

# Year 5, Term 1: Materials

## Key vocabulary

**Thermal Insulator:** Does not let heat travel through easily, such as; fabrics, wood and plastics. Can keep heat in or out

**Thermal Conductor:** Lets heat travel easily through, such as metals.  
something that motivates a person to leave or escape a country

**Electrical Insulator:** Does not let electricity pass through.

**Electrical Conductor:** Lets electricity pass through, often made of metal.

**Dissolving:** Dissolving is when the particles of solids mix with particles of liquids, often appearing like it has disappeared. In reality it has dissolved in the liquid to make a transparent solution.

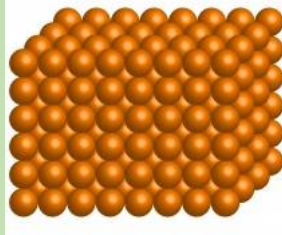
**Insoluble:** If a material does not dissolve.

**Soluble:** if a material does dissolve.  
something that encourages a person to move to a new country

**Melting:** Solids that change into a liquid due to heat. They stay as the same material (ice to water).

## Sticky Knowledge: Three States of Matter

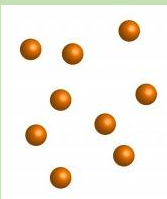
**Solid:** Particles close together / vibrate around a fixed position.



**Liquid:** particles close but randomly arranged/move around.



**Gas:** Particles far apart and randomly arranged/ move around.



## Separating Materials

**Sieving** separates two solids of different sizes (e.g. flour and raisins).

**Filtration** separates a mixture of liquids and solids (which haven't been dissolved).

**Evaporation** separates a solid that has dissolved in a liquid (solution) using heat. Liquid evaporates and leaves behind the solid (e.g. salt and water solution)

**Magnetism** separates metal from another solid by attracting metal to the magnet, leaving behind the other solid (e.g. paper clips and matchsticks).

## Reversible and Irreversible changes

**Reversible changes** can be changed back or reversed by adding heat or by cooling down.

e.g. Ice (melts to water) - Water (evaporates into steam) – Steam (condenses into water) – Water (freezes into Ice)

**Irreversible changes** can not be changed or reversed by adding heat or cooling down.

e.g. Cooking an egg or burning wood