

Year 8 ,C5 materials fact list (For a 25 question test in Sept)

also you need review the facts about:

- *the early and modern periodic table, symbols, formula, particle diagrams C4 (year 8)*
- *elements, mixtures , compounds C2 (year 7)*

Year 8 fact sheet C5

1. The substances that make up the world around us are called materials.
2. Physical properties are what a substance is like eg its colour, if it is hard or soft,
3. Chemical properties are how a substance reacts eg if it is flammable, reacts with acid.
4. Combustion (Burning) is an oxidation reaction.
5. The products of combustion are called oxides.
6. When magnesium burns it gains mass as oxygen atoms add to it.
7. Metals react with acid to make a salt plus hydrogen gas.
8. Hydrogen produces a squeaky pop when a lit splint is placed in it. This is the test for hydrogen.
9. Hydrochloric acid produces salts called chlorides.
10. Sulfuric acid makes salts called sulfates.
11. Nitric acid forms salts called nitrates.
12. Metals that are less reactive than hydrogen do not react with acid.
13. Group 1 metals are very reactive. It is too dangerous to react them with acid.
14. Group 1 metals react with water to form hydrogen gas and the metal hydroxide.
15. When a group 1 metal reacts with water it makes an alkaline solution. Group 1 metal are called the alkaline metals.
16. In a displacement reaction, a more reactive metal takes the place of a less react metal in a compound.
17. Reactions can be exothermic (heat energy is given out) or endothermic (heat energy is taken in)
18. Carbon can be used to extract a metal from a compound if the metal is less reactive than carbon.
19. Composite materials are made from joining different materials together; each material keeps its own properties.
20. The order of reactivity from most reactive to least reactive is called the reactivity series. The reactivity series is;

Potassium
Sodium
Lithium
Calcium
Magnesium
Aluminium
Carbon
Zinc
Iron
Tin
Lead
Hydrogen
Copper
Silver
Gold

Extract from C4

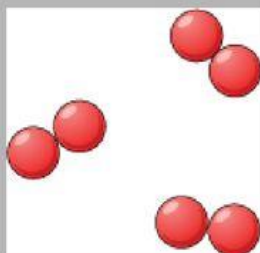
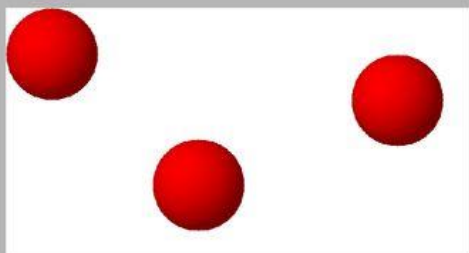
- The periodic table shows all the elements.
- The elements on the modern periodic table are arranged in increasing atomic number.
- The early periodic table was arranged in order of atomic weight but Mendeleev changed this slightly to make elements fit in groups with similar properties.
- Rows across the periodic table are called periods.
- Columns going down the periodic table are called groups.
- Elements are represented by a capital letter or a capital and a lower case letter called symbols.
- Compounds are represented by formula; these show the types and numbers of atoms in each molecule.

Extract from C2

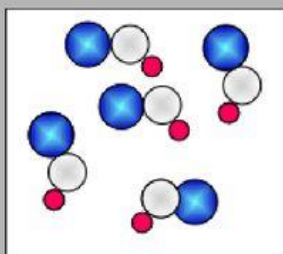
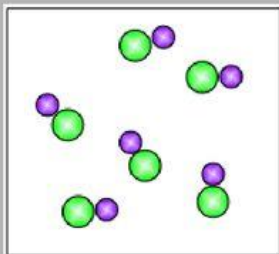
1. Elements are materials that only contain one type of atom.
2. Compounds are materials that contain more than one type of atom chemically bonded together.
3. Pure substances contain only atoms or molecules of that substance eg pure water only contains H_2O molecules.
4. Mixtures, or impure substances, contain two or more different substances that are not chemically joined together.

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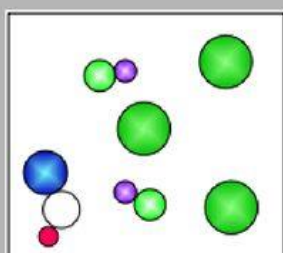
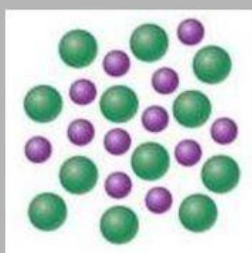
Particle diagrams



Examples of **elements**:
only 1 type of atom! (On the right is an element that is a molecule, like O_2)



Examples of **compounds**:
Two or more different atoms **chemically bonded** together.



Examples of mixtures:
different elements or compounds mixed together – **not bonded!**