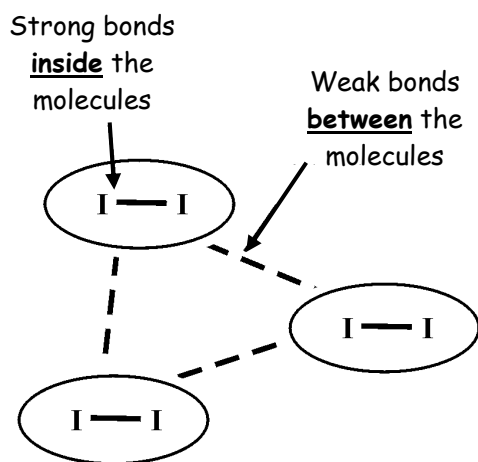


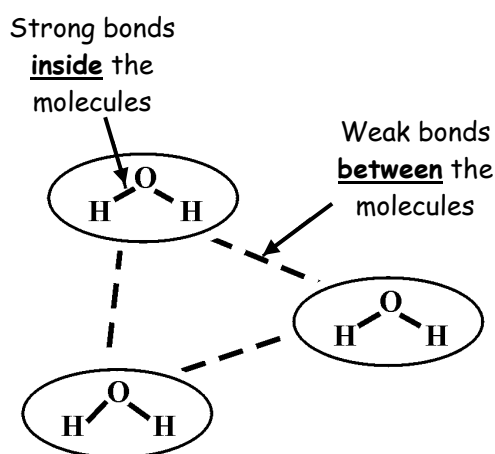
Section 3 Summary

3.1 Molecules & Ions

- a) There are about 100 different elements.
- Every element is made up of very small particles called **atoms**.
- b) **Atoms** of *different* elements are *different* from each other.
- c) **Molecules** are made up of *two or more* atoms *joined together*.
(can be same element or different elements)
- d) **Molecules** are held together **inside** by **strong** bonds
- However bonds **between** different molecules are **weak** bonds.
- e) Compounds are made up of *two or more different* elements chemically *joined together*
- f) Substances made of molecules tend to have
- low melting points
 - low boiling points
- g) Substances made of molecules do not conduct electricity.



This substance can be called both a
Element: Only one kind of atom present
Molecule: 2 or more atoms joined together



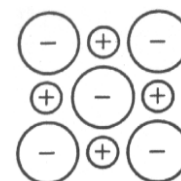
This substance can be called both a
Molecule: 2 or more atoms joined together
Compound: 2 or more *different* atoms joined together

3.1 Molecules & Ions (cont.)

h) **Ions** are charged atoms

i) Ions can be **positively** charged or **negatively** charged

j) **Ionic compounds** are compounds (2 or more different elements) made up of oppositely charged ions



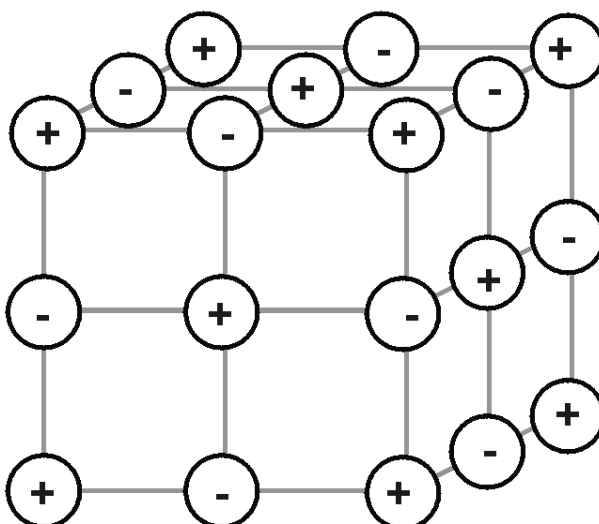
k) Bonds between ions are **strong**

l) Substances made of ions have

- high **melting** points
- high **boiling** points

m) Substances made of ions **conduct** electricity when:

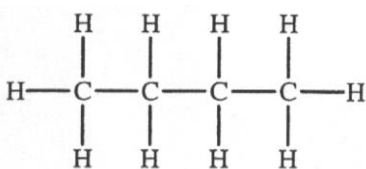
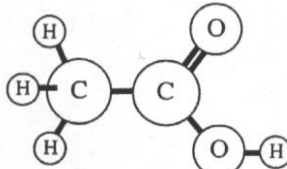
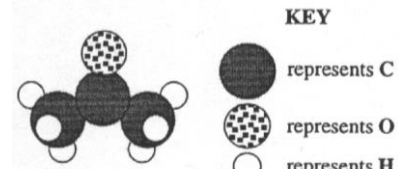
- dissolved in water
- molten



Section 3 Summary

3.2 Formulae: Using Models

a) Be able to work out formulae from diagrams and pictorial representations.

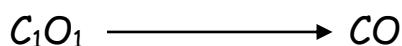
		
C_4H_{10}	$C_2H_4O_2$	C_3H_6O

Remember: drop number 1 in a formula $C_3H_6O_1 \longrightarrow C_3H_6O$

3.3 Formulae: Using Prefixes

Prefix	Meaning	Example	Chemical Formula
mono	1	carbon mono xide	CO
di	2	d initrogen oxide	N_2O
tri	3	phosphorus tri hydride	PH_3
tetra	4	carbon tetra fluoride	CF_4

Remember: drop number 1 in a formula



If an element has no prefix then it has the number 1

