

# Properties of materials









## STICKY KNOWLEDGE

<p><b>Conductive materials</b> allow heat/ electricity to pass through them</p> <p><b>Magnetic materials</b> are attracted to a magnet</p> <p><b>Transparent materials</b> allow light to pass through them so they can be seen clearly</p>	<p><b>Thermal conductors</b> allow heat to pass through them quickly.</p> <p><b>Thermal insulators</b> do not allow heat to pass through them quickly.</p>	<p><b>Hardness</b> is resistant to scratching and pressure</p>
<p>Materials which dissolve in liquids are <b>soluble</b>.</p> <p>Materials which do not dissolve in liquids are <b>insoluble</b>.</p>	<p>Mixtures can be <b>separated</b> by filtering, sieving, evaporating or magnets.</p>	

## KEY VOCABULARY

thermal	Using or producing heat
conduction	Heat moving from one object to another through contact
solute	A subject that can be dissolved in liquid
solvent	A substance that can dissolve a solute
saturation	Unable to dissolve or absorb any further

## 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

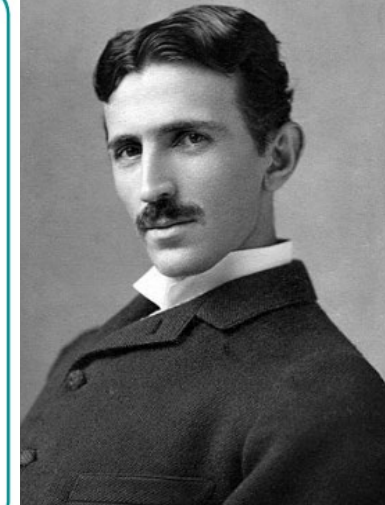
Some solids **dissolve** in water (**SOLUBLE**).

coffee    sugar    salt    jelly



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

pepper    sand    wax



## Nikola Tesla

Inventor of the modern alternating current (AC) electricity supply system.

## Separating Materials

### Sieving



### Filtering



### Magnetism



### Magnetic metals:

- iron
- nickel
- steel