



# FRAMEWORK FOR LEARNING



## CREATIVE

An education where imagination, curiosity and resilience enable us to ignite our learning.

## HAPPY

A shared belief that optimism, empathy and responsibility are the foundations for a respectful, safe and inclusive community.

## SUCCESSFUL

Individuals who are ready to learn, practise being reflective, and are motivated to become champions.

## SUBJECT

### TECHNOLOGY – RESISTANT MATERIALS

### TECHNOLOGY – TEXTILES

## INTENT

"Design is everywhere. From the dress you're wearing to the smartphone you're holding. It's design" - Samadara Ginige

Design and technology aims to ensure that all students:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Students will build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users, critique, evaluate and test their ideas and products and the work of others.

Design and technology aims to ensure that all students:

- Develop core skills and a strong technical understanding which aids their personal development and provides them opportunity to achieve whilst gaining life-long learning experiences.
- Students will acquire knowledge that gives them a strong understanding of the world around them and our heritage as a design and manufacturing nation. Students will not only obtain knowledge, but also develop understanding whilst practicing home skills that make them able to contribute and add value to our community at a local, national and global level.



YEAR GROUP		YEAR 8			
RATIONAL / NARRATIVE	<b>Design Technology – Resistant Materials</b> Students will be taught the knowledge, understanding and skills needed to design and develop their own product using a variety of materials. They will work with a range of hand tools and electrical equipment to help manufacture a high-quality box with the use of CAD/CAM.		<b>Design Technology – Textiles</b> Students will develop their knowledge, understanding and skills to design and develop a 'bag for life'. They will explore the work of others, account the views of the intended users and identify the environmental issues with the textiles industry. They will work with a range of specialist tools, techniques and processes to complete a high quality, functional product.		
	TERM KNOWLEDGE	TERM 1	TERM 2	TERM 1	TERM 2
SKILLS	Students will be taught how to design and develop their ideas using isometric drawing techniques for the box project. They will develop their knowledge of wooden joints, specifically finger joints. Students will be working on how to finish a product and evaluate the outcome and skills developed.	Students will develop their understanding of using 2D design (CAM) to design. They will design and develop a decorative feature for their box using CAD/CAM.	Designing and making a 'bag for life'. Students will build on their design process explore a variety of decorative and construction techniques to independently make their product. They will continue to develop the design process by breaking down the design brief, completing a task analysis, design specification, research, and design development. Students will practice decorative and construction techniques to produce a product suitable for a specific target market.	Students will develop their understanding on sustainability within the textiles industry and look at a product's life cycle and the impact the manufacturing process has on the environment. Students will complete an evaluation at the end of the project and gather peer feedback on their practical work.	
	<b>Design investigation skills</b> Students will learn how to design considering the wants and needs of a client. They will use client research to influence and inspire their box designs. They will learn how to develop ideas in CAD in order to create a decorative feature for their box.	<b>Practical skills</b> They will develop their practical skills with the hogneg saw and coping saw to help them cut out their finger joints. They will develop their skills in marking out and understand the importance of quality control. Students will learn how to use the laser cutter.	<b>Design investigation skills:</b> Students will learn how to design considering the wants and needs of a client. They will use client research to influence and inspire their 'bag for life'. They will look at the impact a product has on the environment	<b>Practical skills:</b> Students to develop their decorative techniques in applique, tie dye, batik, fabric pens. Developing seams, hems, pockets and handles using the sewing machines. Carrying out quality control checks.	
ASSESSMENT	<b>Assessment 1-</b> Pupils will be assessed on their understanding of the design brief, task analysis and design specification.	<b>Assessment 2</b> – Baseline assessment on topics learnt. This will 'test' student's knowledge and understanding gained from this half term.  <b>Assessment 3</b> – Practical assessment – graded on their practical work.	<b>Assessment 1</b> – Students will be assessed on their design development.	<b>Assessment 2</b> – Practical assessment – Pupils will be graded on the decorative techniques and manufacturing of their 'bag for life'.  <b>Assessment 3</b> - Baseline assessment on topics learnt. This will 'test' student's knowledge and understanding gained from this half term.	



