

## Lesson Plans for Student Activities

### Lesson 1: Heads Up: How Much Do You Know About Drug Addiction?

**OBJECTIVE** To test students' self-knowledge about drug addiction before and after reading the article

#### NATIONAL SCIENCE EDUCATION STANDARDS

Life Science; Science in Personal and Social Perspective

#### WHAT YOU WILL DO

- Before the lesson begins, ask students, "What do you know about drug addiction?" and "What do you think happens to a person's brain when they are addicted to drugs?" Give students time for discussion.
- Tell students you are going to find out what they really know about drug addiction.

Distribute copies of Student Activity Reproducible 1. Tell students to write their name on the paper, date it, label the paper #1, and answer the questions. Collect the papers when they are done.

- Have students silently read the article, "Drug Addiction Is a Disease." When they have finished, begin a discussion by asking the following: How would you define addiction? Why is addiction a disease? What do drugs do to the teen brain?
- After the discussion, tell students you are going to find out if they know more about drug addiction and their bodies than

they did before. Distribute a second copy of Student Activity Reproducible 1. Tell students to write their name on the paper, date it, label the paper #2, and answer the questions. After students are done, collect the papers, score their answers, and record your data in the Assessment Guide below.

- Wrap up the lesson by asking students: "Why are drugs dangerous?" and "What can you do to prevent drug abuse?"

#### ANSWERS TO REPRODUCIBLE:

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

### Lesson 2: Heads Up: Drug Abuse Affects Decision Making

**OBJECTIVE** Students use scientific data to draw their own conclusions about the effects of drug use on the brain

#### NATIONAL SCIENCE EDUCATION STANDARDS

Science as Inquiry; Science in Personal and Social Perspective

#### WHAT YOU WILL DO

- Tell students that scientists have long known that drugs damage the brain's limbic system. Now, scientists are discovering that drug abuse also harms other parts of the brain. Ask students what parts of the brain they know about and what might happen if these parts were damaged.

- Have students define the word *hypothesis*. If necessary, explain that a hypothesis is a scientific word for an assumption.

Scientists come up with a hypothesis, then do experiments to prove the hypothesis true or false.

- Tell students they are going to look at a real scientific study. The study tests the hypothesis that drug abusers make poor decisions because the drugs have damaged their prefrontal cortex.
- Distribute Student Activity Reproducible 2. Have students complete it.
- Wrap up the lesson by asking students: "Why do you think it

is important to do research studies?" and "What kind of study about drugs and the body would you do?"

#### ANSWERS TO REPRODUCIBLE:

1. Group A (drug abusers) and Group B (brain damaged) were most alike. The most different were Group B (brain damaged) and Group C (healthy). 2. People who abused drugs made decisions similar to those of people with brain damage. 3. Yes.