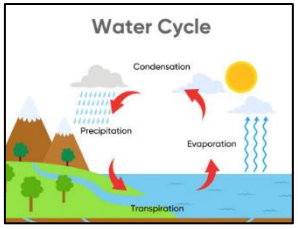
Year 5/6: Properties and Changes of Materials Knowledge Mat

Subject Specific Vocabulary Dozen

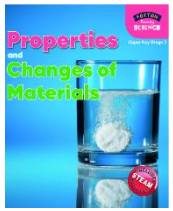
Soluble	Able to be dissolved, especially in water. A **solution** is made when one substance dissolves intro another.
Insoluble	Cannot be dissolved, especially in water
Dissolve	Breaking down of a material in to tiny particles to make a solution
Reversible change	Can be reversed back to its original state
Irreversible change	Cannot be reversed back to its original state
Separate	to break into parts or to keep apart.
Evaporation	The process of liquid heating and changing into a gas
Condensation	The process of a gas changing into a liquid.
Filter	Separates an insoluble solid that is mixed in a liquid.
Sieve	Separates solids of different sizes
Properties	Characteristics of different materials that make them suitable for purpose
Mixing/Mixture	Combining substances that do not dissolve

What I will know at the end of the unit:

- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
- 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
- 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, and that this kind of change is not



Exciting Books



Sticky Knowledge

- Materials have different uses depending on their properties and state (liquid, solid, gas).
- Some materials will dissolve in a liquid and form a solution while others are insoluble and form sediment.
- Mixtures can be separated by filtering, sieving and evaporation.
- Some changes to materials such as dissolving, mixing and changes of state are reversible, but some changes such as burning wood, rusting and mixing vinegar with bicarbonate of soda result in the formation of new materials and these are not reversible.
- Water at the surface of seas, rivers etc. evaporates into water vapour (a gas). This rises, cools and condenses back into a liquid forming clouds. When too much water has condensed, the water droplets in the cloud get too heavy and fall back down as rain, snow, sleet etc. and drain back into rivers etc. This is known as precipitation. This is the water cycle

	usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.