LESSON 3: Drugs and Your Body

Students will understand how a drug affects the body, the risks of drug use, and strategies and resources they can use to make better decisions when they have to make choices about using drugs.

Materials:

- Student Worksheets on the poster back.

Objective:

Students will understand basic concepts of drug abuse and the effects of drug abuse on the body, consider how you might identify a drug user, and develop strategies to make better decisions when faced with the choice to use drugs.

Discussion:

How do you think the brain would respond to someone who says, “As long as I can get away with it, I don’t mind!”? When teens make decisions, do they make decisions that are right for them or do they do the things that their friends do? What would you do if you were in a social situation, their decisions often are based on what their friends say; they are more likely to take risks if they are with people who are not practicing sound behavior. One of the reasons is that teens are not able to critically evaluate situations from an objective point of view.

How does teen brain development different than adult brain development? What are some of the changes that occur in the teen brain? What are the effects of teen brain development on decision making?

Key Concepts:

- The effects of drug abuse on the body
- Risks and benefits of drug use
- Decision making and drug use
- Strategies and resources for making smart decisions

Critical Thinking:

If drug use changes how the teen brain functions, consider how you might identify a drug user and develop strategies to make better decisions when faced with the choice to use drugs.

Student Worksheet 3:

Multiple Choice:

1. a; 2. b; 3. a.

True or False:

1. True: The brain’s memory center is the hippocampus. (Students complete the Student Worksheet 3 to check their answers.)

2. False: If drug use changes how the teen brain functions, consider how you might identify a drug user and develop strategies to make better decisions when faced with the choice to use drugs.

3. False: Drug use can affect the body, the risks of drug use, and strategies and resources they can use to make better decisions when they have to make choices about using drugs.

4. False: One of the reasons is that teens are not able to critically evaluate situations from an objective point of view.

5. True: A teen’s brain development is complete by the age of fourteen.

6. False: A teen’s brain development is complete by the age of fourteen.

7. False: A teen’s brain development is complete by the age of fourteen.

8. False: A teen’s brain development is complete by the age of fourteen.

9. False: A teen’s brain development is complete by the age of fourteen.

10. False: A teen’s brain development is complete by the age of fourteen.

Discussion:

Have students complete the Student Worksheet 3 to check their answers to check their understanding of the effects of drug abuse on the body.

Materials:

- Student Worksheets on the poster back.

Objective:

Students will understand basic concepts of drug abuse and the effects of drug abuse on the body, consider how you might identify a drug user, and develop strategies to make better decisions when faced with the choice to use drugs.

Discussion:

What are some of the effects of drug abuse? How does drug use affect the body, the risks of drug use, and strategies and resources they can use to make better decisions when they have to make choices about using drugs?

For free printable copies of this lesson, visit www.scholastic.com/headsup.

Alignment with National Standards

Science (NSES, NRC)

- Life Sciences
- Patterns and Properties of the Physical World
- Evolution

Reading (IRA/NCTE)

- Expository text
- Nonfiction text
- Informational text

ADDITIONAL RESOURCES

- For facts about drugs and health, visit www.scholastic.com/HEADSUP
- For free printables, articles, and lessons, visit the HEAD Sup Resources at www.headsupresources.com

PERCENTAGE OF THE NATIONAL STANDARDS

Life Science 35%

Reading 35%

Mathematics 10%

Social Studies 10%
LESLIE: The Science of Teen Brain Making

LESSON 1: Drugs and Your Body

Students will understand basic science of teen brain development and the effects of drug abuse on the brain.

Key Concepts:
- The effects of drug abuse on the brain
- The similarities of drug effects to natural processes of the brain
- The importance of understanding drug effects on the brain

Materials:
- Classroom poster
- Student worksheets
- Rainbow Brain poster

Time Required:
- 20 minutes, with additional time for students to complete Student Worksheet 3

A. First, display the classroom poster. Before displaying the classroom poster, be sure to photocopy all lessons and student worksheets. Ask students at least five facts important for making smart choices? What are their answers? An example of a fact important for making smart choices is: "Marijuana? Nicotine? Painkillers? All of these can affect the brain, illuminated through the brain works, do you think it causes other changes in the body? What changes do you think have been caused by these drugs?" Discuss with students what are the short-term and long-term consequences that can result from drug use.

B. Next, have students participate in the worksheet activity. Use the student worksheet activity, "What Do You Know About Drugs and Your Body?" to have students answer questions about the effects of drug abuse on the brain. Have students complete the worksheet, and then individual or in small groups. After reviewing the effects of drug abuse on the brain, have students write down their own thoughts about the effects of drug abuse. Ask students to share their thoughts and discuss what they have learned.

C. Next, have students participate in the worksheet activity. Use the student worksheet activity, "What Do You Know About Drugs and Your Body?" to have students answer questions about the effects of drug abuse on the brain. Have students complete the worksheet, and then individual or in small groups. After reviewing the effects of drug abuse on the brain, have students write down their own thoughts about the effects of drug abuse. Ask students to share their thoughts and discuss what they have learned.

D. Next, have students participate in the worksheet activity. Use the student worksheet activity, "What Do You Know About Drugs and Your Body?" to have students answer questions about the effects of drug abuse on the brain. Have students complete the worksheet, and then individual or in small groups. After reviewing the effects of drug abuse on the brain, have students write down their own thoughts about the effects of drug abuse. Ask students to share their thoughts and discuss what they have learned.

Multiple-Choice:
- 1. b; 2. b; 3. a.

Critical Thinking:
- "What are some similarities between drug abuse and the natural processes of the brain?" Discuss with students what are the similarities between drug abuse and the natural processes of the brain. How are the similarities between drug abuse and the natural processes of the brain reflected in the effects of drug abuse on the brain? Discuss with students what are the effects of drug abuse on the brain.

Worksheet 3:

1. a; 2. b; 3. a; 4. b; 5. true; 6. false; 7. false; 8. false;

- "What is the brain's memory center?" Discuss with students what is the brain's memory center. How is the brain's memory center affected by drug abuse? Discuss with students what are the effects of drug abuse on the brain.

- "What brain region is responsible for emotional reactions, especially involving pleasure or excitement?" Discuss with students what brain region is responsible for emotional reactions, especially involving pleasure or excitement. How is this brain region affected by drug abuse? Discuss with students what are the effects of drug abuse on the brain.

- "A neurotransmitter and receptor are required for which of the following actions?" Discuss with students what are the actions that require a neurotransmitter and receptor. How are these actions affected by drug abuse? Discuss with students what are the effects of drug abuse on the brain.

Facts on Drugs—Teen Guide

As an educator, you’re aware of how teen choices regarding drugs, alcohol, and tobacco can result in serious short- and long-term effects. This important teaching guide, Facts on Drugs—Teen Guide gives students a deeper understanding of the importance of of informed decisions. Multiple learning by the National Institute on Drug Abuse (NIDA) in conjunction with Scholastic, these fun-filled lessons and activities help kids make wise decisions about their health and health behaviors. You’ll also find facts, tests and activities for students to use these tests to evaluate the risks of drug use, as well as the benefits of making healthy decisions.

Sincerely,

[Return to the main text]
Lessons

LESSON 1: Drug Effects and Your Brain

Objective: Students will understand basic facts about the brain, decision making, and the effects of drugs on the body.

Materials: Poster/Teaching Guide

Before displaying the classroom poster, use the worksheet as a reference to help students understand the importance of informed decision making. Developed by the National Institute on Drug Abuse (NIDA) in conjunction with Scholastic, these lessons and activities support the idea that young people know more about drugs than ever before. These activities are designed to help students understand the importance of informed decision making.

LESSON 2: Drugs and Your Body

Objective: Students will understand the role of drugs in the human body and how they interact with the body.

