Y5 Thinking like a Scientist— Properties of materials

Learning Questions:

How do the properties of materials determine their uses?

How do thermal conductors and insulators transfer heat differently?

Why are some materials more suitable for specific purposes than others?

How do soluble substances form solutions in water?

How can the solubility of materials be compared and tested?

How can mixtures be separated using scientific techniques?

Soluble Materials

Some solids dissolve in water (SOLUBLE).

coffee sugar salt jelly



Some solids do not dissolve in water (INSOLUBLE).

pepper sand wax

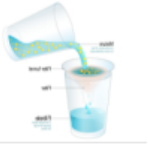


Separating Materials

Sieving



Filtering



Magnetism



Magnetic metals:

- iron
- nickel
- steel

Rocket Words

	conductive	a material that allows heat and/or electricity to pass through it
	magnetic	material that is attracted to a magnet
	thermal	using or producing heat
	conduction	heat moving from one object to another through contact
	hardness	resistance to scratching and pressure
	force	when an object is acted upon by a pull or push motion in a specific direction
	dissolve	to mix with a liquid and become part of the liquid
	solute	a substance that can be dissolved in liquid
	solvent	a substance that can dissolve in a solute, water is a solvent
	substance	any material, such as sugar
	filtering	the separation of a mixture using a tool with small holes to separate particles
	evaporation	the process where a liquid changes into a gas

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.