7H Atoms, Elements & Compounds	Knowledge, Skills and Understanding
Higher	Recall that atoms can be joined together by bonds and that bonds affect the shape of a molecule Explain how new evidence has changed ideas about elements Interpret experimental evidence to identify elements Write simple chemical formulae from molecular structures Apply knowledge of thermal decomposition in carbonates to other compounds
Intermediate	Explain, in terms of atoms and particles, how air is a mixture of elements, compounds, atoms and molecules Represent atoms, molecules of elements and simple compounds using a model Explain the advantages of recycling metals Describe how some elements are found in their native states Explain why some elements have been known for much longer than others Use ideas about the periodic table to identify the positions of metal and non-metal elements Use evidence to classify unfamiliar materials as being metal elements, metallic, non-metal elements, non-metallic Name simple compounds formed from two elements Recall that temperature changes occur during many chemical reactions Represent atoms, molecules of elements and simple compounds using a model Model simple reactions using word equations Model simple reactions using word equations Describe what happens during thermal decomposition of a metal carbonate Name compounds that contain two elements plus oxygen
Foundation	Describe the difference between a mixture and pure substance Recall the names of the most important gases that are mixed together in air State that all matter is made up of tiny particles called atoms Explain the differences between elements, compounds and mixtures (with reference to elements being substances that cannot be broken down into anything simpler by chemical means) Explain the difference between an atom and a molecule Interpret particle models of mixtures, atoms, molecules, elements and compounds State that all matter is made up of tiny particles called atoms Recall that different materials have different properties Recall that elements are often represented by symbols Explain why internationally agreed symbols and conventions are necessary in science communication Recognise some symbols for common elements Use the periodic table to look up symbols for elements Relate the uses of different elements to their properties Identify some common materials as being metals or not Describe some common properties of metallic and non-metallic materials Describe the evidence needed to decide whether an element is a metal or a non-metal Relate the uses of different elements to their properties (includes magnetism) Describe how all other materials are made from the chemical elements Recall some observations that indicate a chemical reaction Describe how elements can combine to form compounds Explain the differences between elements, compounds and mixtures Describe the changes in properties between a compound and its constituent elements Interpret particle models of mixtures, atoms, molecules, elements and compounds Recall examples of chemical reactions in everyday life Recall some observations that indicate a chemical reaction Identify the products and reactants using a word equation Supply missing reactants or products to complete a word equation Identify thermal decomposition reactions