

Landau Learner Curriculum Overview

Subject: Design and Technology Director of Learning: GM Year: 8

Curriculum organisation			
Students are taught in mixed ability for the equivalent of four single lessons per fortnight. Over the year they have four rotations covering different aspects of Design and Technology.			
What topics will students be studying this year? Includes links to National Curriculum, Curriculum Intent and Prior Related Learning*			
Rotation 1 - CAD	Rotation 2 - Communication of Design Ideas	Rotation 3 - Food	Rotation 4 – Electronic Products
<p>Use of SolidWorks</p> <p>Students learn how to sketch and create part, assemble products in a virtual 3D environment.</p> <p>How to extrude, how to fault find, how to understand constraints and dimensions and how to mate parts.</p>	<p>Students will have a clear understanding of the crating method to help form more complex isometric and perspective drawings. They will develop understanding of 3rd angle orthographic projections, including projection lines and measurements. They will develop enhancement techniques. They will be able to use specialist tools and equipment appropriately with 2 different kinds of modelling materials (card & foam)</p>	<p>The Great Landau Bake Off</p> <p>Practical sessions: Students will learn and develop baking skills required to create a range of predominantly savoury dishes, including: Puff pastry Catherine wheels, Pop- corn, Savoury scones, Pizza, Swiss roll</p> <p>Theory sessions: Each theory session focusses on a different raising agent (steam, baking powder, yeast and air) using demonstrations and experiments to help understanding. We extend the theory of yeast to look at it's similarities with bacteria and food safety.</p>	<p>Making a nightlight -</p> <p>To understand vacuum forming process. Students will look at the difference between an electronic product and an electric product, looking at a systems approach. Use soldering techniques to produce an electrical circuit accurately, looking at new electronic components, including transistors. Assemble components accurately. Test product works correctly and evaluate. Use influence from surroundings to design speakers. Use influences to design different casing designs.</p>
<p>*Links: Prior learning KS3: Use of coordinates, Technical language, drawing conventions.</p> <p>National Curriculum: students use specialist tools precisely included computer aided manufacture.</p> <p>Curriculum Intent: Develop technical skills so that students can create, test and evaluate products in 3D.</p>	<p>Links: Prior learning KS3: Building on Communication of Ideas and CAD and workshop techniques from year 7.</p> <p>National Curriculum: Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</p> <p>Curriculum Intent: While making, students are exposed to a range of material areas, whilst developing safe working practices.</p>	<p>Links: Prior learning KS3: Building on techniques and processes from year 7.</p> <p>National Curriculum: students cook a repertoire of dishes so that they are able to feed themselves, become competent in a range of cooking techniques.</p> <p>Curriculum Intent: The design process should have real-life links and relevant contexts to give meaning to learning</p>	<p>Links: Prior learning KS3: Builds on skills from Lamp project in year 7</p> <p>National Curriculum: students use specialist tools, techniques, processes, equipment and machinery precisely. Use more complex components, taking into account their properties. Understand developments in DT.</p> <p>Curriculum Intent: We also aim to have students who are responsible citizens and better consumers.</p>
Equipment needed for sessions:		What can you do to support your child?	
<p>Ingredients lists will be provided in advance of practical food sessions</p> <p>Sketchbook (provided)</p> <p>Pencil, ruler, rubber, sharpener, Ball point pen</p>		<p>Encourage your child to be curious about how things work. Reinforce with your child that making mistakes is part of the design process. Encourage your child not to be afraid to voice their ideas of how particular problems could be solved. Encourage them to use their imagination and develop a creative mind.</p>	
How will learning be assessed and progress measured?		Extension and enrichment activities:	
<p>The four assessment objectives students are assessed on in all projects are: Researching and Designing, Development and Making, Evaluation and Testing, Technical Knowledge</p>			