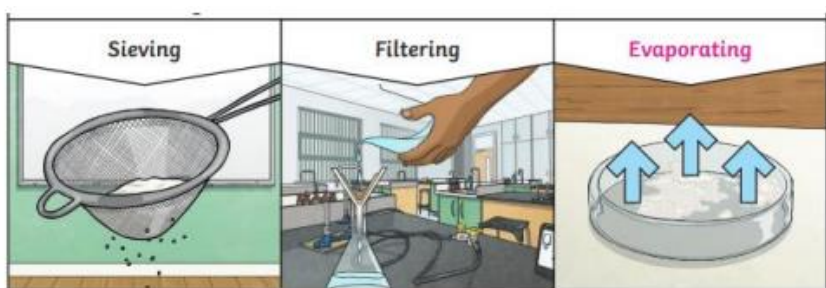
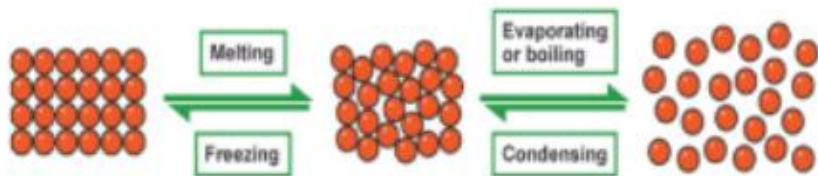
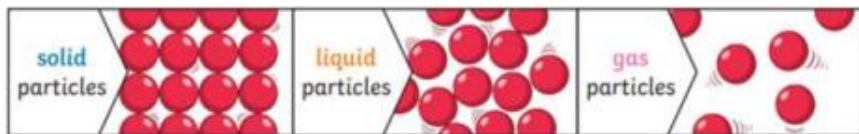


## Y5 Science: Properties and changes of materials



### Why are we learning about properties and changes of materials?

We are **building on all our previous learning** Everyday Materials in Year 1/2, and States of Matter, including how objects can change state, in Year 3/4.

This **new learning is important because** materials are all around us. We use them every day, therefore understanding their properties, how they change, and which are the best material for different purposes is vital.

This **will help us get ready for future learning about** designing investigations in year 6 when exploring scientific inquiry.

### Important questions to answer:

- What are materials and how can we group them?
- Is it possible to separate all materials that have been combined, why/why not?
- Why are some changes reversible and some irreversible?

### Experiences we will have:

- Conduct investigations into reversible and irreversible changes

### Things we need to know:

- To know what materials are made from
- To know how to compare and group together everyday materials based on evidence from comparative and fair tests, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- To use knowledge of solids, liquids, and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- To know dissolving, mixing and changes of state are reversible change
- To know that some changes cannot be reversed and that a new material is formed when this happens

### Skills we need to learn:

- I can **compare** and group materials according to their properties
- I can **plan** and **conduct** a fair test to separate materials
- I can **explain** reversible and irreversible changes

### Subject Specific Vocabulary:

solubility	dissolve	evaporate
transparency	substance	reversible
conductivity	solution	irreversible
electrical	mixture	chemical
thermal	filter	physical
magnetic	sieve	suspension