Materials: Poster/Teaching Guide

Students will understand the role of drugs in the human body and how they interact with the body.

LESSON 3: Critical Thinking

Objective: Students will develop critical thinking skills to make informed decisions.

Materials: Poster/Teaching Guide

Students will develop critical thinking skills to make informed decisions.

LESSON 4: Drug Effects and Your Body

Objective: Students will understand the effects of drugs on the body and how they interact with the body.

Materials: Poster/Teaching Guide

Students will understand the effects of drugs on the body and how they interact with the body.

LESSON 5: The Science of Teen Drug Abuse

Objective: Students will understand the science behind teen drug abuse and how it affects the body.

Materials: Poster/Teaching Guide

Students will understand the science behind teen drug abuse and how it affects the body.

Discussion:

1. a neurons, neurotransmitters 2. prefrontal, control 3. twelve and fourteen 4. twenties 5. drug abuse, after just one use. Sources: National Science Education Standards, National Research Council, Science Content Standards, some of the consequences that could be caused by alcohol.

Multiple Choice:

1. neurons, neurotransmitters 2. a prefrontal, control 3. b prefrontal, control 4. a prefrontal, control 5. d neurotransmitter, synapse 6. a neurons, neurotransmitters 7. c chemicals, interfering 8. a chemicals, interfering 9. c drugs, abuse 10. r

Evaluation:

1. neurons, neurotransmitters 2. a prefrontal, control 3. twelve and fourteen 4. twenties 5. drug abuse, after just one use. Sources: National Science Education Standards, National Research Council, Science Content Standards, some of the consequences that could be caused by alcohol.

Conclusion:

In each lesson, students have the opportunity to explore the science behind drug use and abuse. They will learn about the effects of drugs on the body, the role of drugs in decision making, and the importance of critical thinking in making informed decisions. They will also learn about the potential consequences of drug use and abuse.

Worksheet 1

Objective: Students will understand the role of drugs in the human body and how they interact with the body.

Materials: Poster/Teaching Guide

Students will understand the role of drugs in the human body and how they interact with the body.

Worksheet 2

Objective: Students will develop critical thinking skills to make informed decisions.

Materials: Poster/Teaching Guide

Students will develop critical thinking skills to make informed decisions.

Worksheet 3

Objective: Students will understand the effects of drugs on the body and how they interact with the body.

Materials: Poster/Teaching Guide

Students will understand the effects of drugs on the body and how they interact with the body.

Worksheet 4

Objective: Students will understand the science behind teen drug abuse and how it affects the body.

Materials: Poster/Teaching Guide

Students will understand the science behind teen drug abuse and how it affects the body.

Worksheet 5

Objective: Students will understand the role of drugs in the human body and how they interact with the body.

Materials: Poster/Teaching Guide

Students will understand the role of drugs in the human body and how they interact with the body.

Worksheet Answer Key:

WORKSHEET 1:

1. a; 2. c; 3. b; 4. a; 5. d.

WORKSHEET 2:

6. b; 7. c; 8. a; 9. c; 10. r

WORKSHEET 3:

1. neurons, neurotransmitters; 2. prefrontal, control; 3. twelve and fourteen; 4. twenties; 5. drug abuse, after just one use. Sources: National Science Education Standards, National Research Council, Science Content Standards,

WORKSHEET 4:

1. neurons, neurotransmitters; 2. prefrontal, control; 3. twelve and fourteen; 4. twenties; 5. drug abuse, after just one use. Sources: National Science Education Standards, National Research Council, Science Content Standards,

WORKSHEET 5:

1. neurons, neurotransmitters; 2. prefrontal, control; 3. twelve and fourteen; 4. twenties; 5. drug abuse, after just one use. Sources: National Science Education Standards, National Research Council, Science Content Standards,
Teenagers thrive on the spur of the moment. Whether particularly “wired” to do so.

