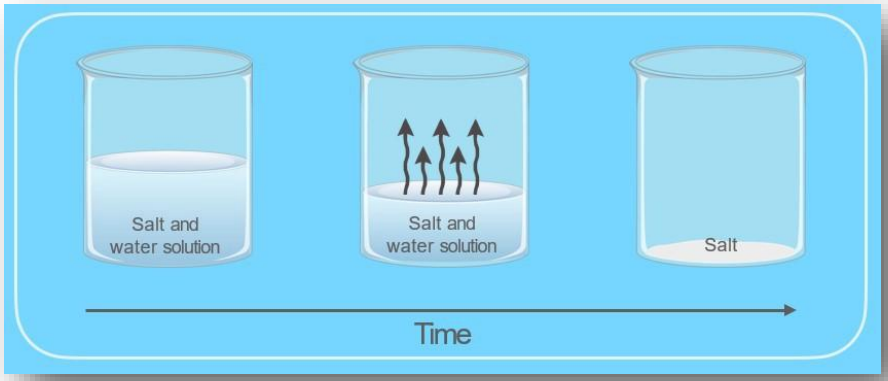
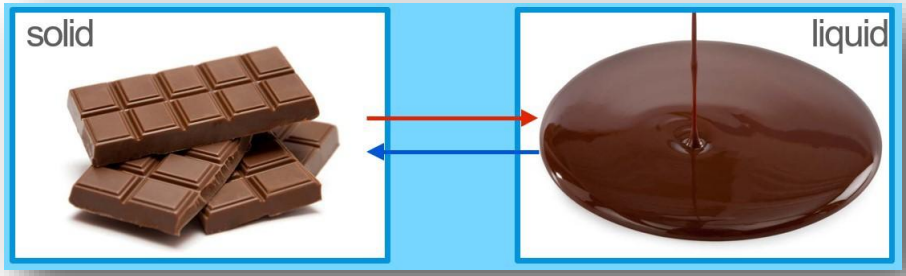
Knowledge Organiser — Year 5 — Science — Characteristics of Materials — Spring 1 and 2

Key Vocabulary	Meaning
Substance	A physical material from which something is made
Solution	The mixture that the dissolved substance and liquid make.
Solvent	The liquid that a substance is dissolved in.
Solute	A substance that can be dissolved in a liquid.
Soluble	A soluble substance dissolves in a liquid.
Insoluble	An insoluble substance does not dissolve in a liquid.
Independent variable	This is the one thing you are changing within the test.
Dependent variable	This is what you are measuring or observing during the test.
Control variable	These are the other aspects of the test that you are keeping the same.
Reversible Change	A change that can be undone or reversed
Irreversible Change	A change that cannot be undone

Key Aims:

- Compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- Know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution.
- Use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.
- Demonstrate that dissolving, mixing and changes of state are reversible changes.
- Explain that some changes result in the formation of new materials.





Ruth Benerito (January 12, 1916 – October 5, 2013) was an American chemist and inventor known for her work related to the textile industry, notably including the development of wash-and-wear cotton fabrics.

By the end of the topic, I will be able to carry out a series of investigations to help me answer key questions and ideas about the characteristics of materials in the world around us.