

Year 9 Design & Technology - Computer Control & Metals

Learning Programme 4

<p>The LORIC skill focus for this LP is: INITIATIVE. The Moral Virtues focus for this LP are: INTEGRITY and GRATITUDE.</p> <p>Integrity - Having strong moral principles. I will show integrity by taking responsibility for my actions. Gratitude - Feeling and expressing thanks. I will show gratitude by saying please and thank you.</p> <p>What will I be learning about in this Learning Programme? How to apply computing to embed intelligence in products; how to use programmable components that respond to inputs and control outputs. How to use block-based programming language to control a buggy. The source, categories and types of metals; the impact of metal processing has on the environment. How designers use a range of design influences and tessellation to create original ideas.</p> <p>Where have I seen this learning before? In Year 8 design & technology you will have learnt about electronic systems using input, process and output components. You will have used computer aided design. You will have learnt about the sources of different materials and how they are processed including their impact on the environment.</p> <p>What could I use it for? You will apply your knowledge of computer control and metal materials when studying the GCSE Design & Technology exam. You can use hand tools to create metal items in your everyday life.</p>		<p>Literacy Non-Negotiables:</p> <ul style="list-style-type: none"> Capital letters must be used at the start of sentences and for the first letter of proper nouns Full stops must be used at the end of a sentence Question marks must be used at the end of a question Apostrophes should only be used for possession or omission Days of the week and months must be spelled correctly Key words must be spelled correctly Vocabulary to be taught using the Frayer model
<p>In LP4.1, I will know: 09/03/26 - (WK 2)</p> <p>how computing can embed intelligence in product through the use of programmable components; that the Crumble microcontroller is a programmable component that has inputs and outputs; how to construct a crumble programmable buggy structure.</p>	<p>Frayer Model Words</p> <p>Microcontroller</p>	<p>Homework</p> <p>Microcontrollers in everyday products.</p>
<p>In LP4.2, I will know: 16/03/26 - (WK 1)</p> <p>how to create simple block-based programming to control crumble output components.</p>	<p>Frayer Model Words</p> <p>Coding</p>	<p>Homework</p> <p>Design a livery for the Crumble Buggy.</p>
<p>In LP4.3, I will know: 23/03/26 - (WK 2)</p> <p>how to programme the crumble buggy to create motion.</p> <p>Extended Task.</p>	<p>Frayer Model Words</p> <p>Analogue</p>	<p>Homework</p> <p>Advantages & disadvantages of programmable components.</p>
<p>In LP4.4, I will know: 13/04/26 - (WK 1)</p> <p>how to programme the crumble buggy so that it performs a variety of tasks; how to problem solve errors in a code.</p>	<p>Frayer Model Words</p> <p>Autonomous</p>	<p>Homework</p> <p>New and emerging technologies.</p>
<p>In LP4.5, I will know: 20/04/26 - (WK 2)</p> <p>the source of metals and how they are processed into stock forms; the difference between ferrous, non-ferrous and alloy metals.</p>	<p>Frayer Model Words</p> <p>Ore</p>	<p>Homework</p> <p>Identifying metals.</p>
<p>In LP4.6, I will know: 27/04/26 - (WK 1)</p> <p>the names, properties and uses of different metal types; how to present original ideas for the mobile phone holder, using sources of inspiration.</p> <p>Extended Task.</p>	<p>Frayer Model Words</p> <p>Inspiration</p>	<p>Homework</p> <p>Metals & the environment.</p>
<p>In LP4.7, I will know: 04/05/26 - (WK 2)</p> <p>how tessellation is used in manufacturing and why it is important; the four different scales of production and the differences between them.</p>	<p>Frayer Model Words</p> <p>Tessellation</p>	<p>Homework</p> <p>Orthographic projection of mobile phone.</p>
<p>Resources to support learning:</p> <p>The following websites contain extensive revision material and information to increase design & technology subject knowledge: www.technologystudent.com; www.mr-dt.com; www.bbc.co.uk/bitesize.</p>		
<p>FFET Award Challenge for this Learning Programme:</p> <p>Computer Control - Create an informative poster/ video/ blog/ vlog about New & Emerging Technologies</p>		

