

What should I already know?

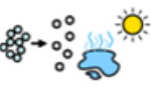
Distinguish between an object and the material from which it is made. (Y1 - Everyday materials)

- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock. (Y1 - Everyday materials)
- Describe the simple physical properties of a variety of everyday materials. (Y1 - Everyday materials)
- Compare and group together a variety of everyday materials on the basis of their simple physical properties. (Y1 - Everyday materials)
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. (Y2 - Uses of everyday materials)
- Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. (Y2 - Uses of everyday materials)

Scientific knowledge:

- compare and group materials together, according to whether they are solids, liquids or gases
- observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius

Key Vocabulary and Definitions:

Boiling 	The change of state from a liquid to a gas, which happens quickly when heated and creates bubbles of the gas.
States of matter 	The different forms that materials can take.
Evaporation 	The change of state from a liquid to a solid, which happens slowly from the surface of the liquid.
Freezing 	The change of state from a liquid to a solid.
Gas 	A state of matter with no fixed shape and no fixed volume.
Temperature 	The measure of how hot or cold something is.
Liquid 	A state of matter with a fixed shape and a fixed volume
Melting 	The change of state from a solid to a liquid.
Solid 	A state of matter with a fixed shape and a fixed volume.

Teaching Sequence

1. To group materials together, according to whether they are solids, liquids or gases
2. To compare materials according to whether they are solids, liquids or gases
3. To observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) (two lessons)
4. To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.
5. To understand the role of evaporation and condensation in the water cycle
6. To associate the rate of evaporation with temperature (two lessons)

Term 2	Let's Talk (Explorify)	Scientific Knowledge	Scientific skill
Lesson 1	The odd one out https://explorify.uk/en/activities/odd-one-out/gas	To group materials together, according to whether they are solids, liquids or gases	Talk about criteria for grouping, sorting and classifying (non-statutory).
Lesson 2	What if? https://explorify.uk/en/activities/what-if/we-used-machines-like-this	To compare materials according to whether they are solids, liquids or gases	Identifying differences, similarities or changes related to simple scientific ideas.
Lesson 3	Have you ever? Have you ever held a piece of chocolate in your hand? https://explorify.uk/en/activities/have-you-ever/held-a-piece-of-chocolate-tightly-in-your-hand	To observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) (two lessons)	Asking relevant questions and using different types of scientific enquiries to answer them. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers.
Lesson 4	Odd one out https://explorify.uk/en/activities/odd-one-out/where-is-the-water	To identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.	Setting up simple practical enquiries, comparative and fair tests.
Lesson 5	Never ending story Never ending story	To understand the role of evaporation and condensation in the water cycle	Identifying differences, similarities or changes related to simple scientific ideas and processes
Lesson 6	What if water didn't evaporate?	To associate the rate of evaporation with temperature (two lessons)	Asking relevant questions and using different types of scientific enquiries to answer them. Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers

