

Module	Content	Skills	Type of Assessment
1	Food – Healthy Packed Lunch	<p>Students will learn - basic hygiene and safety rules for using equipment.</p> <ul style="list-style-type: none"> - Develop organisational and timing skills needed for successful practicals. - Teamwork - Problem solving - Research skills - Planning skills evaluations of practicals. - Analysis of existing products. 	<p>NC teacher assessments Main practical - HPL</p>
2	Plastics – Design and make a plastic toothbrush holder	<p>Students - develop sketching and annotation skills</p> <ul style="list-style-type: none"> - Develop designing and problem solving skills - Identify and describe properties and uses of thermo and thermo set plastics - Predict timings needed to complete practical - Basic safety rules for using tools and equipment for shaping acrylic - How to use the line bender/oven - How to use the pillar drill - How to finish plastics using the stepping down method. - How to market a final product. 	<p>End of module summative assessment</p> <p>Self assessments Peer assessments</p>
3	Wood – Design and make a wooden book/games/letter holder	<p>Students will – refine sketching and annotation skills</p> <ul style="list-style-type: none"> - Develop designing and problem solving skills - Identify and describe properties and uses of a range of woods. - classify soft woods and hardwoods - understand safety rules for using tools and equipment used for shaping woods and manufactured boards - Know how to permanently join woods and manufactured boards. - How to use the vibrosaw, coping saw, benchhook, glass paper, pillar drill. - How to finish and seal wood - Evaluate existing products, by rank order. 	<p>End of module summative assessment</p> <p>Self assessments Peer assessments</p>

4	Textiles – design and make an ugly doll bag.	<p>Students will – extend drawing and annotation skills</p> <ul style="list-style-type: none"> - Learn how to use a template to ensure quality - Identify and describe properties of a range of manmade and natural fibres. - Understand safety rules when using needles, pins, fabric shears, stitch unpicks, sewing machines. - Develop basic skills using the sewing machine - Complete quality checks testing the tension of the sewing machine. - Test and evaluate the design and making process, identifying further improvements to their work. - Develop basic embroidery and applique skills. 	<p>End of module summative assessment</p> <p>Self assessments Peer assessments</p>
5	Graphics – design and make a Pizza box and pop up card.	<p>Students will - develop the specialist sketching techniques of one point perspective and isometric drawing.</p> <ul style="list-style-type: none"> - Gain an understanding of the four main functions of packaging – protection, preservation, promotion and transportation. - Learn how to convert 2D designs into a 3D net for a pizza box - Demonstrate an understanding of how colour and text are used in logo designs - Use computers to research and present logos - Develop problem solving skills, creating a pop up card showing a simple mechanism - Develop accurate measuring skills - Follow safety rules using craft knives to cut and shape card. 	<p>End of module summative assessment</p> <p>Self assessments Peer assessments</p>
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Module	Content	Skills	Type of Assessment
1	Food – Healthy School Dinners	<p>Students will show a detailed understanding of hygiene and safety rules for using equipment/food handling.</p> <ul style="list-style-type: none"> - Practise organisational and timing skills needed for more complex successful practicals. - Gain an understanding of nutrition . - Understanding the needs of a teenage diet and how it differs from other groups of people. - Complete a more complex range of cooking skills, using a wider range of ingredients and equipment. - Creating a new recipe to suite a teenage diet. 	<p>NC teacher assessments Main practical - HPL</p>
2	Metals – Design and make a metal monster	<p>Students - develop sketching and annotation skills</p> <ul style="list-style-type: none"> - Develop designing and problem solving skills - Identify and describe properties and uses of ferrous and non-ferrous metals, focusing on steel. - Develop modelling and problem solving skills - Develop an understanding of a wider range of safety rules for using tools and equipment for shaping and joining metals including pop riveting. - How to mark metal using a scribe and engineers square - How to use the pillar drill with a bench vice. - How to prepare metal using the centre punch for drilling - How to bend steel rod and welding rod with some accuracy - How to join steel permanently using brazing - How to finish steel in order to prevent rusting/oxidising. - Evaluate and appraise a range of existing products 	<p>End of module summative assessment</p> <p>Self-assessments Peer assessments</p>
3	Electronics – design and make a torch	<p>Students will – continue to refine sketching and annotation skills</p> <ul style="list-style-type: none"> - Gain an understanding of the needs and preferences of a user group - Understand the functions of simple electronic components. - Create a simple electronic circuit, soldering components together. - understand safety rules for using the solering iron and vacuum former. - Vacuum form the torch top and the blister pack for the torch package. - Develop graphical skills used for packaging design 	<p>End of module summative assessment</p> <p>Self-assessments Peer assessments</p>