## HOME LEARNING

### READING, WRITING, TALK, NUMERACY

### TIER 2 VOCABULARY

<p>Research – mood board Existing products</p>	<p>Joints worksheet</p>	<p>Research – mood board Product analysis</p>	<p>Decorative techniques</p>
<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>Break down the design brief and key words</li> <li>Learn the properties of materials and their advantages and disadvantages</li> <li>Ask questions</li> <li>Retrieval questions</li> </ul> <p><b>Writing:</b></p> <ul style="list-style-type: none"> <li>Skills will be developed in identify key words and their definition.</li> <li>Identifying pieces of equipment and their health and safety rules.</li> <li>They will carry out a task analysis outlining materials, components, research, equipment, target market and theme. They will undertake a design specification using ACCESSFM.</li> </ul> <p><b>Oracy:</b> Students will focus on their cognitive skill of clarifying and summarising. Continue to develop pace and clarity when they are asked to repeat key words and their definitions as well as retrieve prior learning to answer questions on health and safety in the workshop.</p> <p><b>Numeracy:</b> Students will learn about angles and use a try square and ruler to accurately mark out their finger joints for their box.</p>	<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>Identifying the quality control checks that can be carried out on their practical work</li> <li>Identify the different joining techniques and their advantages and disadvantages</li> </ul> <p><b>Writing</b></p> <ul style="list-style-type: none"> <li>Identify ways in which they can apply quality control checks on their practical work.</li> <li>Pupils will annotate their design ideas and complete an evaluation on their box.</li> <li>Identifying the manufacturing process, what they did well at and how they could improve their box/finger joints.</li> </ul> <p><b>Oracy:</b> Students will develop their Linguistic skills further with a focus on using appropriate vocabulary linked to the manufacturing of their box.</p> <p><b>Numeracy:</b> Students will measure out their dividers for their box using a mettle ruler and try square to determine their waste.</p>	<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>Break down the design brief and identify key words</li> <li>Identify their target market and their needs and wants from their product</li> <li>Learn new vocabulary</li> <li>Carry out research on existing products</li> <li>Retrieval questions</li> <li>Researching and looking at the work of others</li> </ul> <p><b>Writing</b></p> <ul style="list-style-type: none"> <li>Students will identify natural and synthetic fibers.</li> <li>Identify the design brief and keywords.</li> <li>Creating their own design specification.</li> <li>Researching the work of others.</li> <li>Annotating</li> </ul> <p><b>Oracy:</b> Students will develop their Linguistic skills with a focus on using appropriate vocabulary linked to the new decorative techniques.</p> <p><b>Numeracy:</b> Students will need to add a 1.5cm seam allowance to their bag for life to ensure an accurate, functional bag is created</p>	<p><b>Reading:</b></p> <ul style="list-style-type: none"> <li>Identify the properties of materials</li> <li>Success criteria</li> <li>Retrieval questions</li> </ul> <p><b>Writing:</b></p> <ul style="list-style-type: none"> <li>Analysing the impact textiles has on the environment.</li> <li>Summarising their findings.</li> <li>Evaluating their final product.</li> </ul> <p><b>Oracy:</b> Students will focus on their social and emotional oracy skills. They will continue to develop their listening and responding skills. They will also work to develop their cognitive skills in particular their clarity and summarising skills.</p> <p><b>Numeracy:</b> Students need to measure handles to ensure they are comfortable and functional.</p>
<ul style="list-style-type: none"> <li>Design</li> <li>Develop</li> <li>Distribute</li> <li>Evaluate</li> <li>Describe</li> <li>Function</li> <li>Environment</li> <li>Assess</li> <li>Annotate</li> </ul>	<ul style="list-style-type: none"> <li>Justify</li> <li>Compare</li> <li>Explain</li> <li>Require</li> <li>Respond</li> <li>Calculate</li> <li>Benefit</li> </ul>	<ul style="list-style-type: none"> <li>Describe</li> <li>Design</li> <li>Develop</li> <li>Illustrate</li> <li>Justify</li> <li>Structure</li> <li>Compare</li> <li>Function</li> </ul>	<ul style="list-style-type: none"> <li>Environment</li> <li>Explain</li> <li>Evaluate</li> <li>Process</li> <li>Research</li> <li>Section</li> <li>Source</li> <li>Specific</li> </ul>



## TIER 3 VOCABULARY

## PSPSMC, BRITISH VALUES AND DIVERSITY

<ul style="list-style-type: none"> <li>• Contrast</li> <li>• Research</li> <li>• Support</li> <li>•</li> </ul>			
<ul style="list-style-type: none"> <li>• Design Brief</li> <li>• Task Analysis</li> <li>• Design specification</li> <li>• Product analysis</li> <li>• Annotation</li> <li>• Properties</li> <li>• CAD CAM (computer aided design/computer aided manufacture)</li> <li>• Components</li> <li>• Finger Joints</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainability</li> <li>• Manufacture boards – plywood</li> <li>• Evaluation</li> <li>• Life cycle</li> </ul>	<ul style="list-style-type: none"> <li>• Design Brief</li> <li>• Task Analysis</li> <li>• Design specification</li> <li>• Product analysis</li> <li>• Annotation</li> <li>• Sustainability</li> <li>• Environmental issues</li> <li>• Hem</li> <li>• Seams</li> <li>• Applique</li> <li>• Stencil Print</li> <li>• Tie-dye</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluation</li> <li>• Bonder web</li> <li>• Fairtrade</li> <li>• 6R's</li> <li>• Products life cycle</li> <li>• Fast fashion</li> </ul>
<p><b>Personal:</b> Students will develop their own personal skills and confidence when working with different tools and equipment in the workshop. Developing various manufacturing processes, research skills and developing CAD CAM skills.</p> <p><b>Social:</b> Students will consider the impact materials and manufacturing processes have on society.</p> <p><b>Physical:</b> The physical properties of manufacture board.</p> <p><b>Moral:</b> Students will study sustainability the environmental impacts of the manufacturing process and the impact materials have on the planet.</p> <p><b>Cultural:</b> Pupils will be given the opportunity to apply decorative finishes that reflect their culture.</p> <p><b>British Values:</b> Students will be able to explore the use of British standards and political correctness when designing and making products and the impact these designs and making controls have on society.</p> <p><b>Diversity:</b> Pupils will look at the life cycle of products. Where the origins of materials come from and the impact that products can have across the world.</p>		<p><b>Personal:</b> Students will develop their own personal skills and confidence when working with different tools and equipment in the workshop. Developing various manufacturing processes and research skills.</p> <p><b>Social:</b> Students will consider the impact materials and manufacturing processes have on society.</p> <p><b>Social:</b> Students will study fast fashion and the impact it has on society.</p> <p><b>Physical:</b> The physical properties of synthetic and natural fibers.</p> <p><b>Moral:</b> Students will study sustainability the environmental impacts of the manufacturing process and the impact materials have on the planet.</p> <p><b>Cultural:</b> Pupils will carry out research into how different cultures battle climate change and how fast fashion waste can impact others.</p> <p><b>British Values:</b> Consideration of other students' beliefs and values, work in an environment based on mutual respect- including teamwork.</p> <p><b>Diversity:</b> Pupils will research what environmental impact products have across the world and the effects fast fashion has on third world countries.</p>	