



# What can we make from materials?

National Curriculum link: Materials

Year 5, HT4



## Prior knowledge (retrieval practice)

## Key Vocabulary (substantive knowledge)

1	solid	An object that has length, width, and thickness as well as keeping its size and shape.
2	liquid	A form of matter that flows easily, takes the shape of any container it is poured into.
3	gas	Gases are air-like substances that can move around freely. They don't have a shape but flow, and don't stay put: they move around all the time.
4	soluble	A substance able to be dissolved, especially in water.
5	transparent	Allowing light to pass through so that objects behind can be distinctly seen.
6	opaque	Not able to be seen through; not transparent.
7	malleable	Able to be hammered or pressed into shape without breaking or cracking

8	brittle	Hard but liable to break easily.
9	permeable	Allowing liquids or gases to pass through it.
10	viscosity/viscos	Having a thick, sticky consistency between solid and liquid.
11	evaporate	Turn from liquid into vapour.
12	filter	A device for removing solid particles from a liquid or gas.
13	dissolve	To become part of a liquid e.g. sugar dissolves in water.
14	sieve	A utensil consisting of a wire or plastic mesh held in a frame, used for straining solids from liquids.



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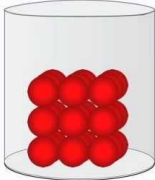
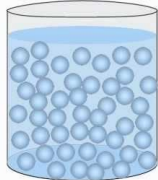
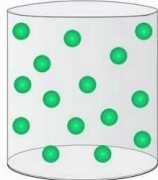
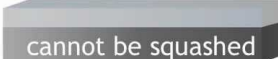
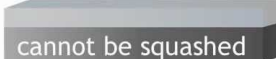
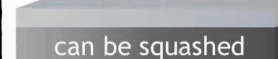
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## Key Concepts (substantive knowledge)

Detailed knowledge of what a solid, liquid and a gas is.
Compare the viscosity and transparency of liquids.
Understand what solids dissolve and which do not.
Explain how dissolved materials can be separated from a liquid.
Describe and explain the process of filtering and sieving.
Explain how to separate solids from solutions using the process of evaporation.

solid	liquid	gas
		
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
 cannot be squashed	 cannot be squashed	 can be squashed

## Working scientifically (disciplinary knowledge)

Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
Observation over time
Using test results to make predictions to set up further comparative and fair tests
Grouping and classifying
Carrying out comparative and fair tests

