



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 9	
RATIONAL / NARRATIVE	The Year 9 Design Technology curriculum is designed to develop the resilience and independent learning abilities of our students as well as building on prior knowledge. It continues to provide them with an enhanced knowledge of the different specialist areas of Design Technology including Textiles, Graphics and Resistant Materials. The curriculum is designed to build Students' confidence in how to work through the design and make process, using a wide variety of materials, tools, techniques, and equipment.	
TERM KNOWLEDGE SKILLS ASSESSMENT HOME LEARNING READING, WRITING, TALK, NUMERACY	HALF TERM 1 HALF TERM 2	
	During this project, Students will develop their knowledge and understanding of health and safety when working in the workshop. They will develop skills in generating initial and developed ideas using 3D drawing techniques. They will learn about electronics and how electronic components are combined to make working circuits. They will develop their knowledge on sustainable design and linkages.	During this project, Students will develop their knowledge of Textile designers and use this to inspire their fabric print to create an iPad/phone holder. They will develop their knowledge on creating patterns and consideration towards seam allowances. Through a range of hand and machine-based techniques, they will learn how to assemble a high-end product.
	<p>Design investigation skills: Students will learn how to use their research on biomimicry, materials, and electronic components to develop an upcycled, adjustable lamp. They will learn the importance of using a range of research to aid design.</p> <p>Practical skills Pupils will develop skills in the workshop using traditional workshop tools to create the base of the lamp. They will further develop their electronics-based skills as they work with a circuit component to form a light. They will use a upcycled tin/container for the lamp shade. They will learn how to combine a range of materials and components successfully to create a working lamp.</p>	<p>Design investigation skills Students will use a theme to develop a iPad/phone holder suitable for the client. They will develop their knowledge on Textiles materials and their properties. Plan out patterns in order to construct a 3D outcome and develop their knowledge on decorative techniques.</p> <p>Practical skills Students will develop their accuracy of hand and machine stitching using applique, develop transfer printing skills and use of fabric pens and paint to add decorative features to their product. They will learn how to combine both hand and machine sewing to create a successful product independently, safely and accurately.</p>
	<p>Assessment 1 – Students will be assessed on their design development.</p> <p>Assessment 2 – Practical assessment – Pupils will be graded on their lamp.</p>	<p>Assessment 1 – Students will be assessed on their design brief, task analysis and design specification</p> <p>Assessment 2 – Practical assessment – Pupils will be graded on the decorative techniques and manufacturing of their iPad/phone holder</p>
	Mood board Product analysis	Artist Analysis Product analysis
	<p>Reading: Strategies that students will use during the course of the rotation are as follows:</p> <ul style="list-style-type: none"> • Break down information • Learn new vocabulary • Design brief and design specification • Product analysis • Reading questions • Retrieval questions <p>Writing skills will be developed in lessons and through home learning. There will be a focused opportunity for extended writing tasks. Pupils will use annotation to help explain their design ideas and carry out a detailed evaluation of their product.</p>	<p>Reading: Strategies that students will use during the course of the rotation are as follows:</p> <ul style="list-style-type: none"> • Break down information • Learn new vocabulary • Design brief and design specification • Product analysis • Ask questions • Retrieval questions <p>Writing skills will be developed in lesson and through home learning. There will be focused opportunity for extended writing tasks.</p>



TIER 2 VOCABULARY

TIER 3 VOCABULARY

Oracy: Students will develop their physical and cognitive oracy skills. Students will develop pace and clarity when talking through their practical work. Pupils will be encouraged to use subject specific language relating to the current topic.

Numeracy:

Students need to ensure the weight ratio of their adjustable lamp is even. Ensuring the lamp is fully functional and doesn't tip over. Students will need to measure and work out the centre points for dowel joints.

- Draw
- Comment
- Debate
- Apply
- Context
- Process
- Explain
- Evaluate
- Discuss
- Identify
- Justify
- Outline
- Method
- Source
- Structure
- Specify
- Summarise
- Benefit
- Sustainable

- Input
- Output
- Template
- Process
- Resistor
- LED (light emitting diode)
- Thermistor
- Circuit
- Soldering
- Tolerance
- Quality control
- Linkages
- Manufacturing plan
- Stock form
- Sustainability

Students will explain the impact the textiles industry is having on the planet. Pupils will use annotation to help explain their design ideas and complete evaluations on their practical work.

Oracy: Students will develop their physical and cognitive oracy skills. Students will develop pace and clarity when talking through their practical work. Pupils will focus on developing their linguistic skills by ensure that they use appropriate vocabulary when engaging in discussion around the topic.

Numeracy: Creating a pattern for the bean bag phone/iPad holder. Students need to ensure the correct measurements are given and 1.5cm seam allowance is incorporated.

- Section
- Research
- Outline
- Method
- Environment
- Illustrate
- Develop
- Draw
- Process
- Select
- Summarise
- Apply
- Available
- Analyse
- Choose
- Concept
- Consider

- Seam allowance
- Pattern
- Quality control
- Synthetic fibers
- Natural fibers
- Cotton
- Nylon
- Sustainability
- Specification
- Evaluation
- Task analysis
- Design brief



PSPSMC, BRITISH VALUES AND DIVERSITY

Personal: During the first term of year 9 students will be establishing routines for work and expectations in the classrooms and workshops environment. Technology subjects will make effective use of employability skills throughout the methods of learning and application of learning. Students will build their confidence and resiliency both within theory and practical lessons.

Social: Links will be made through looking at the social impact of designs and working with materials and products.

Physical: Student's physical wellbeing will be utilised by engagement with practical activities. They will explore the implications of working with specific materials.

Moral: Students will be taught the moral implications of working with tools and equipment and materials, and the choices consumers and manufacturers make.

Cultural: Students will have access to cultural awareness in relation to the design, promotion and manufacturing of product.

British Values: 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.

Diversity: Pupils will research ways to reduce a product's impact on our climate, conserve natural resources and promote social equality. By looking at ways a product can impact climate change across the world.

Personal: During the first term of year 9 students will be establishing routines for work and expectations in the classrooms and workshops environment. Technology subjects will make effective use of employability skills throughout the methods of learning and application of learning. Students will build their confidence and resiliency both within theory and practical lessons.

Social: Links will be made through looking at the social impact of designs and working with materials and products.

Physical: Student's physical wellbeing will be utilised by engagement with practical activities. They will explore the implications of working with specific materials.

Moral: Students will be taught the moral implications of working with tools and equipment and materials, and the choices consumers and manufacturers make.

Cultural: Students will have access to cultural awareness in relation to the design, promotion and manufacturing of product.

British Values: Students will have access to cultural awareness in relation to the design, promotion and manufacturing of product.

Diversity: Students will research a range of Textile Designers from different backgrounds and culture and identify how they have made an impact on the Textile industry.