



# KS3 Curriculum: 3 x 13 weekly rotation

## Food and Nutrition Textiles and Resistant materials

<b>7</b>	<b>Knowledge</b>	<b>Tier 2 Vocabulary</b>	<b>Skills</b>	<b>Assessment</b>
<b>Textiles 1</b>	<p>Natural plant and animal fibres. Man-made fibres Basic fabric construction of Knitting and weaving. Key Smart and technical textiles. Safe working conditions. How to develop a range of decorative techniques How to construct a design brief.</p>	<p>Measure Accurate Template Transfer Equal Allowance Reverse Evaluate Analyse Illustrate Annotate Sustainable Biodegradable Finite/Non finite Insulate Absorbent Original Assess Quality</p>	<p>Control on the sewing machine Safe use of the Heat press. Application and use of interlining. Application of Disperse dye, embroidery and block print. How to create 3 dimensional shapes from fabric. How to develop original patterns from existing research.</p>	<p>Paper based Include student voice Manufacturing Diary Evaluation</p>
<b>Textiles 2</b>	<p>British designer. How to combine two material areas (Textiles and RMT) into a usable product. How to develop a original design and repeat pattern. How to reinforce materials.</p>			<p>Paper based with extended writing Include student voice</p>
<b>RMT 1</b>	<p>Simple mechanisms levers Using workshop safely Hardwoods, softwoods, manufactured boards Wasting and abrading (cutting, filing, sanding and drilling) Finishing materials  Electronics: Battery tester 4 lessons</p>	<p>Annotate Evaluate Model Develop Research Prototype Identify Materials Properties Modify Testing Accurate Template Guideline Wasting Abrading</p>	<ul style="list-style-type: none"> <li>● How to use a template</li> <li>● How to adapt a design</li> <li>● Using a coping saw</li> <li>● Safe workshop practice</li> <li>● PPE</li> <li>● Filing</li> <li>● Drilling</li> <li>● Accurate cutting out</li> <li>● Constructing a basic circuit</li> <li>● Soldering</li> <li>● Using a craft knife</li> <li>● Scoring and folding</li> <li>● Guidelines and simple graphic rendering</li> </ul>	<ul style="list-style-type: none"> <li>● Extended writing task:</li> <li>● CAD/ designing practical skills</li> <li>● Core knowledge paper based on KO</li> </ul>



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<p><b>RMT 2</b></p>	<p>How to research effectively How to create initial ideas How to develop ideas Card model and prototype Evaluation of design ideas How to of vacuum former, laser cutter and die cutter How to identify acrylic or plywood Material properties relative to polymers or woods</p>	<p>Annotate Evaluate Iterative Model Develop Research Prototype Identify Materials Properties Modify Testing Accurate Template Guideline</p>	<ul style="list-style-type: none"> <li>• Effective and accurate research</li> <li>• How to create a mood board</li> <li>• Drawing techniques</li> <li>• Rendering and logo design</li> <li>• Quick modelling</li> <li>• Prototyping materials and development and modifications</li> <li>• CAD</li> <li>• CAM</li> <li>• Vacuum forming</li> <li>• Laser cutting</li> <li>• Evaluation, testing and modifications</li> </ul>	<ul style="list-style-type: none"> <li>• Extended writing task: manufacturing diary</li> <li>• Designing skills</li> <li>• Core knowledge paper based on KO</li> </ul>
<p><b>Food 1</b></p>	<p>Personal safety Knife skills Preparing for practical (Hygiene) Washing up Safe use of the oven Fruit and vegetable preparation Intro to the Eatwell Guide</p>	<p>Hygiene Cross-contamination Chilling Cooking Cleaning Broccoli Knife Texture Analysis Evaluation Nutrition Seasonality Function</p>	<p>Knife skills Claw grip Bridge hold Food Hygiene All in one sauce Rubbing in method Melting method Correct use of sensory descriptors Define Healthy diet Identify Macronutrients and their function Explore Eatwell Guide Define Food Provenance Presentation of work</p>	<p>Paper based Include student voice</p>
<p><b>Food 2</b></p>	<p>Food Provenance (Seasonality) Food Miles Product Analysis (Labelling and Sensory) Introduction to Nutrition (Macronutrients) Recycling &amp; Sustainability</p>	<p>Hygiene Cross-contamination Chilling Cooking Cleaning Broccoli Knife Texture Analysis Evaluation Nutrition Seasonality Function</p>	<p>Knife skills Claw grip Bridge hold Food Hygiene All in one sauce Rubbing in method Melting method Correct use of sensory descriptors Define Healthy diet Identify Macronutrients and their function Explore Eatwell Guide Define Food Provenance Presentation of work</p>	<p>Paper based with extended writing Include student voice</p>



