



Rotation A: Product Design	
Student	<p>LED LAMP Students will be introduced to Design & Technology with a particular focus on designing with Timber, Metal-Based Materials and Polymers. Pupils will learn about the health and safety of the 3D workshop and when using the Workshop equipment.</p> <p>Students will respond to a design opportunity by researching a theme to create initial designs ideas for an LED Character Lamp. Students will create imaginative design drawings and so discover the need for a standard form of communication in Design & Technology.</p> <p>Students will become acquainted with electrical Systems and their components by producing a simple LED circuit.</p> <p>Students will appraise own work and that of others.</p> <p>Students will develop a final design for which they will need to justify their design choices.</p>
Assessment	<p>LED LAMP In the second half term students create an individual method of manufacture to produce their own LED Lamp.</p> <p>They will then have practical lessons where they manufacture their design. Once this has been completed they will then evaluate their finished work, comparing it to their final design and making an overall judgement of their level of success.</p>
Student	<p>Progress Check 1</p> <p>Approximate Date of Assessment Week Beginning:</p> <ul style="list-style-type: none"> • Students will have to demonstrate an understanding of health and safety in the 3D Workshop. • Student will present designs showing increasing ability to develop design ideas with reference to the Iterative Design Process • Students will increase ability to communicate design ideas using Design & Technology processes.
Assessment	<p>MILESTONE 1</p> <p>Approximate Date of Assessment Week Beginning:</p> <ul style="list-style-type: none"> • Students will present a completed prototype of an LED lamp showing an understanding and ability to apply construction processes with timber and electrical based components. • Students will evaluate their finished product, justifying the design choices they have made.



Rotation B: Textiles	
Topic	<p>FLEECE HAT Pupils will learn about the health and safety of the textiles workroom and when using the textiles equipment. Students will then be introduced to the basics of hand sewing learning how to add buttons, sequins and beads for decoration as well as attempting more detailed hand embroidery. All students will then sit their sewing machine driving license to demonstrate their ability to use the sewing machine independently. Students will then research into hat design and create their own initial ideas but settling on their final design for which they will need to justify their design choices.</p>
Assessment	<p>Progress Check 2 Approximate Date of Assessment Week Beginning:</p> <ul style="list-style-type: none"> • Students will have to demonstrate an understanding of health and safety in the textiles work room. • Student will undertake their sewing machine driving license. • Students will describe the different elements on a sewing machine. • Students will produce creative design ideas which show high quality rendering skills and give explanation of their design choices.
	<p>FLEECE HAT In the second half term students create an individual method of manufacture to produce their own fleece hat design. They will then have practical lessons where they manufacture their design. Once this has been completed they will then evaluate their finished work, comparing it to their final design and making an overall judgement of their level of success.</p>
	<p>MILESTONE 2 Approximate Date of Assessment Week Beginning:</p> <ul style="list-style-type: none"> • Students will have created a high-quality fleece hat which includes specified design elements. • Students will have evaluated their finished product, justifying the design choices they have made.



Rotation C: Computing	
Topic	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><u>Micro Bit</u></p> <p>Students will learn how to program a small circuit board to make it do a range of operations, these will include:</p> <ul style="list-style-type: none"> • Explain and demonstrate how to use variables and lists. • Explain and demonstrate how to use iteration and selection. • Explain and demonstrate how to use Accelerometer. • Explain and demonstrate how to use music on a circuit board. • Explain and demonstrate how to create networks using circuit boards. </div> <div style="width: 48%;"> <p><u>Robot Chick</u></p> <p>Students will create and build a small robot that they will program in order to carry out day today's tasks. Pupils will learn how to do the following:</p> <ul style="list-style-type: none"> • Demonstrate and explain how to make the robot play music. • Explain and show how to program motors to make them move. • Demonstrate how to combine code so that problems can be solved. • Develop code to move the robot around a track. </div> </div>
Assessment	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><u>Progress Check 3</u></p> <p>Approximate Date of Assessment Week Beginning:</p> <p>The assessment will be on the classwork that they have produced and provide them with written targets in order to support them to move forward.</p> </div> <div style="width: 48%;"> <p><u>MILESTONE 3</u></p> <p>Approximate Date of Assessment Week Beginning:</p> <p>The assessment will be on the classwork that they have produced and provide them with written targets in order to support them to move forward.</p> </div> </div>



	Topic	Assessment
Rotation A: Product Design	LED LAMP	<p>Students will have to demonstrate an understanding of health and safety in the 3D Workshop.</p> <p>Student will present designs showing increasing ability to develop design ideas with reference to the Iterative Design Process.</p> <p>Students will increase ability to communicate design ideas using Design & Technology processes.</p> <p>Students will present a completed prototype of an LED lamp showing an understanding and ability to apply construction processes with timber and electrical based components.</p> <p>Students will evaluate their finished product, justifying the design choices they have made.</p>
Rotation B: Textiles	FLEECE HAT	<p>Students will have created a high quality fleece hat which includes specified design elements.</p> <p>Students will have evaluate their finished product, justifying the design choices they have made.</p>
Rotation C: Computing	ROBOT CHICK	<p>Students will learn how to program a small circuit board to make it do a range of operations. Students will also create and build a small robot that they will program in order to carry out day to day tasks. The assessment will be judged on the classwork that they have produced and provide them with written targets in order to support them to move forward.</p>