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| **Year:** | **9** | **Unit:**  | **Chemical Reactions** |
| **Subject:** | **Science** | **Assessment:**  | **Test Week 7 and Investigation week 8/9** |
| **LG** | **LEARNING GOALS and SUCCESS CRITERIA** | **I feel confident with this…(Date/Ref)** | **I only need a little help with this** | **I can do some of this but need a lot of help** | **I don’t know this at all-yet!** |
| **1**7 Lessons | **SC1** | I can **define** the following: matter, particle, atom, proton, neutron, electron, charge, mass, radiation (alpha, beta & gamma), element, molecule, compound, ion |  |  |  |  |
| **SC2** | I can **explain** and **draw** the structure of an atom in terms of the nucleus, protons, neutrons and electron arrangement (shells) |  |  |  |  |
| **SC3** | I can **compare** the mass and charge of protons, neutrons and electrons. |  |  |  |  |
| **SC4** | I can **describe** in simple terms how alpha and beta particles and gamma radiation are released from unstable atoms. |  |  |  |  |
| **SC5** | I can **investigate** how the discoveries of radioactivity and sub atomic particles has led to advances in other fields such as archaeology |  |  |  |  |
| **LG1** | **Students will understand that all matter is made of atoms which are composed of protons, neutrons and electrons** |  |  |  |  |
| **2**5 Lessons | **SC6** | I can **define** the following: chemical reaction, product, reactant, chemical equation,  |  |  |  |  |
| **SC7** | I can **identify** reactants and products in a chemical reaction  |  |  |  |  |
| **SC8** | I can **represent** chemical reactions using diagrams, words and chemical symbols and be able to identify the reactants and products. |  |  |  |  |
| **SC9** | I can **apply** the Law of Conservation of Matter when rearranging and balancing simple chemical equations. |  |  |  |  |
| **SC10** | I can **explain** how chemical reactions involve a change in energy (exothermic, endothermic) |  |  |  |  |
| **LG2** | **Students will understand that chemical reactions involve rearranging atoms to form new substances.** |  |  |  |  |
| **3**7 Lessons | **SC11** | I can **define** the following: acid, metal, base, carbonate, combustion, oxidation, neutralisation |  |  |  |  |
| **SC12** | I can **list** at least 3 properties of an acid and a base |  |  |  |  |
| **SC13** | I can **explain** the general word equation for neutralisation and give a simple example |  |  |  |  |
| **SC14** | I can **investigate** the reactions of acids with metals, bases and carbonates (including the use of antacid medication). |  |  |  |  |
| **LG3** | **Students will understand that chemical reactions including combustion and the reaction of acids are important in both non-living and living systems and involve energy transfer**  |  |  |  |  |
| **4**6 Lessons | **SC15** | I can **identify** variables to be controlled, changed and measured in an investigation |  |  |  |  |
|  **SC16** |  I can **identify** the potential hazards of equipment and chemicals used in an experimental investigation |  |  |  |  |
| **SC17** | I can **apply** specific skills for the use of scientific instruments |  |  |  |  |
| **SC18** | I can **analyse and consider** how investigation methods and equipment may influence the reliability of collected data and **describe** and **explain** improvements |  |  |  |  |
| **SC19** | I can **compare** conclusions with earlier predictions and review my scientific understanding if necessary |  |  |  |  |
| **SC20** | I can **use** research as well as my own findings to **explain** a scientific concept |  |  |  |  |
| **SC21** | I can **present** and **explain** my results and findings using a formal experimental report. |  |  |  |  |
| **LG4** | **Students will be able to investigate the importance of different chemical reactions and their effect on people’s lives.** |  |  |  |  |