# RSS Curriculum: 5 X 15 WEEKLY ROTATION

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8	Knowledge	Tier 2 Vocabulary	Skills	Assessment
1 Textiles	Threading the sewing machine Safe use of the sewing machine Cultural issues related to Mexico Different ways of dying Application of safe and effective screen printing. Addition and wastage techniques.	Measure Accurate Template Transfer Equal Allowance Reverse Evaluate Analyse	<b>Decorative techniques:</b> <ul style="list-style-type: none"> <li>● Screen printing</li> <li>● Tie dye</li> <li>● Applique</li> <li>● Embroidery</li> <li>● Transfer printing</li> </ul>	Paper based Include student voice Manufacturing Diary Evaluation
2 Textiles	Presentation of work Key drawing styles of Orthographic and Isometric sketching Correct use of a range of drawing equipment. Application of drawing styles	Illustrate Resist Fixative/fix Stencil Trace Original Annotate Assess Quality	French seam Threading of the sewing machine Accurate sewing and measurement of seams. <b>Drawing skills:</b> <ul style="list-style-type: none"> <li>● Isometric</li> <li>● Orthographic</li> </ul>	Paper based with extended writing Include student voice
1 RMT	Where metals come from Ferrous, non ferrous and alloys Properties of metals Developing CAD skills and laser cutter Casting/ safe practice and techniques Mould manufacture Wasting and abrading Designing inspired by other/collaboration	Mould Melt Cool Harden Solidify Etch Properties Torch Polish Evaluation Manufacture Quality Component Decoration Relief Sketching development	<ul style="list-style-type: none"> <li>● Internet research</li> <li>● Quick sketching</li> <li>● Development sketches</li> <li>● CAD drawing</li> <li>● Laser cutting</li> <li>● Using Moulds</li> <li>● Metals casting</li> <li>● Wasting and abrading metals</li> <li>● Adding standardised components</li> <li>● Timber: wasting, abrading and decoration</li> </ul>	<ul style="list-style-type: none"> <li>● Extended writing task: manufacturing diary</li> <li>● Designing skills</li> <li>● Core knowledge paper based on KO</li> </ul>



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<p style="text-align: center;"><b>2</b> <b>RMT</b></p>	<p>What a system is Input and output components Positive and negative/polarity in component Creating a flow chart including feedback How to solder build a circuit Programmable components and how to programme</p>	<p>Circuit Electricity Flow chart System Process Input Output Positive Negative Programmable Programme Function Polarity Feedback</p>	<ul style="list-style-type: none"> <li>●How to solder a PCB</li> <li>●How to drill a PCB</li> <li>●Why and how to clean a PCB</li> <li>●Component identification</li> <li>●Polarity identification</li> <li>● What a basic system is</li> <li>●Input and output components</li> <li>●Programming a PIC Chip</li> <li>●Creating system flowcharts</li> </ul>	<ul style="list-style-type: none"> <li>● Extended writing task: manufacturing diary</li> <li>● Practical manufacturing skills</li> <li>● Core knowledge paper based on KO</li> </ul>
<p style="text-align: center;"><b>1</b> <b>Food</b></p>	<p>Personal safety Knife skills Preparing for practical (Hygiene) Washing up Safe use of the oven Fruit and vegetable preparation Revisit and review Eatwell Guide Revisit and review Macronutrients and their function</p>	<p>Hazard Consequence Ingredients Development Function Obese Essential Requirement Healthier Combination</p>	<p>Safety Safe use of hob, grill and oven Demonstrate safe knife skills Prepare fruit and vegetables Prepare, combine and shape ingredients Function of bread ingredients Create bread dough Shape bread dough Name Macronutrients and state at least 1 function and source of each Understand how to complete an investigation The use of Physical, chemical, mechanical and biological raising agents Importance of a hypothesis Presentation of work</p>	<p>Paper based Include student voice</p>
<p style="text-align: center;"><b>2</b> <b>Food</b></p>	<p>Introduction to Food Science Introduction to Investigation work Chemical raising agents Biological raising agents Use of a hypothesis Physical raising agents Mechanical raising agents</p>	<p>Retard Control Creaming Mechanical Physical</p>	<p>Understand how to complete an investigation The use of Physical, chemical, mechanical and biological raising agents Importance of a hypothesis Presentation of work</p>	<p>Paper based with extended writing Include student voice</p>



