



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 7

RATIONAL / NARRATIVE

Design Technology – Resistant Materials

Students will be taught the knowledge, understanding and skills needed to design and develop their own product using a variety of materials. Pupils will develop designs that are innovative, functional and appealing. They will work with a range of hand tools and electrical equipment to help manufacture a high quality ‘phone stand, keyring and fridge magnet’.

Design Technology – Textiles

Students will explore the work of others to help inspire them to come up with a unique product of their own. This will help them to developing their learning, understanding and expertise of the design and making process in Textiles. They will use specialist tools, techniques and processes to manufacture a decorative, functional cushion

TERM KNOWLEDGE

TERM 1

Resistant Materials – Making a phone stand.
Students will develop their knowledge and understanding of health and safety when working in the workshop.
Students will develop knowledge on the design process, task analysis, and specification. They will develop their design development using a variety of drawing techniques, including 1 point and 2-point perspective drawing.
Introduction to joints and the development of their practical skills in the construction of a phone stand.

TERM 2

Students will develop knowledge on the properties of materials and their origins, looking specifically at timbers and polymers. Students will continue to develop practical outcomes with a focus on cutting, shaping, and finishing of acrylic.
Introduction to CAD/CAM (computer aided design and manufacture).
Students will research the work of other designers to inspire their own work in response to a brief. They then use a CAD programme to develop their design for a fridge magnet which is then manufactured using the laser cutter and finished by hand.

TERM 1

Textiles – Making a cushion.
Students will develop their knowledge and understanding of health and safety when working in a textiles room.
Students will build knowledge on the design process, task analysis, specification and research.
Students will then develop a design that fulfils the design brief before sampling a range of possible techniques to use in the manufacture process.

TERM 2

They will develop skills using specialist tools, techniques, processes and equipment to create seams, hems and patterns to construct the cushion cover independently.
Students will add decoration to their cushion cover using a variety of skills including block print, applique and fabric pens.
Students will evaluate and test their product.

SKILLS

Theoretical skills:

- The breakdown of the design brief, task analysis and design specification
- Annotation of designs
- Identifying the properties of material and their origins
- Evaluation of the practical, identifying the positives, negatives, and outcome
- Practical skills.
- 1-point and 2-point perspective drawing techniques to develop their design ideas
- Working with hand tools; coping and tenon saw, hammers, vice, and files
- Using electrical equipment such as the hengner saw and pillar drill
- Developing skills working with files and the belt sander
- Shaping pine wood with the belt sander and files.
- Shaping of acrylic to create a keyring
- Applying quality control checks to their practical
- Working with components such keyrings and magnets

Theoretical skills:

- Researching the work of others
 - Research into existing products
 - Understanding how to annotate designs
 - Identifying fabrics, seams, hems and decorative techniques
 - Evaluation of the practical, identifying the positives, negatives, and outcome
 - Design and development, shading, and rendering
 - Setting up to sewing machines
 - Working with electrical and hand tools; sewing machine, irons, needles
 - Developing decorative techniques; applique, tie-dye, fabric pens and transfer print
 - Carrying out construction techniques; seams, hems and patch work
 - Applying quality control checks to their practical
- Other skills students will develop:
- How to work in a safe environment



ASSESSMENT

HOME LEARNING

READING, WRITING, TALK, NUMERACY

<p>Other Skills students will develop are:</p> <ul style="list-style-type: none"> • Quality Control • Time Management • Teamwork • Organization • How to prepare themselves and their area for a practical • Initiative and independence 		<ul style="list-style-type: none"> • Teamwork • Organization • Time management 	
<p>Marking Point 1: Design brief and Task analysis – Students will be marked on their breakdown of the brief and how well they have analysed the task.</p>	<p>Marking Point 2: Students will be assessed on their practical skills -both acrylic and wood and their use of electrical and hand tools and equipment.</p> <p>Progress Test – Spring 1</p>	<p>Marking Point 1: Design Brief and Task Analysis - Students will break down the key words from the design brief and analyse the task at hand.</p> <p>Marking Point 2: Decretive techniques - Students will be assess on their practical samples – fabric pens, appliqué and hand embroidery.</p>	<p>Progress Test –Summer 2</p>
<p>Health and safety poster Mood board</p>	<p>Timber work task Polymers poster</p>	<p>Textiles health and safety factsheet Mood board</p>	<p>Product analysis</p>
<p>Reading:</p> <ul style="list-style-type: none"> • Break down the design brief and identify the key words • Retrieval questions on prior learning • Identifying the health and safety rules for each piece of equipment • Research the work of others to help influence their design and manufacturing processes • Identify the properties of timber <p>Writing:</p> <ul style="list-style-type: none"> • Students will be expected to write down the design brief and task analysis outlining materials, components, research, equipment, target market and theme. • They will undertake a design specification using ACCESSFM. • Pupils will annotate their design ideas. • Explaining the properties of materials and the impact they have on the environment. <p>Oracy:</p>	<p>Reading:</p> <ul style="list-style-type: none"> • Learn new vocabulary and key words • Identify the properties plastic • The name of the equipment and their uses • Understand the term sustainability and the impact timber and polymers have on our environment <p>Writing:</p> <ul style="list-style-type: none"> • Pupils will be expected to identify key words and their definition. • Write an evaluation on their products. Identifying the manufacturing process, what they did well at and ways in which they could improve. <p>Oracy:</p> <p>Students will focus on developing their linguistic skills by ensuring that they use appropriate vocabulary when engaging in discussion around the manufacturing processes and quality control. They will also develop further their social and emotional skills by working on their listening and responding skills</p>	<p>Reading:</p> <ul style="list-style-type: none"> • Identifying the health and safety of the textile workroom and any hazards they need to be aware of • Break down the design scenario and identify the key words • Learn new vocabulary and their definition • Identifying what a detailed specification looks like in order to complete their own. <p>Writing</p> <ul style="list-style-type: none"> • Students will be expected to write down the design brief and task analysis outlining materials, decretive techniques, equipment and target market. • Pupils will identify key words and their definition. • Annotate decretive techniques and samples in their book. <p>Oracy:</p> <p>Students will focus on developing their linguistic skills (vocabulary) and Social & Emotional (Listening and Responding).</p>	<p>Reading:</p> <ul style="list-style-type: none"> • Identifying product analysis • Retrieval questions • Properties of materials. <p>Writing:</p> <ul style="list-style-type: none"> • Pupils will annotate their design ideas. • Explaining the properties of materials and the impact they have on the environment. • Samples of decretive techniques will be annotated. • Pupils will have to complete a detailed evaluation of their final product. Identifying what they have done well at and areas of improvements. <p>Oracy:</p> <p>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</p>



