

BEACH EXPLORER

50 THINGS TO SEE & DISCOVER



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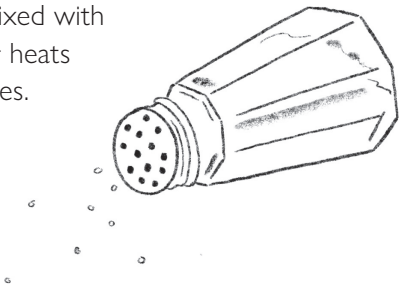
Make Your Own Salt

If you play in the waves or go swimming in the sea, it won't be long before you taste the **salt**. On hot sunny days, the rocks on the beach heat up quickly and are perfect for this experiment.

- Pour a tiny amount of seawater from a rock pool onto a hot rock. Wait for the sun to evaporate away the water, leaving the rock dry.
- Look closely. Can you see white crystals glistening? If so, congratulations! You have made some salt.
- Use a magnifying glass or hand lens.
Can you see what shape the salt crystals are?

What's Happening?

You cannot see the salt in the water because it has **dissolved**. This means that the salt crystals have completely broken up and mixed with the water molecules. When water heats up, it turns to steam and evaporates. As the water **evaporates** the salt crystals are left behind.



Balloon in a Bottle



Bopping balloons about is fun, but if they blow away they can land in the ocean. Find out why **marine conservationists** are worried about balloon litter with this simple experiment.

You will need a jar or pot with a watertight lid and an uninflated balloon.

- Take a walk along the tide line of your beach. You may find an old balloon, but if not use one from home. Fill your jar with seawater, put the balloon in and close the lid.
- Take a photo of the balloon.
- What do you think it will look like in a day, a week, a month or a year?
- Take a new photo of your balloon jar at the end of each week. Compare the photos after a month.
- How long does it take your balloon to break down?

What's Happening?

Balloons are made of plastic or latex (rubber) mixed with other chemicals. They can take many years to break down. Even 'biodegradable' balloons only break down properly in warm composters. They are deadly to seabirds if swallowed.





Seashells in Vinegar Experiment

Increases in carbon dioxide in seawater cause **ocean acidification**. So, what does that mean and why does it matter? In this experiment you will investigate **acids**.

- Collect a small, empty sea snail shell from the beach and take it home.
- Half fill a transparent pot or jar with vinegar.
- Add your seashell. What can you see? (Hold it up to the light for the best view.)
- After an hour, remove your shell using a spoon. Does it look different?
- Return the shell to the vinegar and leave it overnight.
- How has the shell changed? What happens if you leave it longer?

What's Happening?

Sea snails build their shells using **calcium carbonate**. This substance is easily damaged by strong acids like vinegar. When you put the shell in vinegar it causes a chemical reaction. The shell seems to fizz because it is releasing little bubbles of carbon dioxide.

Seawater is not an acid, but its acidity is changing in ways that affect sea snails.