Research shows that one’s brain reaches its full size in early adolescence, parts of the brain continue to mature through a person’s early twenties. This is why you sometimes behave the way you do. With emotional decisions—rather than carefully considered logic, you may act on impulses. Why else would the cerebellum be described as the “brain’s executive function,” which plays a role in emotional responses.

The brain’s center for sleep, appetite, body temperature, heart rate, and breathing is the hypothalamus, which works in conjunction with the pituitary gland, a tiny structure located at the base of the brain. Drugs can affect the hypothalamus by making you feel too hot or cold, or too hungry or full. They can also interfere with the body’s ability to regulate blood pressure, temperature, heart rate, breathing, and alertness.

How can you tell if you’ve become addicted to a drug? The signs include a desire to take the drug despite knowing it’s harmful, spending a lot of time and effort to get the drug, continuing to use the drug even though it’s making you sick, continuing to use the drug after it’s stopped helping you, and using larger amounts of the drug over time.

Drugs are chemicals. They change communication systems and interfere with and control the body’s process and information. Drugs change the brain’s wiring and can alter the brain’s structure. Drugs can affect different parts of the brain by altering the levels of certain neurotransmitters.

**Drug and Body**

Drugs can affect your body in many ways. They can alter your body’s chemistry, causing changes in behavior, mood, and appearance. They can also affect your body’s ability to heal and protect itself from disease.

**Vocabulary**

**Addiction**

Addiction is a condition in which people continue to use a drug despite the negative consequences it has on their health, relationships, and overall well-being. Addiction is a chronic, relapsing disease that requires treatment and support.

**Physiological Dependence**

Physiological dependence refers to the physical changes that occur in the body as a result of taking a drug. These changes can include tolerance, which is the need for a higher dose of a drug to achieve the same effect, and withdrawal, which is the physical symptoms that occur when a drug is stopped suddenly.

**Psychological Dependence**

Psychological dependence refers to the mental changes that occur as a result of taking a drug. These changes can include craving, which is the strong desire to use a drug, and preoccupation, which is the constant thinking about the drug.

**Opioids**

Opioids are a class of drugs that include prescription painkillers, such as oxycodone (OxyContin®) and hydrocodone (Vicodin®), and illegal drugs, such as heroin.

**Prescription Painkillers**

Prescription painkillers, such as oxycodone (OxyContin®) and hydrocodone (Vicodin®), are derived from opium in poppy plants and can be addictive.

**Marijuana**

Marijuana acts on the brain by activating specific receptors called cannabinoid receptors. When marijuana is used, these receptors are activated, which can cause changes in mood, behavior, and sensation.

**Nicotine**

Nicotine is the active ingredient in tobacco products, such as cigarettes, cigars, and smokeless tobacco. Nicotine is a highly addictive drug that can cause changes in mood, behavior, and sensation. It can also cause changes in the brain that can lead to addiction.

**Ecstasy or MDMA**

Ecstasy or MDMA is a drug that is chemically similar to amphetamines and is used to produce a state of intense euphoria. Its use can cause changes in mood, behavior, and sensation. It can also cause changes in the brain that can lead to addiction.

**Hallucinogens**

Hallucinogens are a class of drugs that include LSD, PCP, and mescaline. They can cause changes in mood, behavior, and sensation. They can also cause changes in the brain that can lead to addiction.

**DID YOU KNOW?** The damaging effects of drug addiction often begin with the decision to use one drug, but many people who abuse drugs eventually become addicted to another drug. Addiction can be a chronic, relapsing disease that requires treatment and support.

** Advisors on the dangers of drug addiction**

- **Drug Addiction**
  - Addiction is a chronic, relapsing disease that requires treatment and support.
  - Drug addiction can lead to serious health problems, including overdose and death.
  - Drug addiction can also lead to social problems, including crime and family disruptions.

- **Drug Overdose**
  - Drug overdose is the leading cause of death from drug addiction.
  - Drug overdose can be prevented by using drugs under the supervision of a healthcare professional.
  - Drug overdose can also be treated with naloxone, a medication that can reverse the effects of opioids.

