosenberg conduct to find effective ways of treating solvent abusers?”

ANSWERS TO REPRODUCIBLE:

1. The area is the white matter. The evidence is that 12 percent of solvent abusers with moderate to severe white matter abnormalities scored an average of 20 percent below the rest of the group on a verbal IQ test.
2. By drawing upon evidence that shows that parts of the brain responsible for behavior are damaged by the solvents.