Science Year 5 Spring 2: Properties and Changes of Materials

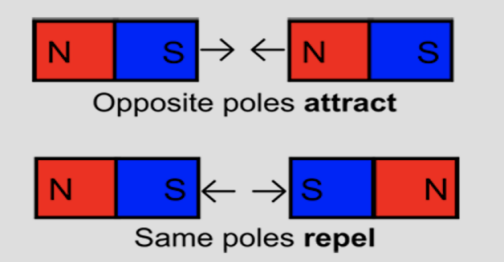
Key vocabulary to learn and use in your learning.

Word	Definition
chemistry	The scientific study of the structure of substances.
substance	A solid, powder, liquid or gas.
soluble	Will dissolve in liquid.
insoluble	Will not dissolve in liquid.
filtering	Separates an insoluble solid from a liquid.
evaporation	Separating dissolved liquids from substances.
condensing	When a gas, such as water vapour, cools and turns into a liquid.
transparent	A material that allows light to pass through
dissolve	When a solid material mixes with a liquid and is no longer visible.
solution	A liquid in which a solid has been mixed into and dissolved e.g. sugar

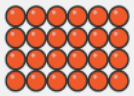
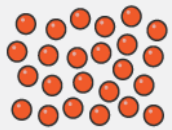
Reversible and Irreversible Changes	
Reversible change	Changes that are not permanent. Dissolving, mixing, melting and freezing are reversible changes.
Irreversible change	Changes that are permanent and can not be undone, e.g. burning wood.

Alice Ball—(July 24, 1892 – December 31, 1916) was an African-American chemist who developed an injectable herbal extract (ethyl hydnocarpate) that was the most effective treatment for leprosy during the early 20th century.

How magnets work



Solids, Liquids and Gases.

State	Solid	Liquid	Gas
Diagram			
Arrangement of particles	Regular arrangement	Randomly arranged	Randomly arranged
Movement of particles	Vibrate about a fixed position	Move around each other	Move quickly in all directions
Closeness of particles	Very close	Close	Far apart

Key knowledge to know and use.

- Magnets have a North and South pole. North is often red while South is often blue. The arrows above show the direction of the force in this diagram.
- Different materials are used for particular jobs based on their properties: electrical conductivity, flexibility, hardness, insulators, magnetism, solubility, thermal conductivity, transparency. For example, glass is used for windows because it is hard and transparent. Oven gloves are made from a thermal insulator to keep the heat from burning your hand.
- Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by, sieving, filtering and evaporating.
- Irreversible changes often result in a new product being made from old material (reactants). For example, burning wood makes ash.