

Mind Over Matter



3 Cs

- I care about myself.
- I care about others.
- I care about my community.

Help students to understand and invite them to state clearly:

- I have the right to care about myself.
- I have the responsibility to make smart choices when I care about myself.
- I show I care about myself when I make choices to live healthy and not use alcohol, tobacco or other drugs.

Preparation

Materials

- several pairs of small nuts and bolts (for “Alcohol’s Impact on the Brain” activity)
- several pairs of gloves (for “Alcohol’s Impact on the Brain” activity)

Music

- “Mind Over Matter” from the CD *Mind Over Matter* (see page 138)

Vocabulary

- neurons
- neurotransmitters

Lesson at a Glance

Note to teacher

- The enclosed lesson should be taught to students prior to sending home the “Mind Over Matter” materials to share with parents.
- Please become familiar with the teacher information on starting page 139).

Introduction

1. Importance of the Brain

Strategy

2. Brain Developmental Stages
3. The Brain Message System
4. Alcohol’s Impact on the Brain
5. “Mind Over Matter” Music

Conclusion and Home Connection

6. Distribute CD *Mind Over Matter*

Core Curriculum Objectives and Standards

Objectives

- Students will be able to make the decision to abstain from underage drinking.

Standards

- 7040-203 Predict the possible consequences of substance use.

Teacher Notes

Note:

This lesson should be taught to students prior to sending home the “Mind Over Matter” materials to share with parents.

In the lesson, dark printed words may be said directly to students.

Lightly printed type is for teacher information and background.

If you have any questions or comments about this lesson, please contact:
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Introduction

Demonstrate

1. Importance of the Brain

- Our hands can make a good model of the brain.
- Make a fist with both hands.
- Move your thumbs from the front of the fingers and rest it on the side of your index fingers.
- If you look down at your fists, you will see your thumbnail resting on the joint of the index finger.
- Put your fists together and stick your thumbs straight up.
- Rotate your hands toward your body and point your thumbs down.
- Your hands model your brain.
- The fingers represent the body of the brain and model the folding of the brain.
- Each hand represents the two distinct hemispheres or sides of the brain.
- The thumbs represent the brain stem or spinal cord.
- Our brain directs everything our body does, and everything we think, feel, see, or do.
- Our spinal cord helps the brain move information to the rest of our body.



Strategies

Discuss

2. Brain Developmental Stages

- The brain takes about 21 years to fully mature.
- As we mature, we grow through stages of being an infant, a child, a teenager and an adult.
- As our brain develops and learns to do more things, it changes us from a crying, helpless baby to a fully mature person

Ask

What we learn and do during each stage of development?

Baby/Infant

- grow taller
- learn to crawl
- walk
- feed ourselves
- talk

Child

- grow taller
- learn to read
- learn to write
- play games
- ride a bike
- swim

Teenagers

- body and voice changes
- take greater charge of development
- make more decisions
- face challenges
- work
- drive

Adults

- work at jobs
- lots of decisions
- face challenges
- make the world a safe place for children



