

Curriculum Map template

Subject: KS3 DT Carousel



Year: 8

	RM1 - Lamp	RM2 - Lamp	Textiles -	Food Tech
Content	Designing and making a Box and a Lamp	Designing and making a Box and a Lamp	Designing and making a felt hat.	
Knowledge	<p>Students will learn about Health & Safety. Including how to use a variety of workshop machines and hand tools safely. Students will research, design and make a functioning lamp. The main theory focus of this section of the project is the timbers, where students will learn about the following:</p> <ul style="list-style-type: none"> • Types, properties and uses of wood • Sources, and how wood is converted into usable forms • Wood joining methods, focussing on finger joints & suitable adhesives • Specific tools and equipment used to cut and shape wood. • Types properties and uses of manufactured boards <p>As part of the design element they will also develop their knowledge of isometric drawing.</p>	<p>Continuing with the Lamp project students will continue to design and make this product in RM2. The main focus of this section is CAD (Computer Aided Design) and electronics including:</p> <ul style="list-style-type: none"> • How to use 2D Design CAD software to produce accurate designs for manufacture using the laser cutter. • Recap knowledge of plastics from Yr7 and incorporate into amplifier design. • How to use a soldering iron and they types of different electrical components • How to use the Line Bender to form plastics 	<p>Students will be introduced to and develop their knowledge and understanding of a variety of textile equipment and processes to design and make an hat made from felt. They will understand how to follow the design development cycle to develop their design ideas. Using ACCESSFM, students will look at and evaluate existing products, exploring how they can influence their own design ideas.</p>	<p>In Year 8 students are introduced to food health and safety as a refresher, (this was taught in classrooms but the majority of students have not experienced the application to their knowledge).</p> <p>The students this year will be starting again from scratch in terms of practical skills but will be building up and forging links from the knowledge learnt from Y7 (covid years). in year eight will revisit a number of topics and gain new knowledge in the 8 tips for healthy living:</p> <ul style="list-style-type: none"> •Eat more starchy food •Eat lots of fruit and vegetables •Eat more fish •Cut down on fat and sugar •Eat less salt •Get active and keep a healthy weight •Drink plenty of water

				<ul style="list-style-type: none"> • Always eat breakfast
Skills	<p>Students will develop skills in:</p> <ul style="list-style-type: none"> • Analysis skills by evaluating existing products • Measuring and marking out materials accurately • Cutting skills to produce accurate finger joints • Recap and develop skills in using the scroll saw, pillar drill & belt sander • How to evaluate and recognise how to improve practical work • Drawing skills focussing on both 2D and 3D isometric drawing. • How do you use the different workshop machines safely and accurately? 	<p>Students will develop skills in:</p> <ul style="list-style-type: none"> • Computer aided drawing skills, learning how to use the different tools and settings • Recap and develop skills in cutting and forming plastics, extending on skills from Yr7 by introducing the hole saw and line bending machine • Developing independence with practical work, working through instructions and student-led learning • Soldering, how to solder joints accurately • How to evaluate projects both recognising successes and areas of improvement. 	<p>Students will learn and develop the following skills:</p> <p>How to set up and use a sewing machine and use other textiles based equipment, The process of bonda-web applique. Hand embellishment skills. Basic pattern cutting/template making skills. How to answer a project brief through completing research and design development. How to complete a product analysis.</p>	<p>Students will have a refresher and introduced to:</p> <ul style="list-style-type: none"> • core health and safety in the kitchen • knife skills - bridge and claw <p>From there students will learn and develop new skills including: A detailed look into sensory analysis How microorganisms are used in food production</p>
Key Questions	<ul style="list-style-type: none"> • What are the key properties of wood? • Where is wood used? • How does the grain affect the strength of wood? • Why is there a need for manufactured boards? • What adhesives should be used with wood? • How do I cut wood accurately and safely? 	<ul style="list-style-type: none"> • What is CAD and CAM? • Why is CAD essential in manufacturing? • What are the advantages and disadvantages of CAD and CAM? • How are electrical components connected? • What does a resistor do and why is it needed? • What is a capacitor? • What is a microcontroller? • What does deforming plastics mean? 	<p>What is the design process? How do you design and make a product which answers the project brief and meets specification points? Why do designers look at existing products? How can looking at existing products influence your design ideas? How do you use a sewing machine? What is applique and how can I use it to recreate my design? How can I use the sewing machine to make a pencil case? How do I insert a zip using the sewing machine?</p>	<p>What is a sensory analysis? What is fermentation and budding? How can we reduce saturated fat in our diet? How can we base our meals on starchy carbohydrates? What does the term 'Julienne' mean? How do food manufacturers disguise the name of sugars in food products? How can a diet high in fibre reduce the chances of someone</p>

