

EFFECTS OF OTHER DRUGS

Teacher Script Day #2

Prep before class:

→ Materials needed:

1. Bag of food such as M&M's, potato chips, pretzels, candy kisses, etc.
2. For the Lab Experiment:
 - Medium sized ice chest/cooler (to store 5-lb bag of ice)
 - 5-lb bag of crushed/cubed ice (should be plenty for 5 to 6 class periods)
 - 2 gallon jugs of tap water (may need to refill throughout the day)
 - Bag of 8-oz to 12-oz plastic cups (1 per student)
 - Several rolls of paper towels or hand towels

→ Have copies of the following activities for students:

1. *Drugs Fact Sheet: Over-the-Counter and Prescription Drugs* (Page 53)
2. *Perception Writing Response sheet* (Page 52)
3. *What's Your Guess? worksheet* (Page 54)
4. *What's Your Guess? Graphing Activity sheet* (Page 56, 57)
5. *Test Your Drug Knowledge: Quiz* (Page 58)

Lesson Day 2

Background Information

1. Today's activities will provide additional information about the impact that illegal drugs can have on the body as well as the brain.
2. Through the *Understanding Craving and Addictions Demonstration*, students should acquire a good understanding of the terms craving and addiction.
3. This lesson will also briefly discuss how over-the-counter and prescription medications can be abused and misused when dosage directions are not followed.

Understanding Craving and Addictions Demonstration

- This object of this demonstration is to have the students understand and recognize what the terms "craving" and "addiction" mean.

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- Intersperse this activity throughout the class period as you teach the rest of the lesson.
 1. **Introduce *Understanding Craving and Addictions Demonstration***
 - A. Have a large bag of candy such as M& M's, Skittles, or a bag of potato chips sitting on a table in the front of the room. Make sure the snacks are positioned so that all of the students in the room can see them.
 2. Occasionally take out a few of the snacks and munch on them deliberately. Make noise while chewing; you may even consider making a comment such as, "These are so good" or "These are hitting the spot", but do not offer any to the students.
 3. About half way through class: **Continue the *Understanding Craving and Addictions Demonstration***
 - A. Offer each student one of the snack items.
 - B. Let the students eat their snack right away.
 - C. Set the bag of treats in plain sight but do not talk about them or pay any attention to them for a few minutes. Continue with the other activities of the lesson.
 - D. If students ask for more or talk about the treats, respond by saying "They were really good weren't they? Or "Oh did you like those?" Don't give them any more treats - - tell them that you need to continue the lesson right now and can't pass out the snacks.
 4. Near the end of class: **Finish *Understanding Craving and Addictions Demonstration***
 - A. Ask the students if anyone wants another treat. Ask if it was hard for them to see the snacks on the table and not get to have one. Ask how it felt to not get another treat. (Students typically report being pre-occupied with the snacks).
 - B. Explain that you could call this experience "**a craving**".
 - C. Ask the students to think about the difference between craving a treat and craving a drug such as nicotine; also discuss their similarities.
 - D. Ask students to define the term "addiction."
 - E. Also ask them to give words or phrases that they think of when describing addiction or someone who is addicted.
 - There will likely be a wide variety of responses given.

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- If student responses are all stereotypes such as a “skid row bum”, be certain to remind them that young people that they may see everyday in the community can be addicted and even babies are sometimes born addicted to drugs that the mother ingested during pregnancy.
- Also, tell them that there are athletes, politicians, students, writers, actors/actresses, ministers, etc. who are addicted to drugs (or other substances or behaviors).

F. **Define Addiction** as: **an uncontrollable compulsion (desire) to repeat a behavior regardless of its consequences**; remind students that addiction can happen to any type of person (young/old, educated/non-educated, rich/poor, male/female, Caucasian/Asian/African American).

G. Some drugs are physically addicting in that a person will experience withdrawal symptoms when the drug use is stopped (for example: headaches, nausea, cramping, and discomfort). For most people, stopping the use of M & M’s or potato chips would cause no difficulty and probably no physical symptoms of any kind. (There certainly are food cravings as the students can probably describe, and some people are considered to be compulsive overeaters and “addicted” to food. For most of these individuals, the compulsive eating is psychological. This can be discussed and students may want to research the difference between cravings, psychological addiction, and physical addiction.)

