SCIENCE
CHALLENGE

02

UNDERWATER VOLCANO

THE
JAMES
DYSON
FOUNDATION

UNDERWATER VOLCANO

SCIENCE CHALLENGE 02

Designed by Ian,
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The brief

Create a colourful underwater volcano.

The method

1. Cut a two foot length of string with a pair of scissors. Tie a knot around the neck of a salt shaker with one end of the string. Double-knot it to ensure the knot is secure. Repeat this process with the other end of the string, resulting in a handle to lower your shaker.
2. Empty and clean a large jar. Fill the clean jar about three quarters full with cold water.
3. Fill the salt shaker with hot water (with adult supervision) – as hot as you can get from your tap – to just below the neck. Add three to four drops of red food colouring.
4. Hold your salt shaker over the mouth of the jar by the string handle. Slowly lower the salt shaker into the jar until the shaker is completely submerged and resting upright on the bottom of the jar. Observe how the coloured water erupts from the shaker into the cold water.

Materials

String

Scissors (with adult supervision)

An empty salt shaker

A large jar

Food colouring

How does it work?

This shows how convection currents work. A convection current is the way that heat rises and falls in liquids and gases.

Design icons

Hot air balloons use convection currents. As hot air rises, so too does the balloon.