

Curriculum Map 2022-2023

Rotations – Each class will have a different starting point.

Year 7 – Textiles theory	Year 8 – DT and Food theory	Year 9 – DT theory															
<p>Focus on commercial viability and modelling processes. The students will learn about properties of materials including suitability for function. The introduction of modern materials. The introduction to industry standards around manufacturing of fabric and fabric products. The students will learn about Quality Control and Health and Safety.</p> <p>Knowledge</p> <table border="1" data-bbox="208 571 775 1182"> <tr> <td>Design considerations Usability Viability of a design solution</td> </tr> <tr> <td>Communicating design ideas Graphical communication</td> </tr> <tr> <td>Material considerations Properties of materials Textiles New development of materials</td> </tr> <tr> <td>Technical understanding</td> </tr> <tr> <td>Manufacturing process and techniques. Scales of manufacture Ensuring accuracy</td> </tr> </table>	Design considerations Usability Viability of a design solution	Communicating design ideas Graphical communication	Material considerations Properties of materials Textiles New development of materials	Technical understanding	Manufacturing process and techniques. Scales of manufacture Ensuring accuracy	<p>Industrial practices including understanding of one off, batch and mass production methods. Students develop an understanding of crowdfunding. Students will be introduced to the Textiles industry and how it has developed over time. Understanding and knowledge of material properties and how they are categorised. Constructional Textiles. Students will also learn about the food industry specifically the difference between Primary and Secondary Processing. Students will be introduced to Food Commodities – Cereals, Grains and Dairy.</p> <p>Knowledge</p> <table border="1" data-bbox="824 788 1391 1406"> <tr> <td>Design considerations Usability New and emerging technology</td> </tr> <tr> <td>Food commodities Primary and secondary processing</td> </tr> <tr> <td>Material considerations Paper and boards New development in materials</td> </tr> <tr> <td>Technical understanding Finishing materials</td> </tr> <tr> <td>Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools Food Safety</td> </tr> </table>	Design considerations Usability New and emerging technology	Food commodities Primary and secondary processing	Material considerations Paper and boards New development in materials	Technical understanding Finishing materials	Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools Food Safety	<p>Focus on Industry standards including Quality Assurance, Quality Control and HACCP. Students are introduced to the new and emerging technologies within industry manufacturing. Computer Aided Design. Computer Aided Manufacture. Computer Numerically Controlled Machinery. Introduction to a range of materials used with the design and manufacturing industry.</p> <p>Knowledge</p> <table border="1" data-bbox="1440 644 2007 1222"> <tr> <td>Design considerations Exploring existing designs</td> </tr> <tr> <td>Communicating design ideas Graphical communication – third angle orthographic projection</td> </tr> <tr> <td>Material considerations Timber Standards components Properties of materials</td> </tr> <tr> <td>Technical understanding Finish of materials Levers</td> </tr> <tr> <td>Manufacturing process and techniques. Digital design tools</td> </tr> </table>	Design considerations Exploring existing designs	Communicating design ideas Graphical communication – third angle orthographic projection	Material considerations Timber Standards components Properties of materials	Technical understanding Finish of materials Levers	Manufacturing process and techniques. Digital design tools
Design considerations Usability Viability of a design solution																	
Communicating design ideas Graphical communication																	
Material considerations Properties of materials Textiles New development of materials																	
Technical understanding																	
Manufacturing process and techniques. Scales of manufacture Ensuring accuracy																	
Design considerations Usability New and emerging technology																	
Food commodities Primary and secondary processing																	
Material considerations Paper and boards New development in materials																	
Technical understanding Finishing materials																	
Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools Food Safety																	
Design considerations Exploring existing designs																	
Communicating design ideas Graphical communication – third angle orthographic projection																	
Material considerations Timber Standards components Properties of materials																	
Technical understanding Finish of materials Levers																	
Manufacturing process and techniques. Digital design tools																	

