

## 8V - Explorer Curriculum – Long Term Plan D.T

	Autumn 1 Unit 1	Autumn 2 Unit 2	Spring 1 Unit 3	Spring 2 Unit 4	Summer 1 Unit 5	Summer 2 Unit 6
Year 8	<p><b>Topic: Health and Safety Bird Table</b></p> <p><u><b>Suggested Key Questions:</b></u>            What are the rules for the workshop?            What materials are we using?            What are the features of a 'Farmhouse/ Cottage Style'?            What is a drilling/sawing jig?            Why is it better to recycle materials? What features of Google Sketchup have you used?</p> <p><u><b>Key Skills and Knowledge:</b></u>            Review Health and Safety.            Identify a purpose for what they intend to make. Start to order the main stages of making a product. Use jigs to aid making and accuracy. Identify feature of the art style when prompted. Start to understand whether products can be recycled or reused. Evaluate how well it meets its intended purpose.</p>	<p><b>Topic: Mechanical toy. Mechanisms.</b></p> <p><u><b>Suggested Key Questions:</b></u>            Who are some of the main characters in 'The Lion, Witch, Wardrobe'?            What are the three classes of lever?            Can you name 3 common cams and describe how they work?            How do gears work?            What is a positive/ friction drive?            What are the properties of MDF?</p> <p><u><b>Key Skills and Knowledge:</b></u>            Know to make drawings with labels when designing. 2d shapes squares, circles, colour within the lines, heavy, light use of line. Start to understand that mechanical systems have an input, process and output. Start to understand that mechanical systems such as levers and linkages create movement. Start to work safely and accurately with a range of simple tools.</p>	<p><b>Topic: Acrylic Salad Servers</b></p> <p><u><b>Suggested Key Questions:</b></u>            Can you find examples of designs you like made by the Alessi Design group?            How can we cut and shape and finish acrylic?            How can a former build quality into production?            What are the H&amp;S issues with the strip heater/ vacuum former?            Does the Salad Servers work, too good and be used?</p> <p><u><b>Key Skills and Knowledge:</b></u>            With growing confidence generate ideas for an item, considering its purpose and the user/s what materials have been used and the construction technique. Will learn about inventors, designers, engineers and manufacturers who have developed ground-breaking products. Can see links to form, function and aesthetics.</p>	<p><b>Topic: Steel candle holder 1</b></p> <p><u><b>Suggested Key Questions:</b></u>            What are the features of the 'Victorian/ Modernist' design style?            Can you find examples of the use of steel in design such as scrollwork?            How many classes of metal are there?            How many metals can you name?            What are their properties?</p> <p><u><b>Key Skills and Knowledge:</b></u>            With growing confidence generate ideas for an item, considering its purpose and the user/s. Know what materials and the construction techniques have been used. Identify feature of the art style when prompted. When sketching begin to use heavy, light use of line.</p>	<p><b>Topic: Candle Holder 2</b></p> <p><u><b>Suggested Key Questions:</b></u>            How did you shape your steel?            What is a permanent and non-permanent joint?            What are the H&amp;S issues with the spot-welder?            What is FSC?            Can you describe how your candle holder looks like a Victorian or modernist style work?</p> <p><u><b>Key Skills and Knowledge:</b></u>            With guidance can measure, mark out, cut, score and assemble components with more accuracy. Start to work safely and accurately with a range of simple tools. Start to think about their ideas as they make progress and be willing to change. Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose.</p>	<p><b>Topic: Structures</b></p> <p><u><b>Suggested Key Questions:</b></u>            What are the forces on a simple bridge?            What materials are good for a tensile/ compression force?            What are the forces on an arch bridge?            How is a girder bridge better than a stone bridge?            Where do we see shell structures in nature and industry?</p> <p><u><b>Key Skills and Knowledge:</b></u>            Start to work safely and accurately with a range of simple tools. With guidance can measure, mark out, cut, score and assemble components with more accuracy. Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose. Start to think about their ideas as they make progress and be willing to change. Evaluate the key designs of individuals in design and technology and how it has helped shape the world.</p>

Gatsby Bench mark:	<p>6. Experiences of the workplaces. 4. Linking curriculum learning to careers.</p> <p>Safe working in a workshop/ workplace. Working in a joinery workshop: conditions, environment, skill set, organisation.</p> <p>Designer: CAD Design in various industries.</p>	<p>3. Addressing the needs of each pupil. 4. Linking curriculum learning to careers.</p> <p>Express themselves through individual fashion, style, design. Students work to their ability: Explore what they can do and build on those skills. Experiment and experience new skills.</p> <p>Designers and designing for fashion: form and function.</p> <p>6. Experiences of workplaces: engineering, mechanics, design, art, sculpture.</p>	<p>3. Addressing the needs of each pupil. 4. Linking curriculum learning to careers.</p> <p>Safe working in a workshop/ workplace. Working in a polymer/plastics workshop: conditions, environment, skill set, organisation.</p> <p>Designer: CAD Design in various industries.</p>	<p>4. Linking curriculum learning to careers.</p> <p>3. Addressing the needs of each pupil.</p> <p>Working in a metal workshop: conditions, environment, skill set, organisation. Express themselves through individual fashion, style, design.</p> <p>Students work to their ability: Explore what they can do and build on those skills. Experiment and experience new skills.</p>	<p>6. Experiences of workplaces. Addressing the needs of each pupil.. 4. Linking curriculum learning to careers.</p> <p>Safe working in a workshop/ workplace. Working in an engineering workshop: conditions, environment, skill set, organisation.</p> <p>Paper Modelling in a variety of industries: Architecture, car design, product design</p> <p>Designer: CAD Design in various industries.</p>	<p>6. Experiences of workplaces. Addressing the needs of each pupil.. 4. Linking curriculum learning to careers. Safe working in a workshop/ workplace. Working in an engineering workshop: conditions, environment, skill set, organisation.</p> <p>Paper Modelling in a variety of industries: Architecture, product design</p> <p>Designer: CAD Design in various industries.</p>