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| **Key Information** | **Key Scientists** | **Subject Specific Vocabulary** | |
| ***Thermal conductors –*** *Heat passes easily through some materials. These are called thermal conductors. Metals like copper, aluminium and gold are great thermal conductors.* | **Marie Curie (1867-1934)**  **Marie Curie** was a physicist and chemist who conducted pioneering research on radioactivity. She is remembered for her discovery of radium and polonium, and her huge contribution to finding treatments for cancer.  **John Dalton (1766-1844)**  **John Dalton**was an English chemist, physicist and meteorologist. He was famous for the atomic theory that suggested all matter was comprised of atoms. | **dissolving** | Some substances dissolve when you mix them with water. When a substance dissolves, it might look like it has disappeared, but in fact it has just mixed with the water to make a transparent liquid called a solution. |
| ***Thermal insulators –*** *Heat does not pass easily through some materials so we can use them to keep things hot or cold instead e.g. flasks, polystyrene.* | **solvent** | A liquid that will dissolve something is called a solvent. |
| ***Electrical conductors -*** *Electricity passes easily through some materials. These are good electrical conductors e.g. copper, aluminium.* | **solution** | When a substance dissolves in water to make a transparent liquid, it is called a solution. |
| ***Electrical insulators -*** *Electricity does not pass easily through some materials. These are good electrical insulators e.g. wood, plastic.* | **soluble/insoluble** | when mixed with water, it disappears (dissolves)/when mixed with water, it doesn’t dissolve |
| ***dissolving vs melting -*** ***Dissolving*** *requires two materials, this results in a mixture of the two (a solution).* ***Melting*** *only involves one substance and this same material can be both a solid and liquid.* | **particles** | very small pieces of something |
| ***properties of materials –*** *transparent, opaque, translucent, rigid, flexible, waterproof, absorbent, flammable, inflammable.* | **suspension** | A mixture between a liquid and particles of a solid when the particles do not dissolve in the liquid. |
| **sieving** | a separating process using a barrier with small to medium-sized holes |
| **filtering** | a process for separating an insoluble solid from a liquid e.g. sand from water |
| **evaporation** | The process of changing a liquid (water) to a gas (water vapour) using heat. |
| **condense** | The process of changing a gas (water vapour) to a liquid (water) by reducing the temperature. |