Year 7 – Pencil case practical	Year 8 – Lucy Sparrow project	Year 9 – Drawing															
<p>The student will be able to apply the theory learnt through rotation 1 in a practical situation. Students will learn about Design Briefs and Specifications.</p> <p>The introduction of basic Textiles techniques including Running Stitch, Back Stitch and Embroidery.</p> <p>Students will be introduced to the Sewing Machine.</p> <p>Knowledge</p> <table border="1" data-bbox="210 531 775 1139"> <tr> <td data-bbox="210 531 775 651"> Design considerations Usability Viability of a design solution </td> </tr> <tr> <td data-bbox="210 651 775 770"> Communicating design ideas Graphical communication </td> </tr> <tr> <td data-bbox="210 770 775 914"> Material considerations Properties of materials Textiles New development of materials </td> </tr> <tr> <td data-bbox="210 914 775 986"> Technical understanding </td> </tr> <tr> <td data-bbox="210 986 775 1139"> Manufacturing process and techniques. Scales of manufacture Ensuring accuracy </td> </tr> </table>	Design considerations Usability Viability of a design solution	Communicating design ideas Graphical communication	Material considerations Properties of materials Textiles New development of materials	Technical understanding	Manufacturing process and techniques. Scales of manufacture Ensuring accuracy	<p>Understanding of logo design for the purpose of printing and manufacture.</p> <p>Understanding of aesthetics and impact on user.</p> <p>Large scale manufacturing processes and digital design tools.</p> <p>Material finishes for particular purpose.</p> <p>Use of forming and deforming of natural materials.</p> <p>Focus on sustainability, packaging and looking at the packaging created for the purpose of aesthetics, function and impact on 6R's.</p> <p>The aim is to create a product which is usable, raises awareness of sustainability.</p> <p>Testing in line with evaluative assessment for learning.</p> <p>Recognition of materials and processes.</p> <p>Large scale processes – paper timber ad polymers</p> <p>Knowledge</p> <table border="1" data-bbox="824 818 1388 1441"> <tr> <td data-bbox="824 818 1388 938"> Design considerations Usability New and emerging technology </td> </tr> <tr> <td data-bbox="824 938 1388 1058"> Communicating design ideas Graphic techniques Isometric drawing </td> </tr> <tr> <td data-bbox="824 1058 1388 1177"> Material considerations Paper and boards New development in materials </td> </tr> <tr> <td data-bbox="824 1177 1388 1257"> Technical understanding Finishing materials </td> </tr> <tr> <td data-bbox="824 1257 1388 1441"> Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools </td> </tr> </table>	Design considerations Usability New and emerging technology	Communicating design ideas Graphic techniques Isometric drawing	Material considerations Paper and boards New development in materials	Technical understanding Finishing materials	Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools	<p>Students are introduced to effective communication through drawing.</p> <p>Students are introduced to a range of techniques:</p> <ul style="list-style-type: none"> • Isometric • Sketching • Crating • 1 & 2 Point Perspective • Orthographic Projection <p>Students will have an introduction to industry standards for presenting ideas.</p> <p>Knowledge</p> <table border="1" data-bbox="1438 611 2020 1241"> <tr> <td data-bbox="1438 611 2020 730"> Design considerations Usability New and emerging technology </td> </tr> <tr> <td data-bbox="1438 730 2020 850"> Communicating design ideas Graphic techniques Isometric drawing </td> </tr> <tr> <td data-bbox="1438 850 2020 970"> Material considerations Paper and boards New development in materials </td> </tr> <tr> <td data-bbox="1438 970 2020 1090"> Technical understanding Finishing materials </td> </tr> <tr> <td data-bbox="1438 1090 2020 1241"> Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools </td> </tr> </table>	Design considerations Usability New and emerging technology	Communicating design ideas Graphic techniques Isometric drawing	Material considerations Paper and boards New development in materials	Technical understanding Finishing materials	Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools
Design considerations Usability Viability of a design solution																	
Communicating design ideas Graphical communication																	
Material considerations Properties of materials Textiles New development of materials																	
Technical understanding																	
Manufacturing process and techniques. Scales of manufacture Ensuring accuracy																	
Design considerations Usability New and emerging technology																	
Communicating design ideas Graphic techniques Isometric drawing																	
Material considerations Paper and boards New development in materials																	
Technical understanding Finishing materials																	
Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools																	
Design considerations Usability New and emerging technology																	
Communicating design ideas Graphic techniques Isometric drawing																	
Material considerations Paper and boards New development in materials																	
Technical understanding Finishing materials																	
Manufacturing process and techniques. Ensuing accuracy Scale of manufacture Digital design tools																	

Year 7 Food preparation and nutrition	Year 8 – Food preparation and nutrition	Year 9 Food preparation and nutrition
<p>Knowledge and understanding of food, cooking methods and processes. Students are introduced to food safety and how to avoid bacteria growth. Introduction to how food is produced ‘from farm to fork’. Students are introduced to the basics of how to manage and maintain a healthy diet.</p>	<p>Knowledge and understanding of food, cooking methods and processes. Introduction to food commodities and practical application of secondary processing. Students are introduced to the food nutrients and their function. Students will be introduced to a larger range of sensory testing methods and how to ensure accurate testing.</p>	<p>Knowledge and understanding of food, cooking methods and processes. Introduction to food commodities – Meat, Fish, Poultry, and Protein Alternatives. Students are introduced to the food nutrients and their function. Focus on Macro and Micro Nutrients in greater detail. Students are shown how to balance their diet and how this will change as they go through life. Understanding and knowledge of energy balance. Students will be introduced to a larger range of sensory testing methods and how to ensure accurate testing.</p>
Knowledge	Knowledge	Knowledge
<p>Food safety Temperature control Where does bacteria come from? Washing up 4Cs</p>	<p>Food safety Temperature control Where does bacteria come from? Growth conditions of bacteria Washing up 4Cs</p>	
<p>Food choice Food labelling Balanced diets</p>	<p>Sensory testing Sensory analysis Recipe modification</p>	
<p>Food provenance Where does food come from? Food waste</p>	<p>Food provenance Where does food come from? Food waste Food commodities</p>	<p>Food safety Temperature control Where does bacteria come from? Growth conditions of bacteria High risk food Washing up 4Cs</p>
<p>General knife Preparing fruit and vegetables Using a cooker Using equipment Cooking methods</p>	<p>General knife Preparing fruit and vegetables Using a cooker Using equipment Cooking methods Raising agents</p>	<p>Sensory testing Sensory analysis Recipe modification Food nutrition Energy balance</p>
<p>Manufacturing process and techniques. Food Hygiene Standards Food Law</p>	<p>Manufacturing process and techniques. Food Hygiene Standards Food Law Primary and Secondary Processing</p>	<p>Food provenance Where does food come from? Food waste Food commodities</p>
		<p>General knife Preparing fruit and vegetables Using a cooker</p>