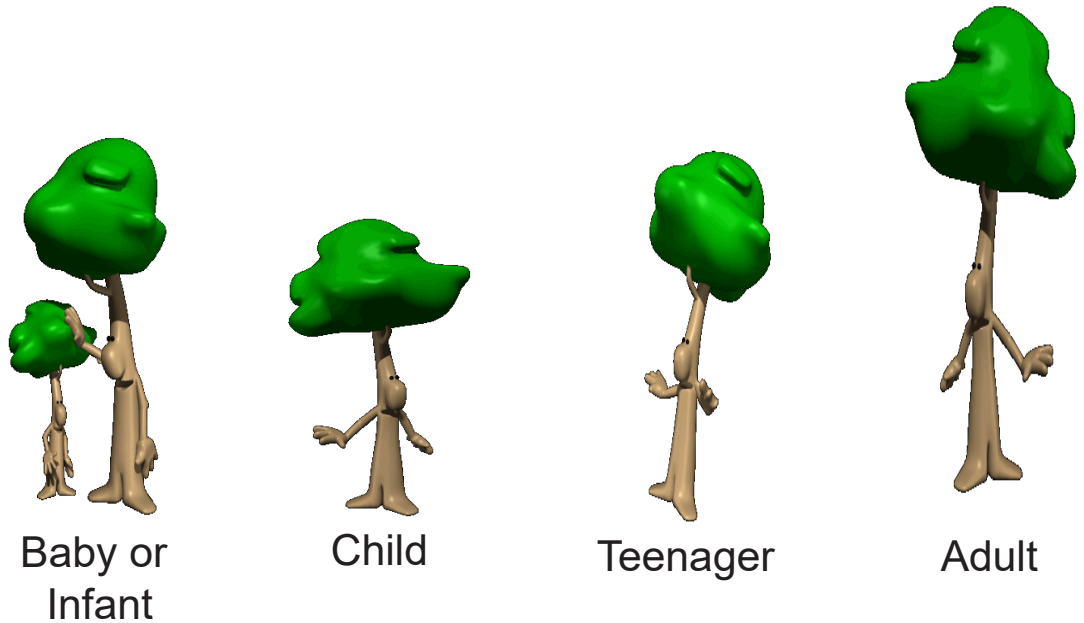
3 Cs

I care about myself.
I care about others.
I care about my community.

- We all need at least 21 years to complete our basic brain development.
- Our brain must keep its growth schedule and not be interrupted or our mental growth will not be as strong and capable as it could be.
- You can show you care about yourself by making smart choices that allow you to grow in the best way you can?
- The developing brain under 21 is not the same as a mature brain.
- How is caring for a growing tree like caring for our own growing minds and bodies?

Discuss

Show four different size trees similar to the examples below.



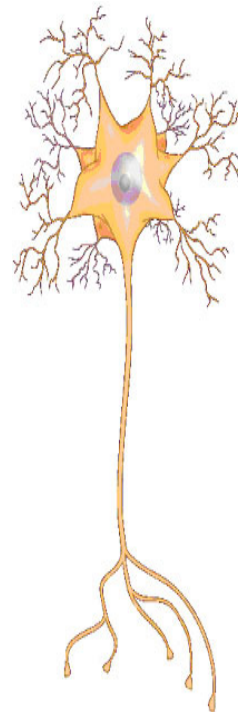
Ask

- How is establishing strong roots of a tree like establishing strong personal roots of a healthy lifestyle, strong values and good decision-making skills?

3. The Brain Message System

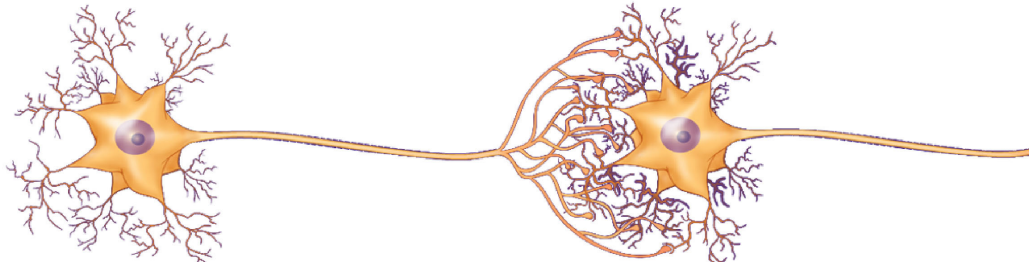
Discuss

- Our brain sends messages throughout our body.
- These messages are sent by brain cells called “neurons.”
- How is a neuron like a tree?
It has a stem or trunk, branches, root-like structures and other parts that look like a tree.



Demonstrate

- Many neurons together form a chain of neurons that send brain messages to different parts of the body.
- Whenever we think, see, or do something, our brain has sent a neuron message to make it happen.



Discuss

Have students complete a few simple tasks to demonstrate how the brain sends a message..

- raise your right arm
 - touch your nose
 - smile at your neighbor
 - pick up a piece of paper.
- Like a growing tree, the brain adds more neuron branches as it matures.
 - New branches are added as you learn new things because your neuron-trees grow more branches and the “roots” make more connections with other neurons.
 - The more branches and connections you make, the smarter and more capable your brain becomes.
 - Our brain must keep its schedule and not be interrupted or our brain will not be as smart and powerful as it could be.

Discuss

4. Alcohol's Impact on the Brain

- Alcohol is a drug that slows down brain activity, so your brain can't develop as well.
- Alcohol is a dangerous drug for the developing brain. It acts like a computer virus on the brain by triggering feel-good messages from a harmful chemical instead of a real experience
- Alcohol interferes with, deletes, or changes messages throughout the developing brain so it doesn't work as well. Some memory parts are stunted.
- These changes in the brain negatively affect how the body functions.
- Alcohol kills some brain cells that make you feel happy and re-wires others in a harmful way so you crave the false happiness alcohol triggers, instead of the real happiness you were meant to experience in life.
- Drinking before age 21 has been proven to harm brain development.
- I have the right to care about myself.
- I have the responsibility to make smart choices when I care about myself.
- I show I care about myself when I make choices to live healthy and not use alcohol, tobacco or other drugs.
- I can make healthy choices to insure my brain develops properly.
- What can you do for your brain to show you care about yourself?

