





Year 9: ASK Yourself!

Subject: Chemistry

Unit: 2 – Bonding, Structure and the Properties of Matter

	Launching 1-2	Developing 3-4	Progressing 5-6	Mastering 7-9
 S skills				
	<p>To be able to recognise substances as small molecules, polymers or giant structures from diagrams showing their bonding.</p> <p>To be able to calculate areas of triangles and rectangles.</p> <p>To be able to use ratios, fractions and percentages.</p> <p>To be able to use SI units.</p>	<p>To be able to visualise and represent 2D and 3D forms including 2D representations of 3D objects.</p> <p>To be able to calculate surface area and volumes of cubes.</p> <p>To be able to recognise and use expressions in standard form.</p> <p>To be able to draw and interpret graphs.</p>	<p>To be able to make orders of magnitude calculations and use prefixes and powers of ten for orders of magnitude.</p> <p>To be able to interconvert units.</p> <p>To be able to use an appropriate number of significant figures in calculations.</p>	<p>To be able to explain applications of science and make decisions based on evidence and arguments.</p> <p>To use a variety of models appropriately such as representational, spatial, descriptive, and mathematical to solve problems, make predictions and develop explanations.</p>
 K knowledge				
	<p>To know the three types of chemical bonds.</p> <p>Need to work on how the three types of bonding are different to each other.</p> <p>To know the three states of matter and how they transition between states.</p>	<p>To be able to clearly describe the difference between ionic, covalent and metallic bonding.</p> <p>To be able to describe properties of giant ionic, metallic and covalent structures.</p> <p>To be able to describe properties of diamond, graphite and polymers.</p> <p>To know some examples of nanoparticles.</p>	<p>To be able to represent ionic and covalent bonding in dot and cross diagrams.</p> <p>To be able to explain properties of giant ionic, metallic and covalent structures.</p> <p>To be able to explain the structure and properties of diamond, graphite and polymers.</p> <p>To be able to give examples of the use of nanoparticles.</p> <p>To have an awareness of intermolecular forces.</p>	<p>To be able to work out the empirical formula of an ionic compound.</p> <p>To be able to explain how the bonding in diamond, graphite and polymers affect their properties.</p> <p>To be able to describe bonding and properties of nanoparticles.</p> <p>To be able to explain how intermolecular forces affect physical properties.</p>