

THE LAB

Three things to make and do

Kitchen chemistry

1 Snowman hot chocolate

Make a melting marshmallow snowman.

What you need

For the hot chocolate:

- 250ml **milk**
- 1 tbsp **cocoa**
- 2 tbsp light brown sugar
- 25g dark chocolate
- **Squirty cream**

For the snowman:

- Orange gummy sweet
- 3 marshmallows
- Icing pen (black or brown)
- Pretzel sticks
- Scissors
- Saucepan
- Small whisk
- Mug

Instructions

1 Cut the gummy sweet into a small triangle and snip a small hole into a marshmallow. Push the sweet into the hole to make a nose. Draw eyes and a mouth using the icing pen.

2 Draw buttons onto a separate marshmallow. Then snap a pretzel in half and push into each side for the arms. Join the head and body parts with pretzel sticks, then push in two pretzel-stick legs.

3 Ask an adult to help you heat milk, cocoa, sugar and chocolate in a small pan over a medium heat. Whisk until the chocolate has melted.

4 Pour the hot chocolate into a mug and squirt some cream on top. Gently lay your marshmallow snowman in the "snow".

Allergy warning! Ingredients in **bold** are allergens (substances that cause allergic reactions). Learn more at tinyurl.com/SN-allergy



How does it work?

Marshmallows were originally made using sap from the root of the marsh mallow plant. Today, however, gelatin has taken the place of this thick, gluey substance. Gelatin is made from a substance called collagen, which is found in the bones, skin and connective tissue of animals. Collagen coagulates (sticks together) when it is beaten. A vegetarian-friendly gelatin substitute called agar is extracted from seaweed. It does a similar thing, forming a jelly when dissolved in water. When beaten into sugar and egg whites, the gelatin or agar thickens, capturing pockets of air inside the mix and stabilising their walls so they don't collapse. The air pockets make marshmallows soft and spongy.