Tie in the 3 Cs

I care about me.
I care about others.
I care about my community.



Play

“Alcohol’s Impact on the Brain”

Teams of 5 or 6 sit in a circle. Each team receives a small bolt and accompanying nut which screws onto it. Each student must, in turn, thread the nut all the way on to the bolt and back off again. This process takes place for each student until all have had their turn. Teams compete for fastest time.

Repeat the activity after passing out a pair of gloves for each team. This time each team member wears the gloves while completing the task. Compare how fast they accomplished the task this time compared to the first effort. If time permits, you may want to complete the activity again where only the 1st, 3rd or 5th team member wears the gloves and the others do it without. Then compare these results to the first two.

Ask

- What happened in the activity with each round?
- The part of the brain that helps with coordination and motor movement is called the cerebellum. How does this activity illustrate how the brain is impaired with alcohol?
- How can you use this information in making decisions regarding alcohol use?

Sing

- How is alcohol in the developing brain like pollutants to a developing tree?

5. “Mind Over Matter”

- Learn and sing the song, “Mind Over Matter”.
- Discuss the messages of the song and ways to protect the developing brain.

Conclusion**6. Distribute “Mind Over Matter” materials**

- Distribute and discuss contents of “Mind Over Matter” take home packets.
- Assign students to share the CD packet with parents.
- Encourage students to sign and display at home the window clings that come in the lesson packet.
- Schedule a day for follow-up discussion and collection of parent evaluations.

Other Activities

- The “Parent Information Sheet” that accompanies the CD contains a piece entitled “Play games. Save Brains” While a serious talk about underage drinking can be good, playing online games with children is fun, connecting and informative.
- To play the games in the classroom, click the “Prevention Games” link at ParentsEmpowered.org.
- Encourage students to play these games with their parents.



Mind Over Matter

Music and Lyrics by Steve James

© 2004

Don't want to drain the brain
That can drive you insane so I find It's a matter of mind
I have to stop and think
That I don't want to drink any kind That can damage my mind

(CHORUS)

Mind over matter
That's the talk of the town
The chatter around Mind over matter
A drink can take its toll
So you take control Mind over matter

It's my mentality
That it's all up to me if I choose to accept or refuse
And so my choices show That I want to grow safe and sound With both feet on the ground

(CHORUS)

Mind over matter
That's the talk of the town
The chatter around Mind over matter
A drink can take its toll
So you take control Mind over matter
Don't you know that all the research shows that drinking causes brain damage
Mind over matter, 10 to 21...

Teacher Information

Current statistics can be found on the listed websites.

Facts about Alcohol and our Children:

- In the United States, 72% of all deaths among persons aged 10--24 years result from four causes: motor-vehicle crashes, other unintentional injuries, homicide, and suicide. During the 30 days before the survey, 29.1% of high school students had ridden in a car or other vehicle driven by someone who had been drinking alcohol

Center of Disease Control and Prevention. Youth Risk Behavior Surveillance-U.S. 2007.

- 83% of tenth graders have not used alcohol in the past 30 days.

Utah SHARP Survey, Prevention Needs Assessment, Bach-Harrison, 2011

- The gap between alcohol use by boys and girls has closed. Girls consume alcohol and binge drink at rates equal to boys.

Alcohol epidemiologic Data System National Institute on Alcohol Abuse and Alcoholism, 1997.

- The use of alcohol, by itself or with other drugs, can retard the normal growth and development of young people.

American Academy of Pediatric, Alcohol: Your Child and Drugs

- “The brain does not finish developing until a person is around 20 years old.”

Cynthia Kwahn, Ph.D., Buzzed: The Straight Facts about the Most used and Abused Drugs, Duke University Medical Center, 1998.

- “When there is a disruption of the normal developmental schedule of experience, neural connections are not made properly, sometimes with devastating results.”

Rethinking the Brain, Rima Shore, Families and Work Institute, 1997.

- “Exposure to substances that inhibit cell growth has some impact on an adult brain, but a devastating impact on the developing brain.”

Kuh, Swartzwelder and Wilkie, Duke University Medical Center, Buzzed, 1998.

- Children shape their attitudes and opinions about underage alcohol use before they are 12. If we are to prevent underage alcohol use, we must reach our children while they are in elementary school.³