- **Drug Treatment**
  - Drug treatment is available for many drug addictions.
  - Drug treatment can be an inpatient or outpatient setting.
  - Drug treatment can include counseling, medication, and therapy.

- **Drug Prevention**
  - Drug prevention programs can help reduce drug use among teenagers.
  - Drug prevention programs can include education, counseling, and support groups.
  - Drug prevention programs can also include community outreach, such as drug education programs in schools.

- **Drug Intervention**
  - Drug intervention can help families and friends understand the dangers of drug addiction.
  - Drug intervention can also help families and friends take action to help a loved one who is struggling with drug addiction.

- **Drug Recovery**
  - Drug recovery is a process of healing and rebuilding after drug addiction.
  - Drug recovery can include physical and mental health care.
  - Drug recovery can also include support and community involvement.

- **Drug Research**
  - Drug research is important for understanding the effects of drugs and for developing new treatments for drug addiction.
  - Drug research can include laboratory studies, animal experiments, and human trials.

- **Drug Policy**
  - Drug policy is the set of laws, regulations, and guidelines that govern the use and regulation of drugs.
  - Drug policy can include prevention, treatment, and research.
  - Drug policy can also include enforcement and punishment.

**True or False?**

- True: If you think about doing something because of a drug, you may be addicted.
- False: If you think about doing something because of a drug, you may be addicted.
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teen decision making

**PREFRONTAL CORTEX:**

- **Use**: center for thinking ahead
- **Important roles**: helps you make decisions and process information. Drugs resemble natural chemicals and so-called cannabinoid receptors.
- **Function**: The brain's system plays a part in regulating emotions, impulses, and cognitive control. It’s the not-yet-mature prefrontal cortex.
- **Opioids**: can adversely affect a person’s breathing.
- **Nicotine**: the addictive element of tobacco.

**Amygdala**

- **Use**: a fear center. The amygdala is part of the brain's limbic system.
- **Important roles**: part of the brain's emotion control center. It helps to process emotions and make memories.
- **Function**: The amygdala helps you make decisions and respond to specific receptors. For example, THC can affect the hypothalamus by making a person feel hungry and the prefrontal cortex to think ahead.

**Hypothalamus**

- **Use**: part of the brain's limbic system.
- **Important roles**: controls automatic functions like breathing and heart rate.
- **Function**: The hypothalamus, increasing hunger and appetite, and can lead to overeating.

**Brain stem**

- **Use**: part of the brain's limbic system.
- **Important roles**: a center for thinking ahead.
- **Function**: Opioids affect the brain stem, slowing breathing and heart rate.

**Cerebral cortex**

- **Use**: part of the brain's limbic system.
- **Important roles**: a center for thinking ahead, and to mediate the influence of others.
- **Function**: Drugs and Your Body

**Eating disorders**

- **Use**: a disease characterized by abnormal eating behaviors.
- **Important roles**: improved metabolism, eating electrical charges, and benefits.
- **Function**: Involving a person's body, brain, and behavior, eating disorders can start at any age, are not limited to women, and can cause emotional dejection and disordered eating.

**Peer influence**

- **Use**: the influence of peers on a person's behavior. It is a significant factor in adolescent development and can lead to the development of addictive behaviors due to the process of addiction.
- **Important roles**: helps you make decisions and respond to specific receptors. For example, THC can affect the hypothalamus by making a person feel hungry and the prefrontal cortex to think ahead.
- **Function**: Peer influence is not necessarily a bad thing. It can be a factor in both positive and negative ways. It is important to learn how to make good decisions and avoid harmful influences.

**Car seat safety**

- **Use**: provide coordination during infancy.
- **Important roles**: essential for safe travel. It is important to use car seats consistently and correctly.
- **Function**: Car seats play a crucial role in ensuring the safety of children. They help to reduce the risk of serious injuries and fatalities in the event of an accident.

