**A Chemical Balancing Act Revision Learning Outcomes**

*Use the Learning Outcomes sheet to help you answer these questions.*

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| **Question** | **Answer** |
| 1. What is a molecule?
 | A small group of atoms chemically joined together. |
| 1. What is an element?
 | A substance that is made up of one type of atom. |
| 1. What is a compound?
 | A substance containing at least two different elements chemically joined together. |
| 1. What do compounds with two elements end with?
 | ide |
| 1. What do compounds with three elements usually end with?
 | ate |
| 1. What do we call a molecule containing two atoms?
 | diatomic |
| 1. Name the seven diatomic elements.
 | Hydrogen, nitrogen, oxygen, fluorine, chlorine, bromine, iodine |
| 1. Which group of elements are monatomic?
 | Group 0 / Noble gases |
| 1. Define the term valency.
 | The number of unpaired electrons in the outermost shell/ energy level/ orbital |
| 1. What is an orbital?
 | 3-D description of the most likely area of where an electron occupies. |
| 1. How is the ratio of atoms in a compound found?
 | Swapping the valency numbers and cancelling down. |
| 1. What is a chemical formula?
 | The ratio of atoms of each element in a compound |
| 1. Name the type of compounds that do not fit the valency rule.
 | Transition metals/ elements |
| 1. What is used to help us identify the valency for copper or iron?
 | Roman numerals e.g. copper (**I**) oxide |
| 1. What is the average mass of atoms called?
 | Relative Atomic Mass (RAM) |
| 1. How is the mass of a molecule or compound calculated?
 | Sum of the RAMs of the atoms |
| 1. Which side of an arrow are the reactants?
 | Left hand side |
| 1. Which side of an arrow are the products?
 | Right hand side |
| 1. What is the first step of writing a formula equation?
 | Write the formulae for each of the reactants and products in the equation |
| 1. What should you notice about the number of atoms on each side of the equation?
 | equal numbers of atoms of each element on the reactant and product sides. |