				developing colon cancer?
Assessment	<p>Students' classwork and homework will be assessed through self, peer and teacher assessment, against the success criteria detailed in the following bands: Planning, Communication, Making and Evaluating and awarded the following Aspire Levels: Foundation, Developing, Secure, Excellent.</p> <p>Students will be required to complete a Health & Safety test, and End of Unit test.</p>	<p>Students' classwork and homework will be assessed through self, peer and teacher assessment, against the success criteria detailed in the following bands: Planning, Communication, Making and Evaluating and awarded the following Aspire Levels: Foundation, Developing, Secure, Excellent.</p> <p>Students will be required to complete a Health & Safety test, and End of Unit test.</p>	<p>Students' classwork and homework will be assessed against the success criteria detailed in the following bands: Planning, Communication, Making and Evaluating and awarded the following Aspire Levels: Foundation, Developing, Secure, Excellent.</p> <p>Students will be required to complete a Health & Safety test, and End of Unit test.</p>	<p>Students' classwork and homework will be assessed against the success criteria detailed in the following bands: Planning, Communication, Making and Evaluating and awarded the following Aspire Levels: Foundation, Developing, Secure, Excellent.</p> <p>Students will be required to complete an End of Unit test.</p>
Literacy/ numeracy/ SMSC/ Character	<p>Students' will develop their knowledge, understanding and use of subject specific terminology.</p> <p>Students' will develop their numeracy skills by accurately marking and measuring finger joints and the various parts of their lamp.</p> <p>Students' will need to consider the environmental impact of the use of wood in manufacturing products.</p>	<p>Students' will develop their knowledge, understanding and use of subject specific terminology.</p> <p>Students' will develop their numeracy skills by using coordinates and measuring tools in 2D Design.</p> <p>Students' will need to consider the environmental impact various energy sources have and how we can design products for a more sustainable future.</p>	<p>Students' will develop their knowledge, understanding and use of subject specific terminology.</p> <p>Students' will develop their application of numeracy skills through the production of scaled drawings and measuring and marking out materials.</p> <p>Students' will have to consider their customers' likes and interests when developing their product to meet the customers needs.</p>	<p>Students' will develop their knowledge, understanding and use of subject specific terminology.</p> <p>Students' will develop their application of numeracy skills through measurements of ingredients and basic scaling up of ingredients.</p>
Enrichment opportunities and futures	<p>Enrichment - Watching Abandoned Engineering, Grand Designs, 100K House, The Big Life Fix.</p> <p>Careers - Engineer, Product or</p>	<p>Enrichment - Watching Abandoned Engineering, Grand Designs, 100K House, The Big Life Fix.</p> <p>Careers - Engineer, Product or</p>	<p>With the skills gained students can be given the opportunity to produce their own products at home or at Textile Club.</p> <p>Enrichment - Watching Great British Sewing Bee, Next in</p>	<p>With the skills gained students can explore (with permission) cooking at home and enter suitable cooking competitions.</p> <p>students will be informed of external</p>

	<p>Industrial Designer, Interior Designer, Retail Designer, Exhibition Designer, Film Set Designer, Automobile Designers, Theatre Set Designer, Manufacturer, Machine Operator, Architect, Exhibition Designer, Toy Designers, Game Designer, Furniture Designer, Electrical Engineer, Carpenter, Plumber, Electrician,</p> <p>Employability Skills - Planning, Fine Motor Skills, Creativity, Organisation, Critical and Logical Thinking, Problem Solving, Risk Awareness</p>	<p>Industrial Designer, Interior Designer, Retail Designer, Exhibition Designer, Film Set Designer, Automobile Designers, Theatre Set Designer, Manufacturer, Machine Operator, Architect, Exhibition Designer, Toy Designers, Game Designer, Furniture Designer, Electrical Engineer, Carpenter, Plumber, Electrician,</p> <p>Employability Skills - Planning, Fine Motor Skills, Creativity, Organisation, Critical and Logical Thinking, Problem Solving, Risk Awareness</p>	<p>Fashion, Read Fashion magazine, visit museums and galleries, watch fashion documentaries.</p> <p>Careers- fashion designer, marketing, seamstress, upholstery, advertising, buyer</p> <p>Employability skills- planning, independent work, dexterity, fine motor skills, design, critical thinking, creativity, Problem solving.</p>	<p>opportunities to enter competitions / draws. (step up2 the plate, etc)</p> <p>The great Haydon bakeoff (internal - activity we host at the end of a rotation to celebrate students accomplishments.</p>
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