Understanding the Facts about Drugs

- The goal of this reading and discussion activity is for students to obtain basic knowledge about over-the-counter and prescription drugs.
 1. **Factual information** about drugs - Pass out the *Drugs Fact Sheet: Over-the-Counter and Prescription Drugs* (Page 53).
 2. Read as a class and discuss the information sheet.
 3. **Discussion** - Ask students: “Can anyone tell me the difference between prescribed and over-the-counter medications”. Make sure that the definition given covers the following:

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- A. Over-the-counter medications can be purchased by anyone, you simply pick the item up off the shelf at your local store (such as Wal Mart, Kroger, Target, Cub Foods, etc.)
 - B. Prescription medications are given to an individual by a doctor; typically you have an appointment with your physician, they examine you, weigh you, take blood pressure, heart rate, etc. - - run tests, make a diagnosis and then write out a prescription and a dose/time schedule for medication specifically for you and your illness/problem.
- c. Ask students to brainstorm and come up with as many different types of prescribed and over-the-counter medicines that they can.
- i. Over-the-counter – Tylenol, Nyquil, aspirin, Tums, Kaopectate, cough syrup, etc.
 - ii. Prescription – Ambien, Zoloft, Oxycontin, Vicodin, Prozac, Wellbutrin, etc.
- d. List these on the board or on a chart.
- e. **Discuss the three classes of drugs** as you read: e.g., Opioids, Depressants, Stimulants
- A. Ask students to identify other stimulants (caffeine, crack, nicotine, and methamphetamine).
 - B. People who use stimulants often appear to be more talkative, anxious or nervous and describe feelings of euphoria. However, it is important to note that stimulants cause the heart to beat faster – often abnormally faster and at an irregular rate. This narrows the blood vessels and reduces the amount of blood and oxygen reaching the heart. This, in essence, starves the heart muscle and can result in heart failure and death.
 - C. Even people who are in very good physical condition can have heart failure as a result of even one-time use of cocaine or other stimulants. Deaths such as these are not predictable. At this time, no one can predict who may be more susceptible to these potential heart problems.

Ice Water/Perception Experiment

- The goal of this demonstration is for students to understand how drugs can change your perception of reality and why that can be dangerous;
 1. Students can work all together and take turns, or the students can be divided into smaller groups - - make this decision based on the composition of each class.

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2. Each group will need a total of two cups: one cup that contains ice water and another cup that contains room temperature water.
3. Pass out the *Perception Writing Response worksheet* (Page 52) and have the students complete it as they do the experiment.
4. First, have the students put several fingers into the room temperature water. Ask students to describe the temperature of the water (generally they will say the temperature is “warm”).
5. Second, have the students remove their fingers from the water.
6. Then, have the students immediately place the same fingers into the cup with ice water. Have them keep their fingers in the ice water for about one minute. (Students will often complain about how cold the water is. This is normal. Have them keep their fingers in the ice water until you instruct them to pull their fingers out).
7. Instruct the students to remove their fingers from the ice water.
8. Then immediately place the same fingers into the cup of room temperature water. Ask the students to describe how the water feels (it should feel “very warm”).
9. Students typically feel that the temperature of the room temperature water is much warmer than it was earlier.
10. Ask if the temperature of the room temperature water really changed or is it a perceptual distortion/illusion?
11. Discuss the fact that different conditions can affect the way people perceive reality. The temperature of the ice water affected how the temperature of the room temperature water felt. This same distortion of perception often occurs when people use illegal drugs.
12. Discuss other real world examples of how our perception can be distorted:
 - i. A person who is sun tanning in the summer will end up having a body temperature that is much higher than normal; if this person decides to cool off by jumping into a swimming pool, the pool water will feel extremely cold.
 - ii. A person who is playing in the snow without mittens will end up developing a body temperature that is much lower than normal; if this person decides to warm up by going inside and placing their hands under room temperature tap water, the water will feel extremely warm.
 - iii. Another example can be drinking alcohol outside in very cold weather since it provides a feeling of warmth (at least initially). People who are freezing and close

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to death (but have been revived) often describe feeling warm and comfortable prior to succumbing to the cold.

11. Relating the experiment to drug use:

- A. Introducing drugs into the body can also create misperceptions. These perceptual distortions can occur to any and/or all of our five senses (sight, hearing, taste, smell or touch).
- B. Discuss potential dangers that can occur when someone's perception of reality is compromised. For example, people may not be able to see or hear as well as they normally would. They may misperceive or misjudge heights, distances, etc. making driving or any other motor task difficult (even walking).
- C. Judgment and decision making skills are compromised with many illicit drugs, and people can make very dangerous and unhealthy decisions while under the influence.
- D. Poor decision making can include sexual encounters, driving under the influence, committing crimes while under the influence, etc.

Reading about other drugs

1. Review information from either the *Tommy Digs Up the Dirt on Drugs* storybook or the *Marijuana and Cocaine Fact Sheets*.
2. You may want to re-distribute the story books OR have students get out their *Fact Sheets*.
3. Relate this information to the Perception Experiment.
4. Describe for students how stimulants such as cocaine speed up the activity in the brain and spinal cord. This causes the heart rate to increase and both blood pressure and metabolism to increase.
5. Discuss with students that the use of different drugs can alter perception in different ways. Here are some examples:
 - A. Alcohol use can cause someone to perceive themselves as more confident and brave than they normally are;
 - B. Excessive alcohol use may cause a person to misjudge distances; they may think they are several feet from the edge line when in actuality they are only an inch or so away from going off the road.