		<p>Using equipment Cooking methods Raising agents Heat transfer Aeration Shortening</p>												
		<p>Manufacturing process and techniques. Food Hygiene Standards Food Law Primary and Secondary Processing Denaturing proteins Sauce Making Bread Making Pastry Making</p>												
<p>Year 7 Block bots</p>	<p>Year 8 – Pewter casting</p>	<p>Year 9 – Lamp project</p>												
<p>Knowledge and understanding of manufacturing, scales of production and classification of materials. Understanding the appropriate use of equipment including hand tools. Marking out and measurements – use of CAD/CAM. Evaluation of process and use of 2D designs transferred into 3D prototype.</p> <p>Knowledge</p> <table border="1" data-bbox="208 1042 775 1489"> <tr> <td data-bbox="208 1042 775 1161"> <p>Design considerations Sources of energy Wider influences on making</p> </td> </tr> <tr> <td data-bbox="208 1161 775 1230"> <p>Communicating design ideas</p> </td> </tr> <tr> <td data-bbox="208 1230 775 1374"> <p>Material considerations Metals, timbers, new development of materials. Standard components</p> </td> </tr> <tr> <td data-bbox="208 1374 775 1489"> <p>Technical understanding Structural integrity Finishing materials</p> </td> </tr> </table>	<p>Design considerations Sources of energy Wider influences on making</p>	<p>Communicating design ideas</p>	<p>Material considerations Metals, timbers, new development of materials. Standard components</p>	<p>Technical understanding Structural integrity Finishing materials</p>	<p>Development of knowledge linked with classifications of materials, properties of materials. Creation of mould. Understanding of casting process. Health and safety implications in industry. Links between polymer, metals and timbers.</p> <p>Knowledge</p> <table border="1" data-bbox="824 967 1413 1430"> <tr> <td data-bbox="824 967 1413 1058"> <p>Design considerations Exploring existing designs</p> </td> </tr> <tr> <td data-bbox="824 1058 1413 1166"> <p>Communicating design ideas Graphical communication – third angle orthographic projection</p> </td> </tr> <tr> <td data-bbox="824 1166 1413 1310"> <p>Material considerations Metals Standards components Properties of materials</p> </td> </tr> <tr> <td data-bbox="824 1310 1413 1430"> <p>Technical understanding Finish of materials Casting</p> </td> </tr> </table>	<p>Design considerations Exploring existing designs</p>	<p>Communicating design ideas Graphical communication – third angle orthographic projection</p>	<p>Material considerations Metals Standards components Properties of materials</p>	<p>Technical understanding Finish of materials Casting</p>	<p>Manufacturing of lamp Students are learning basic – advanced practical skills ranging from Marking out, joints and vac forming. Understanding of polymers and additional manufacturing practices. Analysing validity of the final prototype Analyse and evaluate – • design decisions and outcomes, including for prototypes made by themselves and others • wider issues in design and technology Evaluation of the final prototype(s)</p> <p>Knowledge</p> <table border="1" data-bbox="1444 1145 2018 1489"> <tr> <td data-bbox="1444 1145 2018 1236"> <p>Design considerations Exploring existing designs</p> </td> </tr> <tr> <td data-bbox="1444 1236 2018 1345"> <p>Communicating design ideas Graphical communication – third angle orthographic projection</p> </td> </tr> <tr> <td data-bbox="1444 1345 2018 1489"> <p>Material considerations Timber and polymer Standards components Properties of materials</p> </td> </tr> </table>	<p>Design considerations Exploring existing designs</p>	<p>Communicating design ideas Graphical communication – third angle orthographic projection</p>	<p>Material considerations Timber and polymer Standards components Properties of materials</p>	
<p>Design considerations Sources of energy Wider influences on making</p>														
<p>Communicating design ideas</p>														
<p>Material considerations Metals, timbers, new development of materials. Standard components</p>														
<p>Technical understanding Structural integrity Finishing materials</p>														
<p>Design considerations Exploring existing designs</p>														
<p>Communicating design ideas Graphical communication – third angle orthographic projection</p>														
<p>Material considerations Metals Standards components Properties of materials</p>														
<p>Technical understanding Finish of materials Casting</p>														
<p>Design considerations Exploring existing designs</p>														
<p>Communicating design ideas Graphical communication – third angle orthographic projection</p>														
<p>Material considerations Timber and polymer Standards components Properties of materials</p>														

Levers	Manufacturing process and techniques. Digital design tools	Technical understanding Finish of materials Levers
Mnufacturing process and techniques. Deforming and reforming		Manufacturing process and techniques. Digital design tools