

**Year 7 DT Curriculum Map 2023-24**

		<b>Topic/Unit title</b>	<b>Essential knowledge (what students should <i>know and understand</i> by the end of the unit/topic)</b>	<b>Essential skills (what students should <i>be able to do</i> by the end of the unit/topic)</b>
<i>DT workshop, food and textiles modules rotate every 8/9 weeks. All have a common theme of Nature and key words of iterate and annotate</i>				
<b>Workshop</b>	<b>DT Materials</b>	Clock	Health and safety, be able to work safely in the workshop. Different types of timber. Drawing skills including the use of symmetry and colouring pencils Creation of templates and modelling in card Iterative design process How to do a product analysis How to do an evaluation	Working with hand tools and machines safely and accurately in the workshop: cutting and shaping material Use of templates Accurate measuring
	<b>DT Electronics</b>	Torch	What annotation is and how to do it. What iteration is and how to do it. Common electronic components and their symbols. What a circuit diagram is.	Using 2D Design software, effectively Knowledge/use of the Stikka machine. Use of a moodboard to help designing. Creation of packaging

			Different types of plastic. CAD/CAM	
<b>DT Food</b>	Healthy eating	<p>Health and safety - recognise and minimise dangers</p> <p>Food provenance and food miles</p> <p>Understand and use the eat well guide</p> <p>Seasonal foods</p> <p>Key processes - annotation and iteration</p>	<p>Health and safety - working safely in the environment</p> <p>Practical making - key terms, knife skills, using small equipment, using oven/hob</p> <p>Prepare for making, follow a recipe, leave station hygienically safe to use</p>	
<b>DT Textiles</b>	Planner cover	<p>Health and safety, be able to work safely in the textiles room</p> <p>Planning ahead, able to realise design work into practical tasks</p> <p>Collect images to help generate design ideas (mood board)</p> <p>Iteration to show development of ideas</p> <p>To be able to use annotations to show planning and intentions</p> <p>To evaluate skills, review progress and comment on the outcome.</p>	<p>Be able to thread a needle and sew on a button</p> <p>Follow instructions</p> <p>To able to safely use an iron and sewing machine (with instructions)</p> <p>Hemming</p> <p>With help, to be able to use the embroidery CAM machine</p>	

**Year 8 DT Curriculum Map**

	<b>Topic/Unit title</b>	<b>Essential knowledge (what students should <i>know and understand</i> by the end of the unit/topic)</b>	<b>Essential skills (what students should <i>be able to do</i> by the end of the unit/topic)</b>
<i>DT workshop, food and textiles modules rotate every 8/9 weeks. All have a common theme of Heroes, key words of specification and evaluate</i>			
<b>Workshop</b>	<b>DT Materials</b>	Structures  Basic classification of structures  Understanding of friction and how to overcome it  Understanding how a jet engine works  Knowledge of Newton’s Third Law of motion  Introduction to aerodynamics  Understand what a specification is  Understand how to evaluate effectively	Working with other pupils in a team.  Working with hand tools safely and accurately in the workshop.  Being able to test and modify their practical work.  Able to apply knowledge of structures.  Able to apply knowledge of aerodynamics.  How to write a specification and how to evaluate.
	<b>DT Electronics</b>	Night light  CAD/CAM  Understand principles of electronics theory including potential dividers and transistors  Material/component properties  Thermoplastic/thermosetting properties	Using 2D Design software, effectively  Safe soldering onto a PCB  Adding switch to existing circuit  Vacuum forming HIPS  Strip heating waste plastic to make a battery holder

<b>DT Food</b>	Flour power	<p>Understand the macro nutrients (where they fit in the eat well guide)</p> <p>Commodities - Carbohydrate foods and protein food.</p> <p>Food science - denaturation and coagulation Methods of heat transfer.</p> <p>Traffic light system and allergens</p>	<p>Health and safety - working safely in the environment</p> <p>Practical making - Using commodities to produce practical outcomes. also building on knife skills, using small equipment, using oven/hob</p> <p>Prepare for making, follow a recipe, leave station hygienically safe to use</p>
<b>DT Textiles</b>	Cushion	<p>To be able to communicate design ideas, and use an iterative approach to develop a variety of ideas.</p> <p>To effectively use keywords to annotate to show planning.</p> <p>To be able to link lessons together and plan own practical tasks at the start of each lesson</p> <p>To evaluate skills, progress and comment on the outcome</p>	<p>Health and safety, to be able to work safely in the textiles room, with small sewing equipment and use sewing machines and to develop confidence</p> <p>To understand how and where to use hemming and seam allowance</p> <p>To be able to follow instructions to transfer printing</p> <p>With help, to be able to use the embroidery machine (CAM) to embellish work</p>

### Year 9 DT Curriculum Map

		Topic/Unit title	Essential knowledge (what students should <i>know and understand</i> by the end of the unit/topic)	Essential skills (what students should <i>be able to do</i> by the end of the unit/topic)
<i>DT workshop, food and textiles modules rotate every 13 weeks. All have a common theme of World, key words of analyse and research</i>				
<b>Workshop</b>	<b>DT Materials</b>	Phone stand	CAD/CAM - laser cutter Prototype modelling in card Quality control via iterative designing to create improvements/modifications Fault finding	Working with hand tools safely and accurately in the workshop. marking out accurately - using try square and marking gauge Using 2D Design software, effectively Accuracy of fit Finishing techniques
	<b>DT Electronics/ Engineering</b>	Steady hand game	Understand how a PIC can be programmed. The design style of Yinka Ilori. How to undertake effective research. Lamination with timber. Basic introduction to electronics in DT. Resistor identification.	Safe and effective soldering onto PCB. Write a programme and download it onto a PIC. Working with hand tools safely and accurately in the workshop. Forming metal wire safely and accurately.

<b>DT Food</b>	World cuisine	<p>Understand the micro nutrients (where they fit in the eat well guide, sources and functions)</p> <p>Nutritional needs and target audience.</p> <p>Commodities -</p> <p>Food science - caramelisation, fermentation, lamination and biological raising agents.</p> <p>Using seasonal foods, British and international cuisine</p>	<p>Health and safety - working safely in the environment</p> <p>Practical making - Using commodities to produce practical outcomes. Using a temperature probe. Continuing building on knife skills, using small equipment, using oven/hob</p> <p>Prepare for making, follow a recipe, leave station hygienically safe to use</p>
<b>DT Textiles</b>	Wind sock	<p><b>Knowledge</b></p> <p>To be able to work with care and be safe in the textiles room</p> <p>To be able to show Independent planning for each practical lesson</p> <p>To be able to use a cutting list to show planning</p> <p>To have an understanding of how products are constructed in 3-D</p> <p>Know how a heat press can be used to sublimation print onto fabric</p>	<p><b>Skills</b></p> <p>To confidently use the sewing machine, be able to fault find, and using a variety of stitch patterns</p> <p>to be able to mark out and accurately cut a range of fabrics</p> <p>Be able to generate a repeat pattern by using CAD techniques (2D-Design)</p> <p>Understand key terms, appliques, assemble</p>