



KITCHEN SCIENCE

Heat Conductors

THE GREAT CHOCOLATE RACE

Welcome to the Great Chocolate race! Which piece of chocolate will fall off the wire first? Will it be the chocolate on the copper wire? Will it be the chocolate on the aluminium wire? Make your predictions now! Adult supervision required!

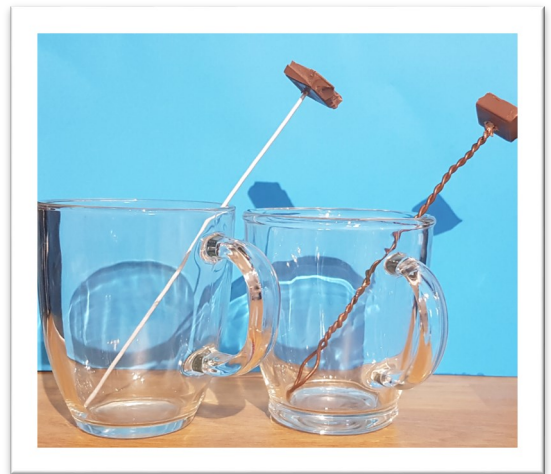
You will need

- 2 containers that can hold boiling water
- 2 pieces of chocolate (the same size as each other)
- An old wire coat hanger or aluminium wire
- A copper wire
- Kettle for boiling water

Instructions

1. Make your prediction!
2. Carefully push a piece of chocolate onto the end of each of your wires.
3. Half fill each mug with hot water and put one wire into each of the mugs.

Top tip: The piece of chocolate should be hanging diagonally over the side of the mug (not in the line of the steam from the mug, just like in the picture above).



What is happening?

Some types of metals are good heat conductors. This means that some allow heat to travel along them better than others. Copper is a good conductor of heat while aluminium is not. The heat from the water is conducted very quickly along the copper wire until it meets the chocolate. This makes the chocolate melt and move around until it either slides down the wire or falls off! The aluminium wire is a poor conductor of heat so nothing happens to the chocolate.



Now try this

What happens if you use different types or thicknesses of chocolate?

What if you use different types of metals?

You could use a stopwatch and time your experiment.

Share your kitchen science experiments with us on Facebook, Twitter and Instagram!