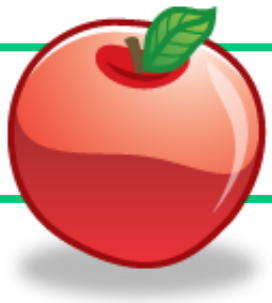
Apple "Tooth Decay" Experiment



Learning Objective

Demonstrate that tooth decay and cavities are the results of a process that begins on the enamel of teeth.

(Meets National Science Education Standard for science as inquiry.)

Materials

2 - Apples (one experimental, one control)

2 - Paper Lunch Bags

1 - Sharpened Pencil

Preparation Time

Give yourself enough time to collect apples and bags before the start of the experiment.

Activity Time

Minimum 2 days; 15 minutes per day.

Instructions

1. Poke a hole in one of the apples using a sharp pencil, (*This is the experimental apple)* and place in a paper lunch bag.
2. Place the other healthy apple into a different paper lunch bag. (*This is the control apple*)
3. Predict what you think will happen to the apples.
4. Leave apples to sit for minimum of 24 hours.
5. Remove apples from the bags and cut the apples in half. *(ADULTS ONLY, CHILDREN SHOULD NOT HANDLE KNIFE)*
6. *Discuss if your predictions were correct or not, and why. Use the following questions as a guide.*

Discussion Questions

1. ***How can an apple be a "model" for a tooth?*** *An apples peel/skin can be compared to a tooth's enamel, and its inside can be compared to dentin inside a tooth.*
2. ***How can a pencil hole in an apple be a model for tooth decay?*** *Just like the pencil hole in the apple caused the fruit to rot, bacteria can penetrate a tooth's enamel (skin) to cause tooth decay.*
3. ***How can you prevent what happened to the apple from happening to you?*** *By brushing your teeth everyday, you can remove the plague from your teeth. This will help prevent cavities.*
4. ***Using the experiment as an example, can you describe what a cavity is?*** *A cavity is a hole in your tooth caused by plaque, just like the hole in the apple caused by the pencil. If the hole is not repaired it can cause your tooth to decay, just like the apple.*

NAME: _____

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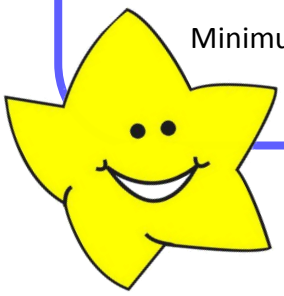

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WHAT DO YOU PREDICT WILL HAPPEN & WHY: _____

_____

_____

_____

RECORD YOUR RESULTS: _____

_____

_____

Use the back of this sheet to answer the following questions.

1. ***How can an apple be a "model" for a tooth?***
2. ***How can a pencil hole in an apple be a model for tooth decay?***
3. ***How can you prevent what happened to the apple from happening to you?***
4. ***Using the experiment as an example, can you describe what a cavity is?***