

Effects of Tobacco

Summary

This lesson reviews the effects of smoking on our bodies.

Materials

- High quality Ziploc® bags
- Water gel
- Paper cups or other containers for water
- Red food coloring
- Black powdered tempera paint
- Water
- Plastic bag
- Soda straws

Background for Teachers

Students should have a basic understanding that tobacco is harmful to those who smoke and those who breathe in second hand smoke.

Intended Learning Outcomes

- 4. Develop physical skills and personal hygiene.
- 6. Communicate clearly in oral, artistic, written, and nonverbal form.

Instructional Procedures

Invitation to Learn

What we learn today will help keep you healthy, strong and physically fit for the rest of your life, if you make wise and informed decisions.

Instructional Procedures

We are going to talk about what smoking does to our bodies. Do you know someone who smokes? People who smoke aren't bad people, but smoking is not healthy for our bodies.

Partially blow up a plastic bag, let the air out, and blow it up again. This shows how our lungs work. They inflate, deflate, inflate and deflate. Most of the time we breathe normally, like when we are sitting at our desks, or on the bus. But sometimes we need to breathe hard, after running for example.

Our bodies breathe in oxygen and out carbon dioxide. We need oxygen to keep ourselves alive and healthy.

When we breathe other things into our lungs, they can be harmful and create problems breathing.

We are going to make a "lung."

Give each child a bag with 1/8–1/4 tsp. of water gel (sodium polyacrylate) in it.

Give each child a paper cup containing red water.

Have students pour the water into the Ziploc® bag, zip it closed tightly, and mix the powder and water together. A soft gelatin will form. If it is runny, add a tiny bit of powder; if it is globby, add a little bit of water.

When everyone has their powder mixed, show students the air bubbles trapped in the gel.

Pretend this bag looks like our lungs. Our lungs are soft and have air pockets so the oxygen we breathe can be transported to other parts of our bodies through our blood cells.

When we put other things into our lungs, they can be harmful and create problems breathing.

Give each child a cup containing 1/4 tsp. of black tempera paint and water gel mixed together. Have them open their bags and dump in this mixture.

Gel will turn black and thick. (If it is runny, add more gel.)

When smoke enters our lungs it has other things mixed with it. Smoke is actually small particles. A cigarette contains parts of a tobacco plant that is mixed with other chemicals. As people smoke, these particles enter their lungs and become trapped. After time their lungs become black and stiff. This causes the lungs to not inflate as easily. Because of this, people who smoke can't get enough air to breathe. This next activity will show you what it might feel like.

Pass out soda straws—the smaller the diameter, the better.

Stand up and run in place for one minute.

After one minute of running in place, have the students put their straws in their mouths, hold their noses, and breathe through the straw as long as they can. Instruct them to remove the straw and breathe normally when they feel they can't get enough air.

Count how many breaths they could take before removing the straw, record and graph.

Reiterate how smoking prevents a person's lungs from getting all the oxygen it needs.

Explain how these particles can cause other problems. It can lead to heart disease, emphysema, lung disease, cancer, and death.

If we want to live a busy and active life, it is important we do all we can to keep our bodies as healthy as possible.

If you send the gel home with the children, place a strip of masking tape or other strong tape across the opening. Instruct them to not open it on the bus or at home, or have them throw it away before leaving class.

REMEMBER—People who smoke are not bad people! But, smoking is bad for people.

Extensions

Design and produce a brochure that lists some of the effects of smoking.

Design and produce flyers advertising the harmful effects of smoking and post throughout the school for Red Ribbon Week.

Collect smoking ads from magazines and recognize how the advertiser is attempting to make smoking look glamorous.

Family Connections

Have children discuss what they have learned with their parents or guardians.

Share their heart books with their parents.

Have children write letters to businesses that are smoke-free thanking them for keeping a clean environment.

Assessment Plan

Have a "Heart Attack." Give each child a paper heart or have them cut one out of construction paper. Each child writes something that can be done to keep our bodies healthy on a heart and then hang the hearts together.

Give each child an accordion book cut in the shape of a heart, diamond, or other shape. Write one thing that can be done to keep our bodies healthy on the book.

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