

Ashfield Valley Primary School—Year 5 – Science- Knowledge Organiser—Can I compare and group materials based on their properties?

Key Vocabulary		Key Knowledge
Materials	The substance that something is made out of e.g. wood, plastic and metal.	Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity and transparency.

**solids** One of the 3 states of matter. Solid particles are very close together so solid materials such as wood and glass hold their shape.

**liquids** They can flow and take on the shapes of the container. The particles are loosely packed so they can move around. Examples are water and milk.

**gases** Gas particles are further apart than solid or liquid particles and they are free to move around. Examples of gases are oxygen and carbon dioxide.

**conductor** A material that heat and electricity can travel through.

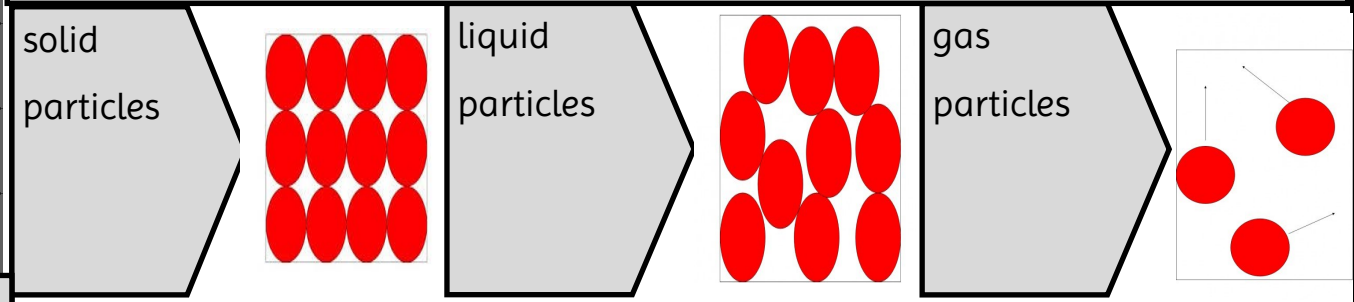
**insulator** It is a material that does not let heat or electricity through.

**transparency** A transparent object lets light through e.g. glass



For example glass is used for windows because it is transparent. Thermos flasks keep liquids and foods hot or cold so they are insulators. Magnets can be used to hold items in place for example on a notice board.

### The three states of matter



### Things to do

Look around your home for a selection of objects. Group them according to their properties. Use the words from the key knowledge. Make a poster of what you find.  
Can you find some foods in your kitchen that dissolve in

**Dissolving**  
A solution is made when solid particles are mixed with liquids. Materials that will dissolve are **soluble**. Those that don't dissolve are **insoluble**.

Sugar is a soluble material.

Sand is an insoluble material.