

Chapter 33

Hygiene and Health



Day One:

Today, you and your child will:

1. Read the text
2. Review the text with your child
3. Complete the student worksheets
4. Collect the materials you will need for days two and three

National Science Education Standards covered this week:

Individuals have some responsibility for their own health. Students should engage in personal care such as dental hygiene and cleanliness which will maintain and improve health.

In addition, washing hands with soap and cooking food thoroughly improves the likelihood that you will remain healthy.

Definitions

Plaque	"plak"; a sticky layer that forms over your teeth; it is a mixture of leftover food, bacteria and bacteria waste
Tartar	hardened plaque that forms on your teeth
Cavity	a place where bacteria have eaten a part of your teeth

Sample questions to ask your child after completing the weekly reading.

Why should you use soap when washing your hands?

Soap is poisonous for bacteria and it helps to remove dirt and other items from your skin.

Why should you cover your mouth when you sneeze?

Every time you sneeze you are spraying the air with any bacteria that may be inside of you. This can cause other people to get sick if the bacteria gets into their bodies.

Why is it important to wash your fruits and vegetables before you eat them?

Fruits and vegetables are covered in bacteria. It is always best to make certain to remove as many bacteria as possible from your food before you eat.

Answers to worksheet questions:

Page 1:

Plaque is a sticky layer that forms over your teeth.

It is a mixture of leftover food, bacteria and bacterial waste.

Page 2:

Tartar is hardened plaque that forms on your teeth.

Page 3:

1. A
2. B
3. C
4. C
5. C
6. C

Day Two:

Today, you and your child will:

1. Review Day One using the following text
2. Run the first activity this week

The following text will give you the most important items to review for your activity today.

The consequences of not brushing your teeth can include staining or decay.

Although your teeth are very strong and can withstand a lot of abuse from the acids in soft drinks, damage can occur if proper hygiene is not administered.

Stained teeth

Objective:

Children will observe the effects of soft drinks on your teeth.

Materials:

any brown soft drink (cola, root beer, etc...)

water

two raw or hard-boiled eggs

two drinking glasses

Procedure:

This is a simple activity you can do with your child to see the harmful effects of acids on your teeth.

Inform the child that soft drinks contain a large amount of acid that can cause damage to the protective covering of your teeth.

Have the child pour a glassful of brown soda into a drinking glass and insert an egg into the liquid. Have the child predict what will happen to the egg if it is allowed to stay in the liquid for one full day.

As a control, pour an equal amount of water into another drinking glass and insert another egg into this liquid.

Pour out the liquids the next day and have the child observe the eggs. What differences can be seen?

Explanation:

Both egg shells and the outer part of your teeth are made up of various kinds of calcium. However, they are not identical chemically. They may both appear smooth and hard, but they do have many differences chemically. Nevertheless, the use of egg shells in this experiment is necessary to see the lasting effects of not taking care of your teeth. You should see that the egg placed into the soft drink has been partially stained a brown color. In reality, your teeth are very strong and can take a lot of punishment from the acids inside soft drinks.

Day Three: Lab Activity

Today, you and your child will:

1. Review Day One using the following text
2. Run the first activity this week

The following text will give you the most important items to review for your activity today.

The prevention of tooth decay can take place through daily brushing with toothpaste and the use of mouthwashes that contains fluoride.

Fluoride strengthens the chemicals that make up your teeth preventing staining and decay.

The power of fluoride

Objective:

Children will experiment with the effectiveness of fluoride to prevent tooth decay.

Materials:

mouthwash with fluoride

two eggs

two drinking glasses

vinegar

water

Procedure:

Take one egg and put it in a drinking glass with water. Place another egg in a different drinking glass that contains mouthwash with fluoride.

You may need to use a fork or spoon to keep the eggs completely submerged.

Allow them to sit, undisturbed, for one full day.

Remove the eggs from the liquids and inform the child that you are going to place both eggs in glasses filled with vinegar.

One of the eggs is going to start to bubble, almost instantly. The other egg will not bubble. Ask the child to predict which one is going to bubble.

Fill both glasses with vinegar and insert one egg into each container.

The egg that was placed inside water will start to bubble almost instantly, while the one soaked in fluoride will not bubble for some time.

Explanation:

When an acid (like vinegar) comes into contact with a source of calcium (the egg shell), a reaction occurs that involves the production of a gas. The bubbles of gas that are formed on the egg shell after you place the water-soaked egg into the vinegar demonstrate this reaction.

The shell soaked in fluoride will be hardened by this chemical. The use of fluoride in your toothpaste and mouthwash help to prevent your teeth from decay by hardening the calcium inside your teeth. Keep brushing.