

**KS3 – Design & Technology** 

Year 7

Golden Threads Enrichment Review and Evaluation

	Topics & Substantive Knowledge	Disciplinary Knowledge	Assessment	Misconceptions	Key Vocabulary	Knowledge Tracking
<b>Resistant Materials</b> Storage Solution	Content, Balance and Presentation of design sheets.  Classification of timbers.  Product Modelling. with Triangulation.  Isometric Drawing.  Marking out a Lapped Joint/Finger joint.  Cutting out a Lapped Joint/Finger joint using Tenon Saw/Coping Saw.  Cutting out themed piece Scroll/Coping saw.  Product assembly.  Product finishing.  Making/Technical processes  Marking and measuring  Coping Saw  Tennon Saw  Scroll/ Vibra Saw  Flat file  Disc Sander  Hammer  Nails  Finishing techniques  Suitability of wood treatments and preservatives.	Making/Technical processes  Accurately use Steel rule, Tri Square, Pencil.  Safely learn how to use a tenon saw/ Coping saw to create lapped joint and finger joint.  Safely learn how to use Scroll/ Vibra Saw.  How to smooth and waste materials using the disc sander.  Product assembly using hammer, nails and adhesive.  Finishing techniques  Application of suitable wood finish for decorative and protective purposes.	End of module Design & Make mark.  4 x Multiple choice question homework's	Marking out correctly with Pencil, Rule and Tri Square. Incorrect cutting techniques and tool misuse. Improper use of machinery. Lack of attention to detail and poor Accuracy. Inadequate or overuse of a specific finish resulting in a poor finish.	Bench Hook Bookend Coping Saw Hardwood Joint Softwood Specification Tenon Saw Vibra Saw Vice	<ul> <li>How to layout out and communicate design ideas/concepts.</li> <li>Categories and classifications of timber.</li> <li>Retrieval/ Cross Curricular-Measuring and marking out.</li> <li>How to accurately mark out two types of wood joints.</li> <li>How to safely use a Tennon and Coping saw.</li> <li>How to safely use Scroll/vibra saw.</li> <li>How to complete a product assembly.</li> <li>How to apply a finish.</li> </ul>



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lextiles	DESIGN: Research and exploration using mood boards.  Working with a context of producing a decorative banner.  Develop specifications to inform design ideas.  Generation of creative design ideas with the use of annotated sketches.  MAKE: Use of specialist tools, techniques and processes such as applique, use of the sewing machine, seams and working with a pattern.  EVALUATE: Test and evaluate final product.  TECHNICAL SKILLS: understand the properties of materials eg Fibres and Fabrics.  How to write a design specification  Design strategies  Communication of design ideas  Specialist tools and equipment  Using and working with materials  Materials and their working properties  Specialist tools and equipment	DESIGN: The importance of working to a specification.  ACCESSFM How to produce a high-quality design solution eg design ideas, final design with the use of annotation.  MAKE: Using the appropriate tools and equipment for use on fabric.  Working with accuracy and precision.  Safe use of the sewing machine and textiles equipment.  EVALUATE: Looking at the positives and negatives of final outcomes. Self and peer assessment and reflection.  Methods to improve and modify.  TECHNICAL SKILLS: Natural and man-made fibre knowledge.  Woven fabric construction methods.	End of module Design & Make mark.  4 x Multiple choice question homework's	Improper threading up of the sewing machine.  Improper use of the sewing machine and other tools/ equipment used in the textiles room.  Confusion between paper scissors and fabric shears.  Incorrect cutting of fabric and the use of seam allowances.  Lack of attention/ lack of accuracy when creating applique pieces on the sewing machine.  The difference between the material categories Natural and Man-made fibres.	Bobbin Needle Fabric Applique Design Sewing machine Specification Equipment Scissors Embroidery	Future Learning:  The safe and accurate use of the sewing machine.  How to cut and manipulate fabric.  How to decorate fabric using a wide variety of processes.  To have a sound knowledge of how fabrics are made using a range of natural and man-made fibres.



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Food	To learn health and safety and hygiene in the food room.  To learn food preparation and cooking skills.  To learn knowledge and understanding of nutrition and healthy eating guidelines.  Healthy eating guidelines  Sensory analysis Health and safety Hygiene Nutrients Eatwell guide Knife skills Kitchen organisation Cooking and baking skills How to use equipment	<ul> <li>Learn about key equipment and their purposes</li> <li>Ingredient organisation</li> <li>How to wash up properly</li> <li>Safety in the food room</li> <li>Organisation in the food room</li> <li>Routine of instructions during a food practical</li> <li>Personal hygiene in the food room</li> <li>Hazards in the food room</li> <li>The eatwell guide and 5-a-day</li> <li>Healthy eating guidelines</li> <li>Nutrients and their functions</li> <li>Using a knife safely using bridge and claw (fruit salad)</li> <li>How much sugar and hidden sugar is in food</li> <li>How to weigh accurately (muffins)</li> <li>Traffic light labelling</li> <li>How to make recipes more healthy</li> <li>Staple foods around the world</li> <li>Melting method (cereal bars)</li> <li>Rubbing in technique (scones)</li> <li>Cooking on the hob safely and using raw meat (bolognaise)</li> <li>Function of ingredients in bread</li> <li>Making bread (pizza)</li> </ul>	End of module Design & Make mark.  4 x Multiple choice question homework's	Difficulty identifying nutrients provided by foods  Confusion between sections of the eatwell guide and names of nutrients  Remembering all the rules of the food room  Remembering the correct way to chop different ingredients	Carbohydrate Protein Calcium Sugar Flour Weighing Ingredients Fibre Sensory Analysis	How to always work safely in the food room  How to follow hygiene  How to use equipment  How to use a knife safely  How to use the oven and hob safely  How to follow personal hygiene  Building on knowledge they may have learnt at primary school about healthy eating and nutrition  Building on knowledge from taster days they may have done when in year 6



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<b>Graphics</b> Theme Park Ride	Understand Content, Balance and Presentation Understand how to generate a range of design ideas. Understand what CAD/CAM is Be able to safely and correctly solder Demonstrate a range of practical skills to make a souvenir plaque  Design strategies. Using and working with materials Specialist techniques and processes.	<ul> <li>Be able to work in a group to produce a new theme park ride and be able to present your ideas.</li> <li>Producing a range of initial ideas.</li> <li>How to shape and form polymers</li> <li>Using a soldering iron, strip heater, pillar drill, tap and die.</li> <li>Understand what components are and what they do in a circuit.</li> <li>Using a former to shape acrylic base.</li> </ul>	End of module Design & Make mark.  4 x Multiple choice question homework's	Design fixation- not producing a wide range of initial ideas. Incorrect soldering- dry joint, L.E.D the wrong way round.	Design Drilling Laser Plaque Safety Electronics Presentation Souvenir Technology Theme Park	Building on previous knowledge from KS2 Leading to: More complex soldering More complex CAD designing Improved practical skills, leading to independently using a range of tools and processes.