

Atomic Structure and The Year 8		<b>Curriculum Checkpoints: What do students know and what can they do?</b>				YT Clips	Further guidance
Summative Comment		Developing	Securing	Mastering	Excelling		
Substantive Knowledge		<p>I need to.....match the term 'element' to its definition. .....state examples of elements. .....present some simple facts about an element. .....identify substances that are elements, giving a simple reason for my answer. .....list the properties of some elements.....state that elements and compounds are different. .....identify elements within compounds. .....state one difference between iron and sulfur compared with iron sulfide. .....state some common properties of metals and non-metals. .....use position on the periodic table to suggest if an element is a metal or a non-metal. .....describe in simple terms what pattern is shown in a given property of a group or period .....describe simple trends shown by numerical data .....describe, in simple terms, how one property changes for the elements in group 1 .....state the products of the reaction between two Group 1 metals with water. .....state a pattern shown by the group 7 elements .....state simply what happens in a displacement reaction, what hazards are associated with the group 7 elements and a physical and chemical property of Group 0 elements .....state how many different elements are in a compound by looking at a chemical formula .....name the elements in a compound. .....write the chemical names for some simple compounds. .....describe the reactivity of Group 0 elements</p>	<p>I can.....match the term 'element' to its definition. .....state examples of elements. .....present some simple facts about an element. .....identify substances that are elements, giving a simple reason for my answer. .....list the properties of some elements.....state that elements and compounds are different. .....identify elements within compounds. .....state one difference between iron and sulfur compared with iron sulfide. .....state some common properties of metals and non-metals. .....use position on the periodic table to suggest if an element is a metal or a non-metal. .....describe in simple terms what pattern is shown in a given property of a group or period .....describe simple trends shown by numerical data .....describe, in simple terms, how one property changes for the elements in group 1 .....state the products of the reaction between two Group 1 metals with water. .....state a pattern shown by the group 7 elements .....state simply what happens in a displacement reaction, what hazards are associated with the group 7 elements and a physical and chemical property of Group 0 elements .....state how many different elements are in a compound by looking at a chemical formula .....name the elements in a compound. .....write the chemical names for some simple compounds. .....describe the reactivity of Group 0 elements</p>	<p>I can.....state what an element is. .....recall the chemical symbols of six elements. .....state what atoms are. .....compare the properties of one atom of an element to the properties of many atoms .....state what a compound is. .....explain why a compound has different properties to the elements in it. .....describe similarities and differences between iron, sulfur and iron sulfide. .....explain how elements are classified as metals or non-metals. .....use patterns to classify an element as a metal or a non-metal .....compare patterns in properties in the groups and periods of the periodic table .....describe displacement reactions and identify risks of using Group 7 elements using the hazard symbols associated with them .....describe the physical and chemical properties of Group 0 elements .....write the chemical names for a range of compounds.</p>	<p>I can .....explain why certain elements are used for given roles, in terms of the properties of the elements. .....compare the properties and uses of different elements. .....use observations and data obtained from conclusions about given elements. .....link the behaviour of atoms within substances to why elements, but not lone atoms, exhibit properties. .....differentiate elements from compounds when given names and properties. .....use particle diagrams to explain why a compound has different properties to the elements in it. .....apply existing knowledge to suggest reasons for the differences between iron, sulfur and iron sulfide. .....classify properties of metalloids into metallic and non-metallic properties. .....predict the properties of an element, given its position on the periodic table. .....explain how missing values can be predicted using numerical trends and compare similar trends between groups and periods .....describe the patterns in the properties of Group 1 elements, using data given ..... expertly write word equations to represent displacement reactions</p>	<p><a href="https://www.youtube.com/watch?v=gT0d4U_MQI&amp;list=PLu0L9nATyW61_1I_nyDSVKUPvEGuM1n">https://www.youtube.com/watch?v=gT0d4U_MQI&amp;list=PLu0L9nATyW61_1I_nyDSVKUPvEGuM1n</a></p>	<p><a href="https://www.youtube.com/watch?v=ulx0HJPVXk">https://www.youtube.com/watch?v=ulx0HJPVXk</a></p>
	Disciplinary Knowledge	<p>I need to.....state what observations are needed about materials to decide if they are metals or non-metals. ....make simple observations about the reactivity of Group 1 metals in water</p>	<p>I can.....state what observations are needed about materials to decide if they are metals or non-metals. ....make simple observations about the reactivity of Group 1 metals in water</p>	<p>I can.....use observations about materials to decide if they are metals or non-metals. .... Use trends shown by numerical data to predict missing values .....interpret data to describe patterns in properties of Group 1 elements. .....predict properties of Group 1 elements. .....record observations about how Group 1 metals react with water, and the pH of the solution formed. ....use patterns to predict properties of Group 7 and Group 0 elements .....draw conclusions about the properties and trends of Group 0 elements, based on experimental and secondary data .....write and interpret formulae ..... calculate the percentage of a given element within a compound.</p>	<p>I can.....use information given to draw conclusions about how the properties of atoms contribute to the properties of elements .....identify anomalous properties exhibited by some materials .....apply patterns shown within groups or periods to unknown elements .....compare predictions with evidence, and from reactions involving Group 1 elements .....use experimental observations to expertly describe and explain reactivity trends in Group 1, and write balanced equations for the reactions observed .....suggest risks of the Group 7 elements and how to control these .....link information about Group 0 elements to their properties .....compare the trends in Group 0 with those of Group 1 and Group 7 elements .....explain how missing data can be predicted by using data from other elements ..... use data provided to calculate formula masses for compounds. .....convert word equations into symbol equations. .....construct balanced symbol equations for reactions without the use of word equations.</p>	<p><a href="https://www.youtube.com/watch?v=rz4Dd11_P0">https://www.youtube.com/watch?v=rz4Dd11_P0</a></p>	<p><a href="https://www.youtube.com/watch?v=7b2a8K6-U&amp;t=2">https://www.youtube.com/watch?v=7b2a8K6-U&amp;t=2</a></p>