**Absence work 14 April 2020**

**Symbols and Formulae**

**Read the information below, then answer the questions that follow.**

When elements form compounds, we write a formula to tell us how many atoms of each element there are in a compound. The little number next to the symbol tells us how many atoms of that element there are in the compound.

If there is more than one atom of each element, the number is always written after the symbol.

Two oxygen in CO2 with the two written after the O. Two hydrogen in H2O, with the 2 written after the H.

When we react two or more chemicals together, we make a new product or new chemical. This chemical will have a name depending on which elements it contains. The key thing here is that the second part of the compounds name (the surname if you will) changes slightly to reflect this.

**-ine** = group 7 element e.g. chlorine

**-ide** = compound e.g. sodium chloride

**-ate** = compound (with 3 elements+ including oxygen) e.g. Calcium carbonate

**Copy out the questions below and write your answers in full sentences.**

**Checkpoint questions:**

1. What does the little number next to a symbol tell you?
2. Write the symbol equation for water and carbon dioxide.
3. If a compound name finishes with –ate, what is in the compound?

**Copy the key knowledge table into your exercise books.**

**Key knowledge- Do your look, cover, write check by learning the answers to the questions below.**

|  |  |
| --- | --- |
| **Which section of the periodic table contains metals?** | **Left** |
| **Which section of the periodic table contains non-metals?** | **Right** |
| **What do we use to represent the number of atoms in a compound?** | **A formula** |
| **What does the subscript (small) number represent?** | **The number of atoms** |
| **What is the ending given to an element in group 7?** | **-ine** |
| **What is the ending given to an compound containing two elements?** | **-ide** |
| **What is the ending given to a compound containing three or more elements (one of which is oxygen)?** | **-ate** |

**Complete the sentences below in your exercise book.**

1. ***You find the metals in the periodic table on the… and the non-metals on the…***
2. ***When naming a substance, “-ine” is used for… “-ide” is used for …. And “-ate” is used for….***
3. ***Calculate how many oxygen atoms are there in Na2SO4?***
4. ***Calculate how many sulphur atoms are there in Na2SO4?***
5. ***Describe the difference between a mixture and a compound?***

**Complete the below application tasks in your exercise book.**

**Application Task – I Do**

Which elements are in these compounds?

Write down the symbol formula and the answer (e.g. MgCl2 = Magnesium and Chlorine)

**1. NaCl**

I can see that this compound contains two different elements. I know this because there are two capital letters. Na and Cl are the two elements. I can look on my periodic table and see that Na represents sodium and Cl represents chlorine.

**2. MgO2**

I can see that this compound contains two different elements. I know this because there are two capital letters.

Mg and O are the two elements. I can look on my periodic table and see that Mg represents magnesium and O represents oxygen. There is a subscript 2 after the O, which tells me there is two oxygen atoms.

**Application Task – You Do**

**Which elements are in these compounds? Write down the symbol formula and the answer.**

**3. HCl, 4. CuSO4 5. SO2 6. H2SO4 7. NaF 8. LiCl­2 9. NaOH 10. AlClO
Complete the below application tasks in your exercise book. For each formula, complete the three questions.**

**KF, MgO2, SiCl4, Al2O3, Mg3N2, CaSO4, CuNO3, KClO4, NaBrO4**

****