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- C. Long term cocaine use can cause misperceptions such as hallucinations, seeing things that aren't really there or hearing voices that aren't present.
- D. Marijuana use and cocaine use can create feelings of paranoia, causing users to think that people are out to get them or are following them, etc.

What's Your Guess? Activity

- The goal of this activity is for students to realize that while some students use drugs, **most** do not.
- With this knowledge it may be easier to resist peer pressure to try drugs.
 1. Explain to students that the next activity is based on a long-term research study called *Monitoring the Future (MTF): A Continuing Study of American Youth*. Make sure to explain the following points:
 - A. Random samples of students from across the country were asked to complete surveys at three different times throughout their life (8th, 10th and 12th grade).
 - B. Students completed these surveys anonymously; this means that no names or identifying information was written on the surveys. This procedure helps ensure that the students' answers are kept private - - this way, adults such as parents or teachers could NOT determine a particular student's answers to any of the survey items. This helps make the students more comfortable when completing the survey and encourages them to respond honestly to the questions.
 - C. Students were asked if they had used tobacco products, consumed any alcoholic beverages, or took any drugs over the last 30 days.
 - D. Students were also asked if they had used tobacco products, consumed alcohol or took drugs at any time during their life (since birth).
 - E. Once all of the surveys from across the country were collected, the responses were summarized and averaged to show group results.
 2. Hand out the *What's Your Guess? worksheet* (Page 54).
 3. Select students to read the scenarios out loud **OR** have students read silently.
 4. Instruct the students to make an estimate as to the percentage of 8th grade students that have used three particular substances:
 - A. Alcohol – both in their lifetime and in the last 30 days;
 - B. Cigarettes – lifetime and last 30 days;

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- C. Marijuana – lifetime and last 30 days.
5. Students can work individually, in pairs, or in small groups. It may be interesting to have the students work independently at first and then place them in small groups for discussion, having students attempt to come up with a unified solution.
6. **What’s Your Guess Graphing Activity**
- A. Hand out the *Past 30-day Drug Usage* and the *Lifetime Drug Usage charts* from the *Monitoring the Future (MTF)* studies.
 - B. Tell students that they will be reading these charts in order to determine the actual usage statistics (number of students who have used) for the three drugs they made estimates for (Alcohol, Cigarettes and Marijuana).
 - C. Show the students how to read the Drug Usage charts.
 - D. Read through some of the drug categories on the left; explain that the usage statistics are listed by year from left (oldest information) to right (newest information).
 - E. Tell students that each drug (Alcohol, Cigarettes and Marijuana) will be on a different page and they will need to look at multiple pages.
 - F. Tell students that they will need to write down the most recent statistic (e.g., 2009) for each of the three drugs, show them that this statistic is on the far right hand side of the chart under the heading (e.g., “2009”).
 - G. Have students identify the actual statistics for the Lifetime Usage and the 30 Day Usage questions.
 - H. Tell students that the **Lifetime Usage** questions are the **odd numbered** questions (1, 3, and 5) and the **Past 30-day Usage** questions are the **even numbered** questions (2, 4, and 6).
 - I. Walk around the room and answer any questions the students may have.
 - J. Pass out the *What’s Your Guess? Graphing Activity sheet* (Page 56, 57).
 - K. Explain to students that they will be creating bar graphs to compare their responses with the MTF statistics.
 - L. Have students graph their *Lifetime Usage* estimates for cigarettes next to the actual statistics for cigarettes from the MTF study; have them also graph the alcohol and marijuana values.
 - M. Encourage students to use crayons and/or markers to individualize their graphs.

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- N. Make sure students label their graphs with the appropriate percentage numbers so that readers can easily interpret the values.
- O. Discuss how sometimes our perceptions of what others are doing are not correct. Why does this matter? Our perception may affect how we react to the pressures we feel to use drugs. Once we know that not everyone uses a particular drug, we don't feel as uncomfortable saying "no" and resisting peer pressure.

Monitoring the Future: A continuing study of American youth

Monitoring the Future is an ongoing study of the behaviors, attitudes, and values of American secondary school students, college students, and young adults. Each year, a total of approximately 50,000 8th, 10th and 12th grade students are surveyed (12th graders since 1975, and 8th and 10th graders since 1991). In addition, annual follow-up questionnaires are mailed to a sample of each graduating class for a number of years after their initial participation. The Monitoring the Future Study has been funded under a series of investigator-initiated competing research grants from the [National Institute on Drug Abuse](#), a part of the [National Institutes of Health](#). MTF is conducted at the [Survey Research Center](#) in the [Institute for Social Research](#) at the [University of Michigan](#).

Monitoring the Future website

<http://monitoringthefuture.org/index.html>

Trends in Lifetime Prevalence of Use of Various Drugs

<http://monitoringthefuture.org/data/10data/pr10t1.pdf>

Trends in 30-Day Prevalence of Use of Various Drugs

<http://monitoringthefuture.org/data/10data/pr10t3.pdf>

****Administer the Test Your Knowledge Quiz ****