

Ocean acidification in a cup



Details

What you need

- 5 clear plastic cups
- Drinking straw
- pH indicator (red cabbage indicator)
- Tap water

Introduction

This activity shows how water becomes more acidic when carbon dioxide is bubbled through it. It demonstrates the link between carbon dioxide in the atmosphere and a process called ocean acidification, a change in the pH, or acidity, of the ocean. This change in ocean chemistry has an impact on many living things in the oceans including coral polyps, clams, prawns, and other sea life.

Activity steps

1. Fill two clear cups two thirds full with water.
2. Take a drinking straw and blow through the water of one of the cups. This bubbles the carbon dioxide from exhaled breath through the water.
3. Taking a rest every 15 seconds, blow for 2 to 3 minutes through the water.
4. Before pouring your red cabbage indicator into each of the cups, try to predict how the colour of the indicator may change. Hint: the red cabbage indicator will turn pinker if the water is more acidic and bluer if the water is less acidic.
5. Pour 50ml of red cabbage water into each cup and observe the difference between the water in the two cups.