

Year 8 Science at War – Reactions

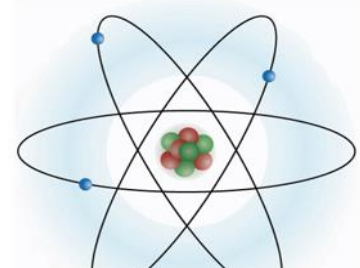
Lithium	Used in Lithium ion batteries. Lithium compounds can be used to treat certain mental illnesses.
Sodium	Used in Sodium Vapour (orange) street lights. Used in the manufacture of soap and Indigo dye.
Potassium	Potassium compounds are used in plant fertilisers. Bananas are a dietary source of potassium.
Rubidium	Used to give a purple colour to fireworks
Caesium	Caesium atoms are used in atomic clocks, the most accurate clocks made.

- All the different elements are arranged in a chart called the **periodic table**.
- The horizontal rows are called **periods**.
 - The vertical columns are called **groups**.
 - Elements in the same group are similar to each other.
 - The metals are on the left and the non-metals are on the right.
 - One non-metal, hydrogen, is often put in the middle.
 - The main groups are numbered from 1 to 7 going from left to right, and the last group on the right is group 0.

The zig-zag line in this diagram separates the **metals**, on the left, from **non-metals**, on the right. Hydrogen is a non-metal but it is often put in the middle.

Notice that most elements are metals, rather than non-metals.

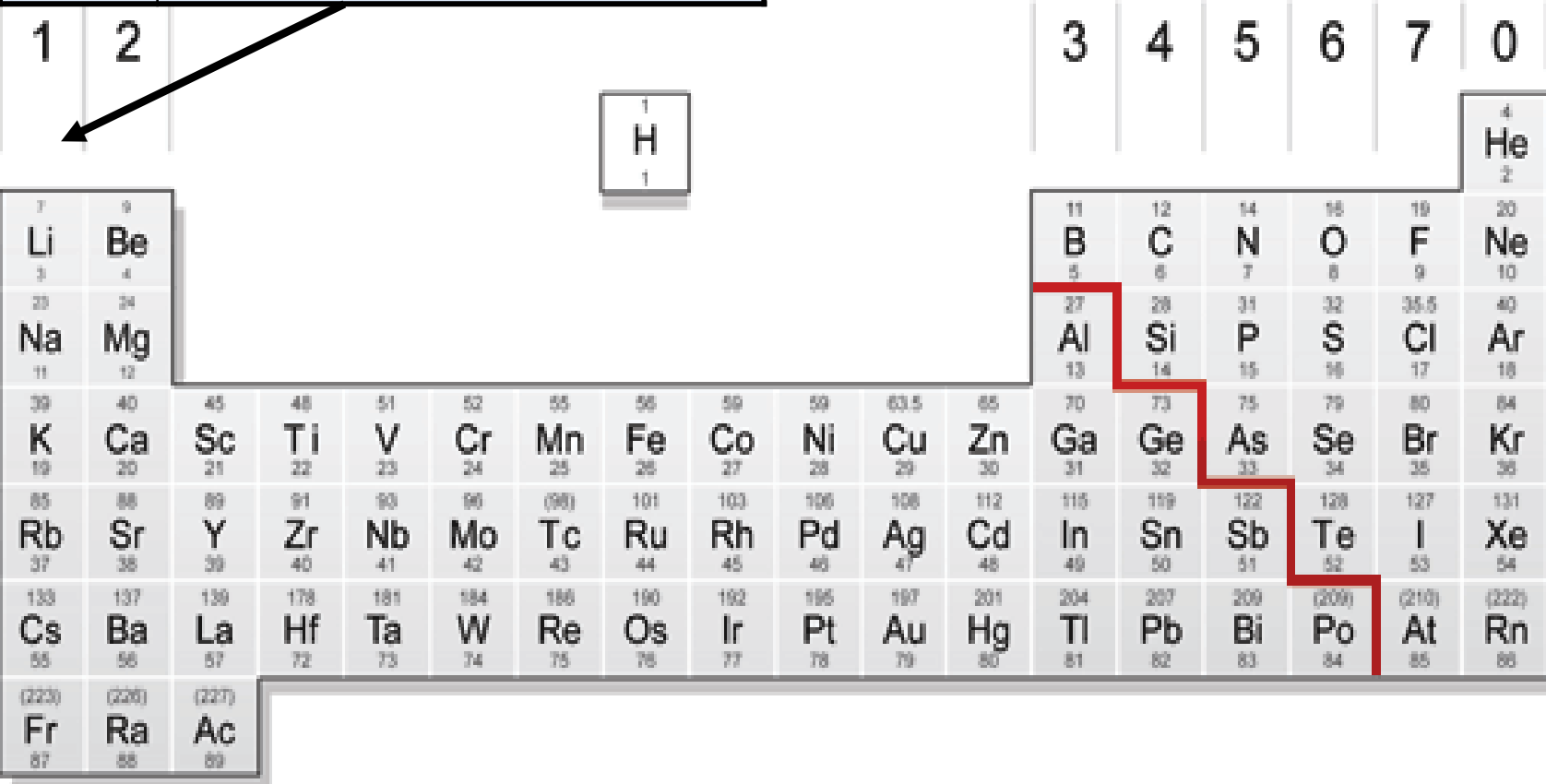
Each element has its own chemical symbol, made from letters. Remember that you will only find elements in the periodic table and never compounds. So don't try to look for substances like water and copper sulphate in the periodic table, because they are not there.