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9	Knowledge	Tier 2 Vocabulary	Skills	Assessment
<p><b>1</b> <b>Textiles</b></p>	<p>Students should have an overview of the main categories and types of textiles including natural (plant and animal) Synthetic fibres, blended and mixed fibres, woven, non woven and knitted fibres.</p> <p>Students will have an overview of the main categories and types of papers and Production of materials- Paper and felt</p> <p>Smart and Technical textiles Specifications Digital printing Forces and Stresses</p>	<p>obsolescence Sustainability Carbon footprint Global warming Landfill Society Classification Properties Composite Conductive Absorbency Durability Density Malleability Elasticity</p>	<p>Recap on materials understanding</p> <p>Name the stages of a life cycle assessment and associate it to a product.</p> <p>Name the 6R's</p> <p>How to develop CAD repeat patterns from original images.</p> <p>How to apply core knowledge to exam related questioning.</p>	<p>60 mins knowledge paper based on KO using some GCSE extended writing questions</p>
<p><b>2</b> <b>Textiles</b></p>	<p>Couture and high street designers Fashion illustrations Environmental factors Digital design Eco textiles Real world challenge</p>		<p>Evaluation of environmental impact produced by product design</p> <p>How to combine materials to create an eco wrap.</p> <p>Presentation of design work and layering of designs.</p>	<p>60 mins knowledge paper based on KO using some GCSE extended writing questions</p>



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<p style="text-align: center;"><b>1</b> <b>RMT</b></p>	<p>Sustainable design Working for a client Thumbnail sketching Initial idea Design development Modelling techniques CAD Jigs and templates Wood joining techniques (for plywood) Wood finishes (for plywood)</p>	<p>Client Sustainable Waste Recycling Upcycling Template Modelling Prototyping Applying Application Smooth Edges Quality Influence Inspired Collaboration</p>	<ul style="list-style-type: none"> <li>• Working and designing with sustainable and recycled materials</li> <li>• Developing thumbnail sketching, initial sketching and isometric skills</li> <li>• Different modelling techniques</li> <li>• Using different forms of CAD</li> <li>• Using Jigs and templates for accuracy</li> <li>• Working to deadlines</li> <li>• Basic wood joints</li> <li>• Screws, pilot holes and countersinking</li> <li>• Using different drills</li> <li>• Wood finishes</li> </ul>	<ul style="list-style-type: none"> <li>• Extended writing task: manufacturing diary</li> <li>• Designing skills</li> <li>• Core knowledge paper based on KO</li> </ul>
<p style="text-align: center;"><b>2</b> <b>RMT</b></p>	<p>Mechanical devices Movements -reciprocating, linear, oscillating &amp; rotary Levers - 1st, 2nd &amp; 3rd order Linkages - push/pull Rotary systems Cams and Followers Gears Pulleys</p>	<p>Mechanism Motion Fulcrum Pivot Linkage Force Template Modelling CAD CAM Cam Convert Velocity Diameter Positioning Output</p>	<p>Disassembly Drawing Paper modelling Card modelling Computer Aided Design CNC machining Material modelling Testing and developing Modifications Evaluations</p>	<p>Paper based Peer and self - assessment Knowledge retention Real life design</p>



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<p><b>1</b> <b>Food</b></p>	<p>Recap and recall Hygiene Where do bacteria come from? Applying Eatwell Guide and recap Macronutrients Micronutrients Nutrients in food, source and function</p>	<p>Bacteria Nutrient Source Sauce Function Nutrition Properties Macro Micro Poisoning Preservation Borne Ambient Temperature Analysis Excess Deficiency Contaminate Function Thicken Deficiency Annotation Describe Dietary Recycle Repair Reduce Contaminate Quality cleanliness</p>	<p>Recap and recall hygiene Name the places that bacteria come from. How and why food can become contaminated Use of hob, grill &amp; oven Safe knife skills Preparing fruit and veg Meat &amp; Vegetarian alternatives Combine and shape Function of ingredients Pasta making Sauce making Micronutrients A B C D E K Minerals (Calcium, Iron and Sodium) Function &amp; Source Define British &amp; International Cuisine. Investigating further features.</p>	<p>30 mins core knowledge paper based on KO</p>
<p><b>2</b> <b>Food</b></p>	<p>Primary and Secondary Processing. (Wheat into flour, flour into pasta) British Cuisine International Cuisine Heat Transfer Sauce making (Gelatinisation)</p>			<p>60 mins knowledge paper based on KO using some KS4 style extended writing questions</p>