

CHANGING STATES: SOLID, LIQUID AND GAS

The objects around us take many forms. They can be liquid, like water, which flows and changes shape. They can be gases that float around freely, such as the air we breathe. Or they can be solid, like wood, which keeps its shape when pushed. Let's explore how chocolate changes state, from solid to liquid.

WHAT YOU WILL NEED:

- Small chocolate pieces of the same size (chocolate squares or chips)
- Paper plates
- A pen and paper to record results

INSTRUCTIONS:

1. Put one piece of chocolate on a paper plate and place it outside, in the shade.
2. Record how long it takes for the chocolate to melt, or if it wasn't hot enough to melt, record how soft it was after 10 minutes.
3. Repeat the process with a piece of chocolate on a plate that you put outside in direct sunlight. Record your results in the same way.
4. Find more locations where you can test how long it takes for the chocolate to melt. You could try your school bag, a cup of hot water or even your mouth.
5. Compare your results. In what conditions did the chocolate melt quickest? You might also like to record the temperatures of each location using a thermometer, so you can learn about the temperature at which chocolate melts.

● **Parent's note:** Help your child to identify examples of changing states of matter around the house. For example, when cooking, heated foods can melt. **Going further:** As chocolate melts quickly when you put a piece in your mouth, what does this tell you about the temperature of your body? For further experiments, compare white and dark chocolate.

