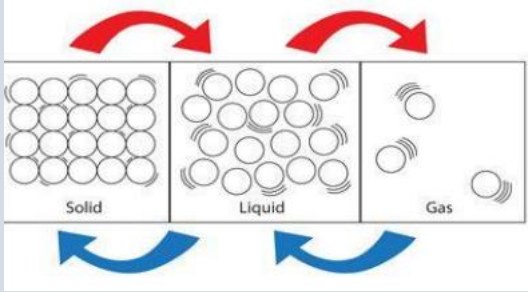
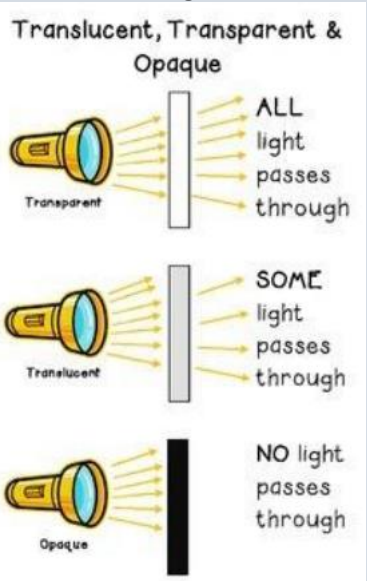
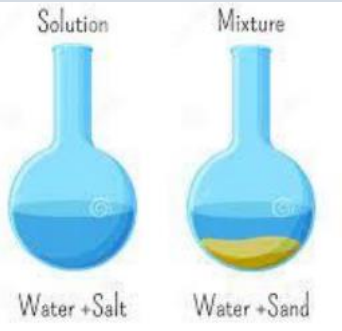


Properties and Changes of Materials – Year 5 & 6 – Spring 1 2025

Key Learning	Vocabulary
<p>Materials have different uses depending on their properties and state (liquid, solid, gas).</p> 	<p>Change of state: a physical change in a matter including melting, boiling, freezing and condensation. Mixture: a substance made by mixing other substances together. Dissolve: to become incorporated into a liquid so as to form a solution. Solution: a mixture whereby one substance has been dissolved in the liquid substance. Soluble: able to be dissolve, especially in water. Insoluble: not able to be dissolved. Reversible: capable of being reversed so that the previous state is restored. Irreversible: not capable of being reversed. Separate: the process of dividing into individual parts / materials. Material / substance: the matter from which a thing is or can be made. Property: an attribute, quality, or characteristic of something. Filtration: to pass a liquid through a device (e.g. filter paper) to remove unwanted material. Evaporation: the process of turning from liquid into vapour Sieving: the process of passing a mixture through a sieve to separate larger particles from smaller ones. Transparent: allowing light to pass through so that objects behind can be seen (seethrough) Opaque: blocking light from passing through; not transparent. Conductor: allowing heat or electricity to pass through.</p>
<p>Properties include hardness, transparency, electrical and thermal conductivity and attraction to magnets.</p>  <p>Translucent, Transparent & Opaque</p> <p>Transparent: ALL light passes through</p> <p>Translucent: SOME light passes through</p> <p>Opaque: NO light passes through</p> <p>Some materials will dissolve in a liquid and form a solution.</p>  <p>Water + Salt Water + Sand</p> <p>Others are insoluble and form sediment. This is known as a mixture.</p>	

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.



Charcoal



Rust



Vinegar and bicarbonate of soda



Bread dough

Lesson	Key Questions
1	How can we classify and group materials according to their properties?
2	Can I understand what thermal insulation is?
3	Can I investigate if materials are electrical conductors or insulators?
4	Can I explain how some materials will and won't dissolve in water?
5	Can I use the processes of magnetism, sieving, evaporation and filtration to separate a mixture of materials?
6	What are reversible and irreversible changes?