Knowledge Organiser: Year 5 Properties of Materials

Sticky Knowledge



1. Some everyday materials include: wood, plastic, glass, metal and water. Wood is strong, plastic is light, metals are strong, glass is often transparent and rocks can be hard or soft.



2. A thermal conductor is a material that allows energy, as heat, to move through that material. Materials that are poor conductors of thermal energy are called thermal insulators.



3. The hardness of a material is the ability to resist a compressive force. This means that a very hard material will be difficult to bend or scratch.



4. Only soluble materials dissolve in water. These are called solutes. Insoluble materials cannot be dissolved.



5. Often, solids become more soluble as you increase the temperature of the liquid you are adding them to. The saturation point is when no more of a substance can be dissolved.



6. If a mixture has been made it can be separated. Some ways to separate a mixture include: filtering, sieving, evaporating and using a magnet.

Properties of Materials

conducts energy	
insulates energy	
transparent	
waterproof	
durable (strong)	
magnetic	

Everyday Materials

Metal saucepans **conduct** heat to warm food.



Wooden spoons and plastic handles **insulate** heat so hands do not get burned.

Soluble Materials

Some solids **dissolve** in water (**SOLUBLE**).

coffee 

sugar 

salt 

jelly 

Some solids do not **dissolve** in water (**INSOLUBLE**).

pepper 

sand 

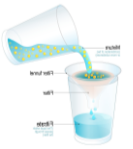
wax 

Separating Materials

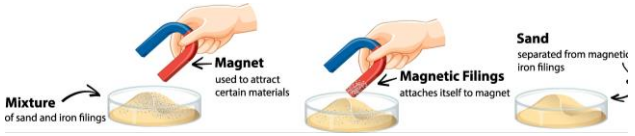
Sieving



Filtering



Magnetism



Magnetic metals:

- iron
- nickel
- steel

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