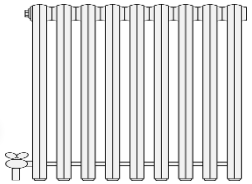
Materials

KEEPING

Thermal Insulators – Do not let heat travel through easily such as fabrics, wood and plastics. Can keep heat in or out.



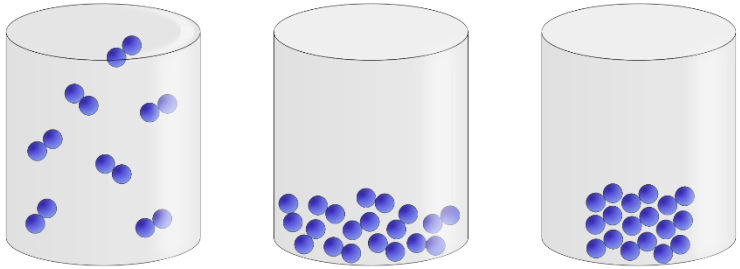
Thermal Conductors - Lets heat travel easily through such as metals.

When things get hot, atoms start to vibrate. Heat produces energy. This could cause them to change state!

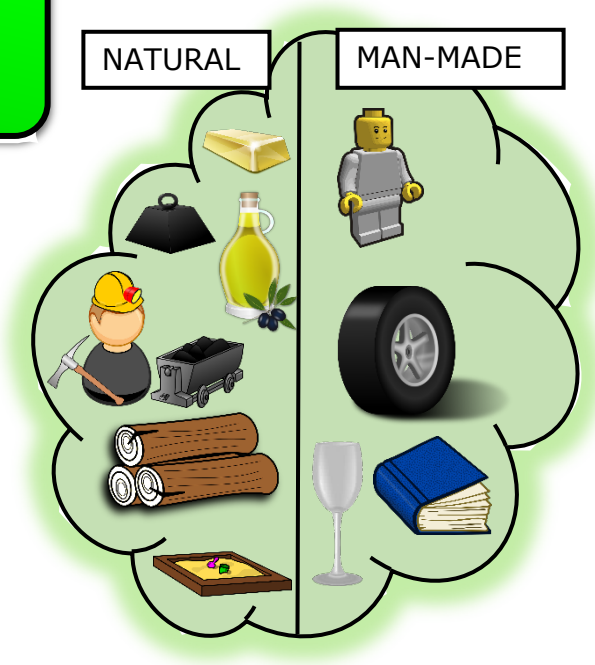
Three states of matter

GAS: particles far apart and randomly arranged / move around
LIQUID: particles close but randomly arranged / move around
SOLID: particles very close together / vibrate around a fixed position



Gas Liquid Solid

Examples	**Examples**	**Examples**
Steam (water vapour) Hydrogen Carbon Dioxide Oxygen	Water Milk Washing up liquid Juice	Ice Wood Glass Diamond



DISSOLVING
Dissolving is when the particles of solids mix with particles of liquids, often appearing like it has disappeared but it has dissolved in the liquid to make a transparent solution (e.g. mixing sugar into water). It does not always need heat to occur. If a material does not dissolve it is insoluble. If it does, it is soluble.

MELT ING
Involves only solids which change into a liquid due to heat. They stay as the same material (e.g. ice to water).

Separating Materials

SIEVING – A way to separate two solids of different sizes (e.g. flour and raisins).

FILTRATION – A mixture of liquids and solids which haven't dissolved can be filtered using paper with tiny holes (e.g. sand and water).

EVAPORATION – A solid dissolved in a liquid (solution) can be heated. Liquid evaporates and leaves behind the solid (e.g.

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