



Haberdashers'
Monmouth Schools

An investigation into two unknown powders

Can you uncover the secret of the experiment that millions of people use daily all over the world?

Equipment

First check the equipment that came in your school pack.

You should have:

One plastic reaction vessel.

Two small plastic vials labelled "A" and "B" – found inside the plastic reaction vessel.

One plastic pasteur pipette.



You will also need:

A plate.

A cup of cold water straight from the tap.

A pen and paper for making notes.

Experiment

1. Remove the two plastic vials from the reaction vessel and stand the reaction vessel on the plate.
2. Now carefully uncap the plastic vial labelled "A". Tip the powder into the reaction vessel and have a good look at it, make some notes if you like. Does it have large grains like sugar, small grains like salt or is it more like icing sugar? What colour is it? Is it the same colour all the way through?
3. Carefully uncap the plastic vial labelled "B" and again tip the contents into the plastic reaction vessel with powder "A". What happens. Have a good look at what the powder looks like, is it the same as powder "A"? If not, what are the differences? Make some notes if you like.
4. Take the Pasteur pipette and look carefully along its length, you should be able to see the following marks, 0.5ml, 1.0 ml, 1.5ml, 2.0ml, 2.5 ml and 3.0 ml.
5. Put the end of the Pasteur pipette into the water, squeeze the bulb at the end and suck up 2.0ml of water. You might need a couple of goes to get this right.
6. Squirt the 2.0ml of water into the reaction vessel on top of the two powders and watch what happens.
7. Watch for two minutes and then add a further 2.0ml of water, what happens?
8. Add more water to see if anything further happens, if you like make a note of what you did, scientists always record every detail of their experiments.

Questions

Once you have done the experiment have a go at answering the following questions.

- A. What happened?
- B. Have you ever done an experiment like this before?
- C. Do you have any idea what the powders might be?
- D. How does your experiment link to the muffins cooking in the oven?

Finally, once you have had a think about these questions you can watch the short video on the website – www.habsmonmouth.org/year6activity called "**Science Experiment Explanation**" which will explain what the reaction was and why it is such a common, and useful, chemical response.