

Activity : Volcano

Materials

- 10 ml of washing up liquid
- 100 ml of cold water
- 400 ml of vinegar
- Food colouring
- Bicarbonate of soda slurry (fill a cup about $\frac{1}{2}$ with bicarbonate of soda, then fill the rest of the way with water)
- Empty 2 litre plastic bottle

Hi, my name is Emma I am a STEM Ambassador and work in the Westlakes Laboratories. Today I am going to show you an exciting experiment you can do at home **“but remember to ask an adult to help you.”**

You can watch how I got on at

www.cavendishnuclear.com



Method

What we're going to see here is a chemical reaction between vinegar and bicarbonate of soda, producing a gas called carbon dioxide, which Ben has already mentioned. Gas takes up a lot more space than solids or liquids due to the space between the molecules, so as the reaction takes place, the mixture in the bottle is going to start to take up a lot more space...

This is the reason I'm outside - because this is going to make a lot of mess.

- Combine the vinegar, water, a good squirt of washing up liquid and 2 drops of food colouring into the empty bottle.
- Make a slurry of $\frac{1}{2}$ a cup of bicarb and fill the rest of the cup up with water, stirring until it's all a liquid.
- Once it's all mixed, pour the bicarb into the bottle and back away!

