

Teacher-led activity

MOVE WATER WITH FIRE



You will need:

- Small plate
- Food colouring
- Small candle
- Matches
- Glass jam jar

What you do:

1. Pour some water onto a small plate and mix in a few drops of food colouring (so you can see it more clearly).
2. Stand a candle in the middle of the plate and light the candle.
3. Next, turn a jar upside down and place it over the lit candle. Watch what happens.



You should find:

After a few seconds, the candle goes out and the coloured water is sucked inside the jar. The fire was extinguished because the candle used up some of the oxygen inside the jar as it burnt. Carbon dioxide was also produced as the candle burnt, which helped to extinguish the fire. Whilst the fire was alight, the air inside the jar became warm and expanded (took up more space). When the candle went out, the air contracted (got smaller) and the water was drawn inside to take the space of the contracting air.

Pupil activity

BUBBLE TROUBLE

You will need:

- A small glass half-filled with water
- A small glass half-filled with golden syrup, honey or other viscous (gooey) liquid
- Two paper straws (per child)
- Safety goggles (or ask pupils to bring in a pair of sunglasses)

What you do:

1. Put on your safety goggles (or sunglasses) so your eyes don't get splashed with spewing lava!
2. Imagine that the water is runny magma below the surface of the Earth, and the gooey liquid is viscous (thick) magma.
3. Put a straw into each cup of lava. Gently blow bubbles – first into the runny magma (the water) and then into the viscous magma (the gooey liquid). Which is easier to blow into?

You should find:

It's hard to blow bubbles into the viscous magma; the bubbles come to the surface much more easily in the runny magma (water). When you blow bubbles into the runny magma, you create lots of small bubbles that quickly and easily rise to the surface. When you blow into the viscous magma, a large bubble builds up below the surface and then suddenly erupts, taking the gooey magma up with it.

