

Suspended Egg

Materials

- Water
- Tall glass
- Teaspoon
- Salt
- Food colouring (two colours)
- Fresh egg
- Small jug



Instructions

1. Add water to the glass until it about one third full.
2. To the water in the glass, add 1 drop of food colouring and 3 teaspoons of salt, and stir well.
3. Use the teaspoon to carefully lower the egg into the glass so it floats in the salty water.
4. Fill the small jug with fresh water and 1 drop of a different colour of food colouring.
5. Turn the teaspoon upside down and hold it against the inside wall of the glass. Slowly pour the water from the jug over the back of the spoon so the fresh water doesn't disturb the salty water. Keep pouring until the glass is almost full.

What happens?

Density is the amount of mass in a given volume. Salty water has a higher density than fresh water, so it stays at the bottom of the glass, while the fresh water floats on top. The density of a fresh egg is somewhere between the densities of salty water and fresh water, so the egg becomes suspended between the two layers of water.

Related activity

Test whether an egg is old or fresh by floating it in fresh water. A fresh egg will sink in water, while an old egg will float. If an egg is somewhere between old and fresh, it will stand on one end. The density of the egg slowly drops, as higher-density water is replaced with lower-density gas. As an egg ages, it loses water due to evaporation. It also builds up gas due to the egg decomposing and taking up some gases from the surrounding air.