TIER 2 VOCABULARY

TIER 3 VOCABULARY

PSPSMC, BRITISH VALUES AND DIVERSITY

<p>Students will develop their physical and cognitive oracy skills. Pupils will develop pace and clarity when they are asked to repeat key words and their definitions.</p> <p>Numeracy: Students will learn how to measure in mm. Converting cm into mm.</p>	<p>throughout practical. They will develop their cognitive skills in particular their clarity and summarising skills.</p> <p>Numeracy: Students will learn scale. Drawing to scale. Marking out and measuring their phone stand.</p>	<p>Students will develop their physical and cognitive oracy skills. Pupils will develop pace and clarity when they are asked to repeat key words and their definitions.</p> <p>Numeracy: Students will learn how to add 1.5cm seam allowance to their patchwork cushion to ensure an accurate cushion is made.</p>	<p>particular their clarity and summarising skills.</p> <p>Numeracy: Students will work out the costing of materials.</p>
<ul style="list-style-type: none"> • Asses • Annotate • Complete • Context • Create • Develop • Design • Explain • Specific 	<ul style="list-style-type: none"> • Evaluate • Evident • Explain • Compare • Consider • Apply 	<ul style="list-style-type: none"> • Analyse • Annotate • Contrast • Create • Design • Develop • Research 	<ul style="list-style-type: none"> • Evaluate • Explain • Evident • Find • Respond • Process
<ul style="list-style-type: none"> • Design Brief • Inclusive • Task Analysis • Design specification • Evaluation • Annotation • Properties • Timbers • Felling • Deciduous • Sustainability 	<ul style="list-style-type: none"> • Hardwood, softwood, and manufactured board • Polymers • Thermoset • Thermoplastic • Quality control 	<ul style="list-style-type: none"> • Design Brief • Task Analysis • Design specification • Annotation • Product analysis • Synthetic • Non synthetic • Applique 	<ul style="list-style-type: none"> • Seam • Hem • Tie-dye • Block print • Natural • Synthetic • Evaluation
<p>Personal: Students will develop their own personal skills and confidence when working with different tools and equipment in the workshop. Job roles and skills required in varying design technology related industries.</p> <p>Social: Students will consider the impact materials and manufacturing processes have on society.</p> <p>Physical: The physical properties of polymers and timber.</p> <p>Moral: Students will be encouraged to design a product that considers the moral responsibility of its clients. For example, students should consider the safety of their potential user when using their product.</p> <p>Cultural: Pupils will be given the opportunity to design a dectrive feature for their phone stand that represents their culture.</p> <p>British Values: Consideration of other students' beliefs and values, work in an environment based on mutual respect- including teamwork.</p> <p>Diversity: Pupils will design and make an inclusive mobile phone stand. Their keyrings will celebrate diversity and their magnets will celebrate different cultures.</p>		<p>Personal: Students will develop their own personal skills and confidence when working with different equipment in the textiles room. Job roles and skills required in varying design technology related industries.</p> <p>Social: Students will consider the impact materials and manufacturing processes have on society.</p> <p>Physical: The physical properties of natural and synthetic materials.</p> <p>Moral: Students will study how the increase in population has effected the textiles industry's pollution, which is one of the significant polluters with a considerable carbon footprint.</p> <p>Cultural: Pupils will be encouraged to use inspiration from different cultures, using patterns, colours and textures to add dectrive features to their cushion</p> <p>British Values: Consideration other students' beliefs and values, work in an environment based on mutual respect- including teamwork.</p> <p>Diversity: Students are encouraged to celebrate and explore a variety of different cultures. This will be reflected in the students designs and products.</p>	