



THE LAB

Eight pages of things to make and do

Kitchen chemistry

WARNING!
Ask an adult for help when using a microwave oven.

Make edible playdough

Turn a sweet and fluffy treat into a modelling material you can eat.

What you need

To make one ball of playdough:

- 6 large marshmallows
- Glass or plastic bowl
- 2tsp vegetable oil
- 8–10 drops food colouring
- Spoon
- 8tbsp cornflour, plus extra for dusting
- Baking paper

Instructions

- 1** Place the marshmallows in a glass or plastic bowl and heat them in the microwave for 20–30 seconds, until they have all puffed up.
- 2** Carefully remove the bowl from the microwave and add the oil and food colouring.
- 3** Stir the ingredients well until the food colouring has mixed in completely and you are happy with your chosen colour.
- 4** Add the cornflour, 1 tbsp at a time, while you keep stirring.

- 5** Once the mixture sticks together and feels more solid, remove it from the bowl.
- 6** Lightly dust a sheet of baking paper and your hands with more cornflour. Then, roll, knead and pull at your dough until you get a stretchy texture.

How does it work?

This experiment is all about changing the naturally sticky marshmallows to make them stretchier and more flexible. A marshmallow is mostly sugar, water and air, plus a chemical called a thickening agent that prevents the light and fluffy mix from collapsing into mush. Heating in the microwave causes bubbles of air in the marshmallows to expand and makes the sweets easier to shape. Cornflour absorbs water and dries out the mix. Kneading makes sure the cornflour is evenly spread, and folds air into the mixture to create a mouldable dough.