		<ul style="list-style-type: none"> - Compare and contrast existing products. 	
4	Textiles – design and make an appliqued cushion cover	<p>Students will – extend drawing and annotation skills</p> <ul style="list-style-type: none"> - Develop research skill using disassembly , examining an existing product in detail. - Learn how to create and use a paper pattern to ensure quality - Identify and describe the four main fabric manufacturing techniques. - Develop further understanding of safety rules when using needles, pins, fabric shears, stitch unpicks, sewing machines. - Develop independent skills using the sewing machine - Complete quality checks testing the tension of the sewing machine. - Test and evaluate the design and making process, identifying and explaining further improvements to their work. - Complete a range of complex embroidery and applique skills. 	<p>End of module summative assessment</p> <p>Self-assessments</p> <p>Peer assessments</p>
5	Graphics – CAD/CAM	<p>Students will - develop the specialist sketching techniques of 3rd angle orthographic drawing, both by hand and using 2D design.</p> <ul style="list-style-type: none"> - Gain an understanding of how CAM is used and what is meant by the terms input and output - Prepare a design using the 2D design programme, suitable to be used as an input for the 3D milling machine. - Learn how to convert 2D designs into a 3D net for a pizza box - Demonstrate an understanding of how colour and text are used in logo designs - Develop CAD skills to draw an accurate net to given dimensions. - Follow safety rules using craft knives to cut and shape card. 	<p>End of module summative assessment</p> <p>Self-assessments</p> <p>Peer assessments</p>
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Module	Content	Skills	Type of Assessment
1	Food – Multicultural food	<p>Students will show a detailed understanding of hygiene and safety rules for using equipment/food handling.</p> <ul style="list-style-type: none"> - Develop a range of skills needed to cook a range of family meals. - Gaining knowledge of and using a wider range of ingredients from around - Understand what is meant by the term staple food. - Develop planning and organisational skills for more independent cooking of practicals. - Understand the term food miles and how this effects consumer choice. - Understanding the importance of budgeting when cooking for a family. 	<p>NC teacher assessments Main practical - HPL</p>
2	Mechanisms – Design and make an automata	<p>Students - develop sketching and annotation skills</p> <ul style="list-style-type: none"> - Develop designing and problem solving skills used to develop a complex design idea. - Identify and describe the four types of motion. - Gain an understanding of how linkages can change the type, direction and amount of motion. - Develop modelling and problem solving skills at the planning stage. - Predict timings needed for practical lessons. - Develop an understanding of comprehensive range of safety rules for using tools and equipment for shaping and joining woods and rods. - How to use the vibrosaw to cut intricate designs - How to use the pillar drill accurately using a jig - how to modify designs at the making stage to ensure a quality product. 	<p>End of module summative assessment</p> <p>Self-assessments Peer assessments</p>
3	Structures – investigate what is a structure and building a model structure such as a chair, bridge, shelter	<p>Students will – develop research skills using a search engine to find examples of a range of structures.</p> <ul style="list-style-type: none"> - Identify and explain the four types of bridge structure - Identify and explain a range of forces including tension, compression, torsion and shearing. - Selecting a range of manmade and natural structures - Gain an understanding of why some structures fail such as 	<p>End of module summative assessment</p> <p>Self-assessments Peer assessments</p>

		<p>the Tacoma Narrows bridge.</p> <ul style="list-style-type: none"> - Experience use of West Point Bridge programme to design and test a structure using CAD. - Gain an understanding of how modifying or substituting materials and shape changes the forces on a structure. - Developing modelling skills used to create a new structure such as a chair, bridge or shelter. 	
4	Textiles – design and make a fabric bowl/container.	<p>Students will – explore how fabric is manufactured, completing samples of tabby and twill weaving</p> <ul style="list-style-type: none"> - Students will explore how fabric can be made by bonding, creating two different bonded fabrics. - Translate care label symbols, showing how to care for a range of fabrics and clothing - Develop a range of embellishing techniques, including hand couching and machine couching. - Develop further understanding of safety rules when using needles, pins, fabric shears, stitch unpicks, sewing machines. - Develop independent skills using the sewing machine completing quality checks testing the tension of the sewing machine and changing the stitch settings. - Create a detailed plan that can be followed when making. - Complete a range of complex embroidery and applique skills. - Use self assessment techniques to correct and modify work as it progresses. - Illustrate how fabric items can be recycled and reused, helping to prevent the use of landfill. 	<p>End of module summative assessment</p> <p>Self-assessments Peer assessments</p>