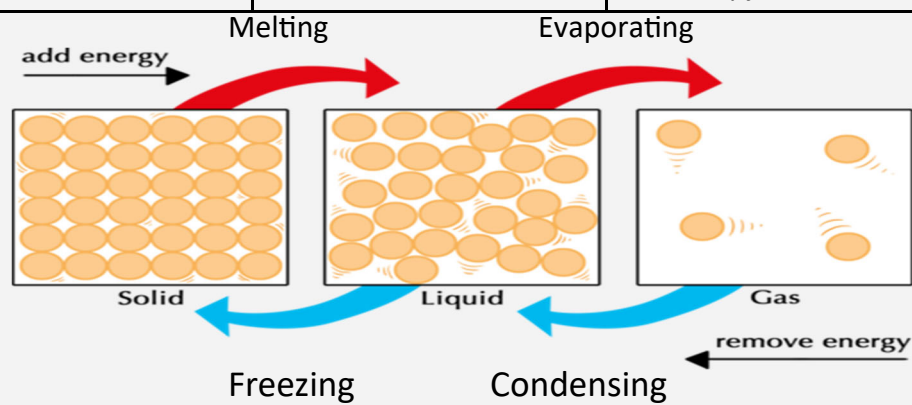


(1) Chemistry 1 — Particles

Element	Compound	Mixture
A substance that contains only one type of atom.	A substance that contains different types of atoms that are chemically joined.	A substance that contains different types of particles that are not chemically joined.



(2) Chemistry 2 — Periodic Table

Metals	Left hand-side of periodic table
Non-metals	Right hand-side of period table
Groups	Columns that read up and down
Periods	Rows that read left to right

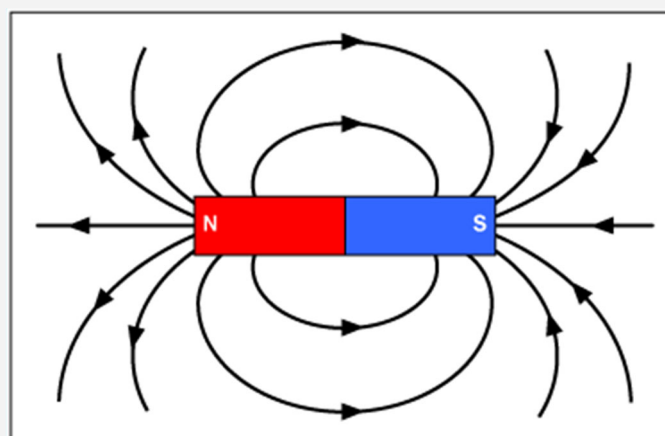
Formulae show us which elements are present in compounds

H ₂ O	Water
CO ₂	Carbon Dioxide
CH ₄	Methane
NH ₃	Ammonia

(3) Physics 3 — Gravity

- Contact Forces**—Forces experienced when objects are touching.
Examples: Friction, Air resistance, Water resistance, Normal contact
- Non-Contact Forces**—Forces experienced when objects are not touching.
Examples: Magnetism, Weight, Electrostatic
- Mass**—The amount of matter in an object, measured in grams, g or kilograms, kg. Can be measured using a **digital mass balance**.
- Weight**— The force applied on the matter by gravity, measured in Newtons, N. Can be measured using a **Newton meter**.
- Newton meter**—The piece of apparatus (equipment) used to measure pulling forces such as weight, and friction.
- Digital mass balance**— The piece of apparatus (equipment) used to measure the mass of an object.

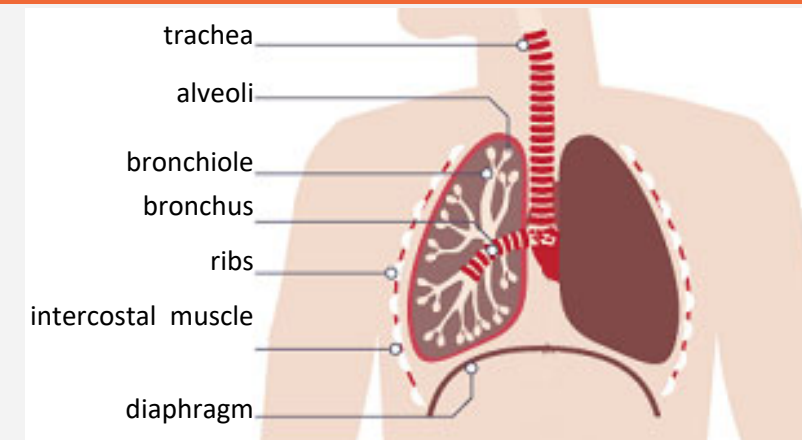
(3) Physics 4 — Magnets



Magnetic field—The area around a magnet where it has a magnetic effect.

The three **magnetic elements** are: Iron, Nickel, Cobalt

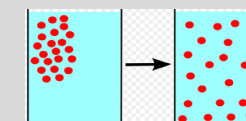
(5) Biology 3 — Gas Exchange System



Inhalation	Exhalation
Diaphragm contracts, moves downwards.	Diaphragm relaxes, moves upwards.
Intercostal muscles contract, ribs move up and out.	Intercostal muscles relax, ribs move down and in.
Air drawn in to the lungs.	Air forced out of the lungs.

(6) Biology 3 — Key Vocabulary

Diffusion—The net movement of particles from an area of high concentration to an area of low concentration.



Gas Exchange— The process which occurs in the alveoli in animals, moving oxygen into our blood and carbon dioxide out of our blood. In plants it takes place through stomata.

Stomata—Tiny holes on the underside of a leaf.

Smoking

Causes: Coronary Heart Disease, Emphysema, Smoker's Cough

Tar— Causes cancer of the lungs, mouth and throat

Nicotine—Addictive drug found in cigarettes and tobacco.

Smoke—Damages the lining of the airways causing a smoker's cough.

Carbon monoxide— A gas that reduces the amount of oxygen carried in the blood.



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