



**What I will know and understand by the end of Year 8**

This year in Technology we will be learning:		This links to:	Key Vocabulary:
<b>1</b>	<p><b>Electronics</b></p> <ul style="list-style-type: none"> <li>• What current, voltage and resistance are</li> <li>• How to calculate current, voltage and resistance using ohms law</li> <li>• What the function of electronic components, such as LED's, resistors and switches are within a circuit</li> <li>• How to follow all health and safety rules to solder safely and successfully</li> </ul>	<p>In Primary school and science, students will know that a full circuit is needed to power components.</p> <p>In this unit, we will delve deeper into the roles of current, voltage and resistance in a circuit, along with how to calculate them using ohms law. In year 9, we will then look at how to programme microcontrollers successfully.</p>	<ul style="list-style-type: none"> <li>• Joint</li> <li>• Context</li> <li>• Ohms law</li> <li>• Pole and throw</li> <li>• Resist</li> <li>• Diode</li> </ul>
<b>2</b>	<p><b>Engineering</b></p> <ul style="list-style-type: none"> <li>• What a ferrous and non-ferrous metal is, plus examples of both and where they are used</li> <li>• Where metals are sourced and how they are processed to make them into usable materials</li> <li>• The environmental impact of using metals</li> <li>• How to successfully produce a mould, using hand tools</li> </ul>	<p>In year 7, students have been introduced to the workshop environment and the health and safety considerations that are required. They have worked with polymers and now understand how they are sourced and applications of different plastics. Students will now have the opportunity to work with metals, whilst developing their hand skills of working with tools to produce a mould using MDF.</p>	<ul style="list-style-type: none"> <li>• Metal ore</li> <li>• Ferrous and non-ferrous</li> <li>• Destijl</li> <li>• Extraction</li> <li>• Wasting</li> <li>• Abrasive</li> </ul>
<b>3</b>	<p><b>Paper and Board</b></p> <ul style="list-style-type: none"> <li>• How to design, develop and model lamp design, based upon the Memphis design movement</li> <li>• How to use CAD software to model a design and the advantages and disadvantages of doing this vs hand modelling</li> <li>• What the different scales of manufacture are and examples of different products that are made in industry</li> </ul>	<p>Paper and board is a familiar medium used by students. In year 7, they learnt about the different types of paper and board, along with mechanisms and to design a 2D product. This year, students will learn key techniques to design and communicate ideas more effectively, whilst learning how to model in 3D to a high standard.</p>	<ul style="list-style-type: none"> <li>• Production</li> <li>• Iterative</li> <li>• Development</li> <li>• Attachment</li> <li>• CAD</li> <li>• CAM</li> <li>• Accuracy</li> </ul>

<b>Target Grade:</b>		<b>AP1:</b>		<b>AP2:</b>		<b>AP3:</b>		<b>End of year exam</b>	
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