



Topic: Atoms, elements, compounds and mixtures

Date covered: 30/10/17 – 22/12/17

Key words:

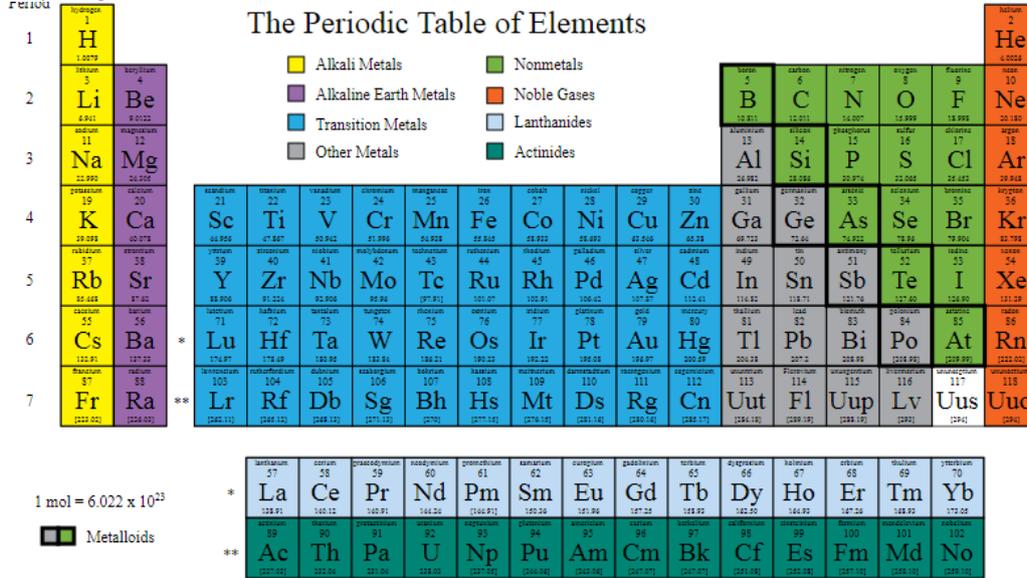
atom
boiling point
properties
compound
element
formula
melting point
mixture
molecule
particle
periodic table
pure
symbol
composition
products
reactants

Key facts:

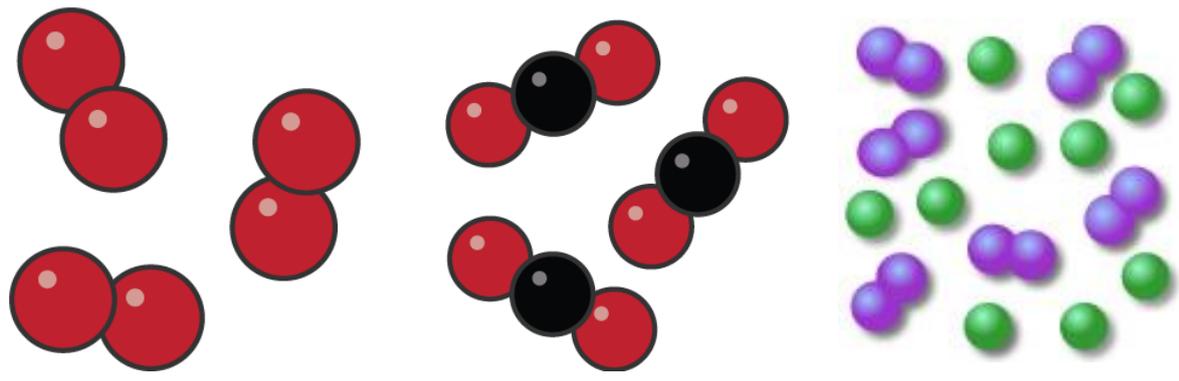
- Atoms make up everything.
- An element is made up of one type of atom.
- All the elements are listed in the periodic table.
- Approx. 75% of the periodic table is made up of metals.
- Elements in the periodic table are arranged in Groups. These groups have similar properties.
- Each element has its own unique symbol in the periodic table made up of only one capital letter and possibly a low case letter. (e.g.: Oxygen = O, Copper = Cu).
- All but one metal in the periodic table exist as a solid at room temperature. (Mercury is liquid at room temperature.)
- A compound is two or more different elements chemically joined together.
- A compound is represented with a formula. This represents the different atoms present in the compound. (e.g. Carbon dioxide has the formula CO_2 this means there is 1 carbon atom and 2 oxygen atoms)
- A mixture is two or more different elements not chemically joined.
- Examples of mixtures: Alloys, salt water, concrete.
- Chemical reactions are represented with equations. Reactants are always on the left. These are the substances that react. Products are on the right. These are the substances that are made.
- In all reactions mass is conserved as there is the same number of particles present at the beginning as the end.
- Any element that is burnt reacts with oxygen this forms an oxide.
- Molecules are two or more atoms bonded together. All compounds are molecules however elements can also be molecules as two of the same atom can be bonded together.

- The colour a flame changes to tells us which element is present:
 - Zinc – Yellow
 - Potassium – Lilac
 - Strontium – Red
 - Sodium – Orange
 - Copper – Green- Blue

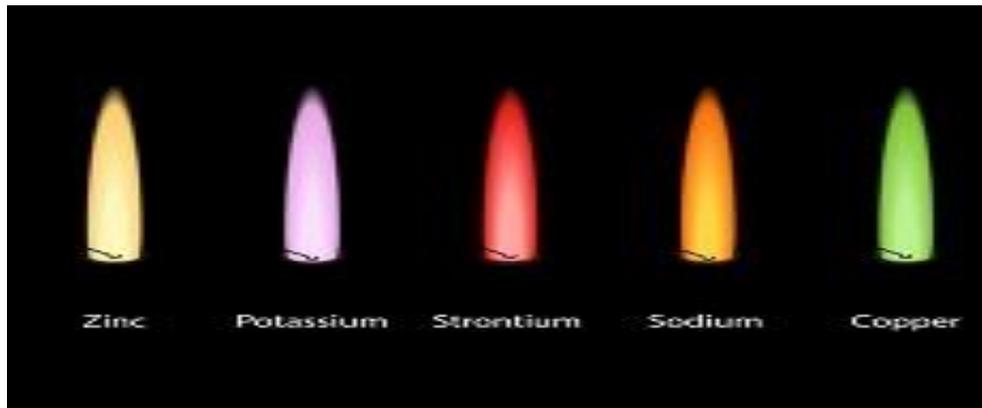
Key diagrams:



Element Compound Mixture



Flame tests:



Additional information: