



GROWING & SHRINKING EGG

Discover osmosis by observing it in action.

Materials

Two eggs
Two glasses
Vinegar
Water
Corn Syrup



Note: Do not eat or drink anything in this activity. No corn syrup? Try mixing a solution of sugar and water or salt and water.

Procedure

- Ask an adult to fill two glasses with vinegar
- Place an egg in each glass, making sure they are submerged completely.
- Let the eggs soak for 24 hours, until the eggs' shells dissolve and leave behind membranes.
- Carefully remove the eggs and wash both glasses.
- Fill one glass with water and the other with corn syrup.
- Let each egg sit for another 24 hours, one in each glass.
- Take the eggs out and observe the changes.

Results

The egg that soaked in the corn syrup shrunk, and the egg that soaked in water grew in size.

Why?

Osmosis is the movement of water through a semi-permeable membrane from an area of higher concentration to an area of lower concentration. This balances out the concentration of water on both sides of the membrane. The vinegar caused the shell to dissolve, leaving behind a semi-permeable membrane. Sugar molecules are too large to pass through the membrane, but water molecules are small enough to pass through. The water molecules in the egg soaking in the corn syrup were drawn out of the egg through the membrane and into the syrup, where there was a lower concentration of water. The egg soaking in the glass of water had a lower concentration of water inside of the egg than outside of it, so the water from the glass moved across the membrane into the egg.

This activity was adapted from the Steve Spangler Science "Growing and Shrinking Egg" experiment. You can find more activities on their website, stevespanglerscience.com