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| ***Unit 1 Checklist* (28 sessions-7 weeks)** | ***YES*** | ***MAYBE*** | ***NO*** |
| * 1. **Introduction to the particulate nature of matter and chemical change**

**(8 sessions)** |  |  |  |
| I can recall the definitions of: atoms, elements, molecules, and compounds. |  |  |  |
| I understand that atoms of different elements combine in fixed ratios to form compounds, which have different properties from their component elements. |  |  |  |
| I understand that mixtures contain more than one element and/or compound that are not chemically bonded together and so retain their individual properties. |  |  |  |
| I understand that mixtures are either homogeneous or heterogeneous. |  |  |  |
| I can deduce chemical equations when reactants and products are specified. |  |  |  |
| I can recognize different types of chemical reactions. |  |  |  |
| I can balance different types of chemical reactions.  |  |  |  |
| I can apply the state symbols (s), (l), (g) and (aq) in equations. |  |  |  |
| I can explain observable changes in physical properties and temperature during changes of state. |  |  |  |
| I can name changes of state—melting, freezing, vaporization (evaporation and boiling), condensation, sublimation, and deposition. |  |  |  |
| I can recall Names and symbols of first twenty elements. |  |  |  |
| I understand that chemical symbols and equations are international, enabling effective communication amongst scientists without need for translation. |  |  |  |
| I understand that IUPAC (International Union of Pure and Applied Chemistry) is the world authority in developing standardized nomenclature for both organic and inorganic compounds. |  |  |  |
| I Understand chemical equations are the “language” of chemistry. How does the use of universal languages help and hinder the pursuit of knowledge? |  |  |  |
| I can discuss how the use of universal languages help and hinder the pursuit of knowledge? |  |  |  |
| I can explain Lavoisier’s discovery of oxygen, which overturned the phlogiston theory of combustion, as an example of a paradigm shift and how does scientific knowledge progress? |  |  |  |
| I can explain how refrigeration is related to the changes of state. |  |  |  |
| I can define “Atom Economy” and explain its relationship with sustainable development. |  |  |  |
| I can discuss the negative environmental impacts of refrigeration and air conditioning systems.  |  |  |  |