



Department: Science: Chemistry – Periodic table and Patterns, Chemical Reactions and Human influences on the earth
Year Group: Eight

Working toward	Working at	Working above
- Recognizes that elements are grouped in the periodic table. - Identifies some common elements and their symbols. - Understands that elements have different properties. - Recognizes that heating can cause changes. - Identifies simple examples of substances breaking down with heat. - Understands that some reactions need heat to start. - Recognizes that oxygen is needed for burning. - Recognizes that the Earth is getting warmer. - Identifies sources of pollution. - Understands that human activity affects the environment. - Identifies materials that can be recycled. - Understands that recycling helps the environment.	- Describes patterns in groups (e.g. Group 1, Group 7). - Explains trends in reactivity and physical properties. - Understands how the periodic table is organised. - Describes thermal decomposition with word equations. - Explains how heat causes compounds to break down. - Understands the difference between physical and chemical changes. - Explains complete and incomplete combustion. - Explains causes and effects of global warming. - Describes greenhouse gases and their impact. - Understands the role of carbon dioxide in climate change. - Describes how materials are processed for reuse. - Understands the limitations of recycling certain materials.	- Predicts properties of unknown elements based on group trends. - Explains atomic structure in relation to periodic patterns. - Evaluates historical development of the periodic table. - Predicts products of thermal decomposition reactions. - Explains energy changes involved in decomposition. - Evaluates practical applications of thermal decomposition. - Analyses combustion reactions using chemical equations. - Evaluates evidence for global warming. - Analyses data on climate trends and human impact. - Explores solutions and sustainability strategies. - Analyses lifecycle of materials and sustainability. - Explores innovations in recycling technologies.



- Recognizes that carbon is part of living things.	- Describes the carbon cycle and its key processes.	- Analyses human impact on the carbon cycle.
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