**Bare feet**

- **Use**: essential for safe travel. It is important to walk barefoot and make sure to wear shoes.
- **Important roles**: essential for safe travel. It is important to walk barefoot and make sure to wear shoes.
- **Function**: Walking barefoot can help to improve circulation and promote relaxation.

**Treating ear pain**

- **Use**: essential for safe travel. It is important to make sure to ear pain.
- **Important roles**: essential for safe travel. It is important to make sure to ear pain.
- **Function**: Treating ear pain can help to reduce the risk of serious infections and hearing loss.

**Smoking and pregnancy**

- **Use**: essential for safe travel. It is important to make sure to smoking.
- **Important roles**: essential for safe travel. It is important to make sure to smoking.
- **Function**: Smoking during pregnancy can lead to long-term health problems for both the mother and the child.

**Addiction**

- **Use**: the process of addiction.
- **Important roles**: a complex mental and physical state.
- **Function**: Addiction is a complex mental and physical state that can be difficult to overcome.

**Detoxification**

- **Use**: the process of removing toxins from the body.
- **Important roles**: essential for safe travel. It is important to make sure to detox.
- **Function**: Detoxification can help to reduce the risk of serious health problems and improve overall health.

**Drug abuse**

- **Use**: the process of addiction.
- **Important roles**: a complex mental and physical state.
- **Function**: Drug abuse can lead to a range of negative consequences, including physical and mental health problems, social and occupational problems, and legal issues.

**Drug and Alcohol Abuse**

- **Use**: the process of addiction.
- **Important roles**: a complex mental and physical state.
- **Function**: Drug and Alcohol Abuse can lead to a range of negative consequences, including physical and mental health problems, social and occupational problems, and legal issues.

**Drug and Your Body**

- **Use**: the process of addiction.
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**Drug and Your Body**

- **Use**: the process of addiction.
- **Important roles**: a complex mental and physical state.
- **Function**: Drug and Your Body can lead to a range of negative consequences, including physical and mental health problems, social and occupational problems, and legal issues.
DID YOU KNOW? Alcohol is the most commonly abused illegal drug in the United States. In 2010, there were an estimated 16.6 million American adults who met criteria for alcohol use disorder. In addition, an estimated 10 million American adults used alcohol in a way that was harmful to their health or the health of someone close to them.

DID YOU KNOW? In 2012, there were an estimated 1.6 million young people aged 12 to 20 who used heroin at least once in their lifetime. In that year, an estimated 344,000 youths aged 12 to 17 had used heroin in the past year. The percentage of young people aged 12 to 17 who used heroin in the past year decreased from 0.9% in 2012 to 0.8% in 2013.

DID YOU KNOW? In 2010, an estimated 2.6 million Americans aged 12 or older used cocaine in the past year. Of these, an estimated 1.5 million used it illicitly, meaning they used it illegally. Within the illicit user group, an estimated 1.2 million used cocaine one or more times within the past year.

DID YOU KNOW? In 2010, an estimated 2.7 million Americans aged 12 or older used hallucinogens in the past year. Of these, an estimated 1.8 million used them illicitly, meaning they used them illegally.

DID YOU KNOW? In 2012, 26.6% of the U.S. population aged 12 or older used tobacco in the past month. This trend has continued for more than 20 years. In 1991, 29.4% of the U.S. population aged 12 or older used tobacco in the past month.

DID YOU KNOW? In 2010, an estimated 15.8 million Americans aged 12 or older used marijuana in the past year. Of these, an estimated 4.3 million used marijuana daily or almost daily. The percentage of young people aged 12 to 17 who used marijuana continued to decrease in 2013, from 19.6% in 2012 to 17.7% in 2013.

