

Long Term Plan: Design and Technology Year 7

Half term	Unit title	Key knowledge/ Content to learn and retain	Essential skills to acquire (subject & generic)	Anticipated misconceptions	Links to previous KS	Links to future KS	Opportunity for stretch for high prior attainers	SMSC & British Values	Cultural Capital	Career Link
One	Design, Make, Evaluate	<p>Health and safety in the workshop</p> <p>The use of basic cutting and sanding equipment for wood and plastic</p> <p>The use of CAD/CAM in design</p> <p>Designing a product for a client</p> <p>Evaluating products against criteria</p>	<p>Basic addition and subtraction</p> <p>Making and marking accurate measurements</p> <p>Working safely in a workshop environment</p> <p>Drawing simple designs both on paper and digitally</p> <p>Accurate cutting of material</p>	<p>Students often confuse the use of different cutting and measurement equipment and this will need to be explicitly taught.</p> <p>The difference between CAD and CAM</p>	Students should be familiar with the Design, Make, Evaluate cycle from KS2; and will have explored a number of common resistant materials, but are unlikely to have touched on specialist equipment	As a fundamental introductory course, the key stage three programme of study lays the foundation for future study of either a Design and Technology or Engineering qualification at GCSE	Students may wish to consider a different target audience for their products and how they would adapt their design for this audience	Different products for different target clients, including potential users from all backgrounds and how this affects their needs	Exploration of different designers and materials that students may not have encountered before	As an introductory course, the KS3 technology programme of study lays the foundations for a wide range of STEM field careers.
Two	Introduction to Electronics	<p>Common electronic components</p> <p>Drawing circuit</p>	<p>Interpreting data in tabular and graphical form.</p>	Students often confuse ductile and malleable.	Students should be familiar with the Design, Make, Evaluate cycle from KS2;	As a fundamental introductory course, the key stage three	Students could be encouraged to link their learning with their science	The impact of non-sustainable materials and how individual choices can	The impact of non-sustainable materials and how individual choices can	As an introductory course, the KS3 technology programme of

		<p>diagrams</p> <p>The use of solder and a soldering iron</p> <p>The use of different components within a circuit</p>	<p>Justifying choices for material use, with reference to data about that material</p> <p>Interpret circuit diagrams</p> <p>Accurate and safe use of a soldering iron</p> <p>Evaluating products against a given criteria</p>		<p>and will have explored a number of common resistant materials, but are unlikely to have touched on specialist equipment</p>	<p>programme of study lays the foundation for future study of either a Design and Technology or Engineering qualification at GCSE</p>	<p>lessons, and consider simple explanations for properties with respect to their structure.</p>	<p>encourage the use of more sustainable materials</p>	<p>encourage the use of more sustainable materials</p>	<p>study lays the foundations for a wide range of STEM field careers.</p>
<p>As a rotation subject at KS3, Design and Technology is taught for 1 full term, before students rotate into another technology subject.</p>										