

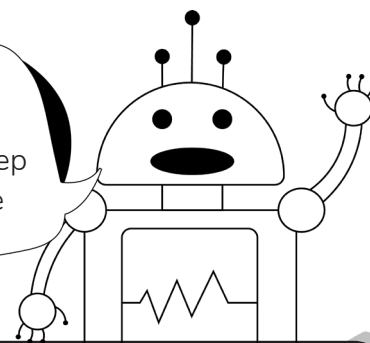
Esiw's Egg-cellent Experiment!

This activity was created by Sophia.

Materials

- A tall glass
- Vinegar
- One raw egg

You following the instructions below is the same as me following an **algorithm**! **Algorithms** are step-by-step instructions that I'm given to complete a task. In this case, what is the task?



Instructions

- 1 Place the egg in the glass gently.
- 2 Fill the glass with vinegar so the egg is fully submerged. Do you see any bubbles forming? What could this be?
- 3 Leave the glass in a safe place for 24 hours.
- 4 After 24 hours, carefully pour out the vinegar and replace with fresh vinegar. Place the glass back in a safe place and leave for one week (do not disturb the egg!)
- 5 After the week is over, carefully pour out the vinegar, take the egg out and rinse it gently with water.

You have successfully just chemically removed the shell of the egg! All that is left now is a thin membrane, or **Semipermeable Membrane** that surrounds the yolk and egg white.

This is a **Chemical Change**. A **chemical change** produces a new substance with distinct properties. You may be thinking that you still have an egg, so it was just a physical change. But you actually performed a chemical reaction and created new products. This is also **Not Reversible**. Unfortunately, you will not be able to recreate the shell that egg had.

What Happened?

The shell of an egg is made of **Calcium Carbonate**, and the vinegar you used is a diluted form of **Acetic Acid**. When the two substances come together, they react to form **Carbon Dioxide** (the bubbles you saw forming on the egg!), **Calcium Acetate** and **Water**.