Proton (positive charge)

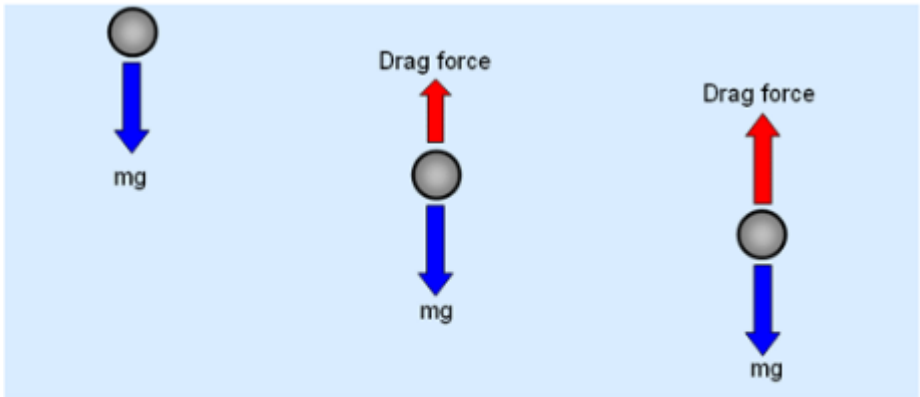
Electron (negative charge)

Neutron (no charge)



Property	Metals	Non-metals
Appearance	Shiny	Dull
State at room temperature	Solid (except mercury, which is a liquid)	About half are solids, about half are gases, and one (bromine) is a liquid
Density	High (they feel heavy for their size)	Low (they feel light for their size)
Strength	Strong	Weak
Malleable or brittle	Malleable (they bend without breaking)	Brittle (they break or shatter when hammered)
Conduction of heat	Good	Poor (they are insulators)

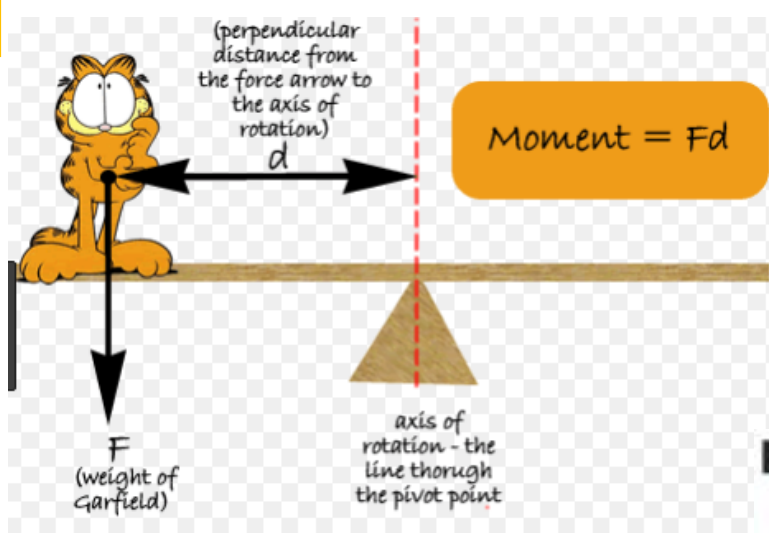
19 9 F		Fluorine	yellow gas
35 17 Cl		Chlorine	green gas
80 35 Br		Bromine	volatile brown liquid
127 53 I		Iodine	volatile purple solid



Body released from rest

Forces on body during acceleration

Forces on body at terminal velocity



Bacteria vs. Virus

BACTERIA	BOTH	VIRUS
Strep throat Tuberculosis Whooping cough UTI	Bronchitis Ear infection Sinus infection	Common cold Flu Sore throat
Antibiotics? YES	Antibiotics? MAYBE	Antibiotics? NO

Stop the spread of germs that make you and others sick!

Cover your Cough

Put your used tissue in the waste basket.

Cover your mouth and nose with a tissue when you cough or sneeze or cough or sneeze into your upper sleeve, not your hands.

Clean your Hands

after coughing or sneezing.

Wash hands with soap and warm water or clean with alcohol-based hand cleaner.

High and low Pressure

- An elephant exerts relatively low pressure because the surface area of its feet.

- Where as a woman in stilettos exerts a lot of pressure because of the low surface area of the heel.

HOW A VACCINE WORKS