DID YOU KNOW? In 2012, there were an estimated 923,000 youths aged 12 to 17 who had used Ritalin or同等的阿米西osis medication at least once in their lifetime. In that year, an estimated 169,000 youths aged 12 to 17 had used Ritalin or同等的阿米西osis medication in the past year. The percentage of young people aged 12 to 17 who used Ritalin or同等的阿米西osis medication in the past year decreased from 0.8% in 2012 to 0.7% in 2013.
**Pick Your Brain:** After reading the information above, answer the following questions:

1. **Possible Consequences of Drinking and Driving:** How? He notes two main differences: First, teens are more likely to try drugs in situations in which they feel pressure from their friends and find it harder to control their behavior. Second, they are still learning to control their impulses, making it easier for them to take risks than adults. For example, they may take drugs to fit in with their friends or for other reasons. Second, they are still learning to control their impulses, making it easier for them to take risks than adults. For example, they may take drugs to fit in with their friends or for other reasons.

2. **Limbic System:** The limbic system is a set of brain structures that is involved in emotional processing and regulation, as well as in the regulation of autonomic functions such as heart rate and blood pressure. The limbic system includes several regions such as the hippocampus, amygdala, and septum. It plays a central role in the integration of emotional and cognitive processes, such as memory, motivation, and reward.

3. **Opioids:** Opioids are a class of drugs that bind to specific receptors in the brain and are used to relieve pain. They are derived from the opium poppy plant and include substances such as morphine, codeine, and oxycodone, as well as synthetic opioids such as fentanyl and tramadol. Opioids work by binding to opioid receptors in the brain and spinal cord, which activates a variety of effects, including pain relief, drowsiness, and euphoria. However, long-term use of opioids can lead to physical dependence and addiction, as well as a range of side effects such as respiratory depression, constipation, and tolerance.

4. **Marijuana:** Marijuana is a plant that is widely used for its psychoactive properties. It contains a chemical called tetrahydrocannabinol (THC), which is responsible for the drug's effects. When THC binds to specific receptors in the brain, it produces a feeling of euphoria, relaxation, and altered perceptions. However, marijuana use can also have negative effects, such as memory and learning impairments, as well as an increased risk of respiratory problems.

**DO YOU KNOW?** Drugs can change the way the brain works, affecting the way it processes information and affects behavior. They can interfere with the normal functioning of neurotransmitters, which are chemicals that transmit signals between nerve cells. When drugs are used, they can either block or mimic the effects of these natural chemicals, disrupting normal brain function.

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LEARN ABOUT DRUGS WITH WORKSHEETS

When teens make choices in their lives, they are often influenced by external factors. The prefrontal cortex, the brain's decision-making center, is not developed until after the age of twenty. As a result, teens may not be able to control their impulses. In this problem, you will discuss how the brain affects decision making in adults and teens.

LESSON 1: Teens and Brain Development

Objective:

- To understand how the brain develops.
- To understand how the brain affects decision making in adults and teens.

Critical Thinking:

- How do you think the brain works, do you think it causes other things?
- How do you think the brain affects decision making in adults and teens?

Multiple Choice:

1. a; 2. c; 3. b; 4. a; 5. d.

Match the words:

- neurons/synapses
- prefrontal/ control
- twelve and fourteen
- twenties
- drug abuse/after just one use

Key Concepts:

- The brain has a control system in which different structures talk with each other by way of electrical impulses and chemical messengers, called neurotransmitters.
- When teens make choices in emotionally charged situations, those choices affect their lives as they grow older.
- Drugs can affect people differently, sometimes producing a feeling of pain relief or euphoria, other times producing a feeling of depression or anxiety.
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Multiple Choice:

6. b; 7. c; 8. a; 9. c; 10. r

Discussion:

1. Why do you think the brain develops before the prefrontal cortex?
2. How do you think the brain affects decision making in adults and teens?
3. How do you think the brain affects decision making in adults and teens?

Multiple Choice:

1. neurons/neurotransmitters; 2. prefrontal/control; 3. twelve and fourteen; 4. twenties; 5. drug abuse/after just one use

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