

# Bacteria "EGGS"periment!



## Learning Objective

Demonstrate how acids created by plaque will effect tooth enamel.

### Materials

- 1 - Egg
- 1 - Small Container
- Vinegar

### Preparation Time

5 Minutes

### Activity Time

24 Hours

### Instructions

1. Gently place an egg into the small container.
  2. Carefully fill the container with vinegar until the entire egg is covered.
  3. Predict what you think the acid in the vinegar will do to the egg.
  4. Cover the container and set aside for a minimum of 24 hours.
  5. Pour out vinegar and gently pick up the egg.
  6. Discuss if your predictions were correct or not, and why.
- Use the following questions as a guide.

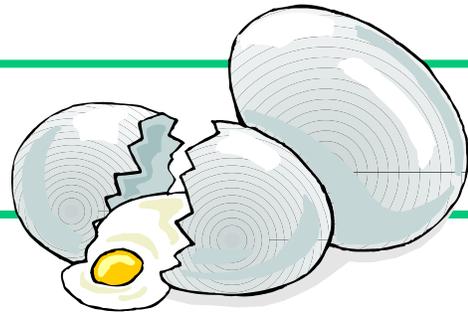
*NOTE: This experiment can also be done with a chicken bone. Simply keep the chicken bone in vinegar for at least 3-4 days.*

## Discussion Questions

1. **How can an eggshell be compared to tooth enamel?** An eggshell can be compared to tooth enamel, because it is the hard outer shell of an egg protecting the softer inside. Just like how the tooth enamel protects the dentin on the inside of a tooth.
2. **How can vinegar be compared to bacteria?** Vinegar contains acid that eats away at the eggshell, making it soft and rubbery. Bacteria found in your mouth, produce acid that dissolves the enamel on your teeth in the same way, making it vulnerable to tooth decay and cavities.
3. **How does bacteria produce acid?** The bacteria in your mouth eats the plaque on your teeth containing left over food and saliva. The acid produce is a by-product of the bacteria's feasting.
4. **How can you prevent what happened to the egg from happening to you?** By brushing your teeth everyday, you can remove the plaque and bacteria from your teeth. This will help prevent cavities.

NAME: \_\_\_\_\_

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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 eggshell be compared to tooth enamel?
2. How can vinegar be compared to bacteria?
3. How does bacteria produce acid?
4. How can you prevent what happened to the egg from happening to you?