

D&T - Textiles

Year 9

Curriculum



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ACADEMY

ASPIRE – ENDEAVOUR - SUCCEED

Purpose

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising, and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- 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.

Threshold concepts

The Design Process

- Analyse - Research purposefully: Using a range of sources showing selectivity and analytical skill.
- Design - Visual Communication: Demonstrate innovation and creativity in response to a client's need/problem, using a range of 2D and 3D techniques.
- Make - Safe working Practice: Select and use tools and equipment safely and accurately in order to manufacture a high-quality prototype that demonstrates a range of skills.
- Evaluate - Critical Reflection: Demonstrate the ability to reflect critically throughout the design process showing an understanding for modification and improvement.
- Technical Knowledge
- Impact on Society: Understand developments in Design and Technology, their ecological and social footprint with an awareness of the impact on society.
- ACCEESSFMM
- These threshold concepts appear repeatedly throughout the curriculum.

Sequence of learning

In line with the faculty guidance students will begin the project with the design process. This provides consistency and helps student link the wider areas of faculty and hopefully allow them to transfer knowledge between faculty

areas more easily. Students will also be tested on Word Power in the first lesson to ascertain their current knowledge and understanding of key terms. Students will then be reminded of ACCEESSFMM and introduced the foci words of ACCEESSFMM for the project so that students now what to expect a deeper insight into during the project.

TEXTILE TECHNIQUES MINI PROJECT

Firstly, students will engage in a short textile technique print project lasting 8 lessons. Students will gain knowledge and understanding into each textile technique (Batik, Tie Dye, Marbling and Block Print) the origins of each technique and how to apply successfully, before applying knowledge into their own sample which will then allow all students to create a A3 sample board complete with key information and samples. Due to limitations with practical work during home learning this ensures students have covered content that would have been taught in Yr7/8. Students will also gain knowledge into natural and synthetic fibres allowing them to successfully choose the correct material to use for each sample dependent on the dyes/ technique, a short recap of biomimicry (From Yr 7) will be the first thing the students will engage in, students will create 4 mini pattern designs based on this which will influence their technique sampling.

Next students will be given a lesson surrounding the project brief, outlining key elements in which students will participate in this term. The brief will be thoroughly explored, giving students time to jot down initial design ideas. Students will successfully analyse existing products on the market using ACCEESSFMM key words as part of the market research task. Other textile artists will also be explored giving students insight to industry links. This lesson will also give a taster into logo design colour theory and how this is important in branding and marketing.

Paper Fashion

Students will then have a design-based project to complete throughout the rest of the term. Students will be introduced to key designers such as Alexander McQueen, Vivienne Westwood, Vera Wang and many more to influence the designing process.

Key fabric / paper manipulation techniques will be revisited and applied to form a fashion/ costume design-based outcome. Students will be able to understand the transition from paper to fabric and apply throughout.

Textile equipment will again be revisited with time for students to recap on prior knowledge, building on skill set creating a sample of embroidery stitches that can be used throughout the project.

Team building will be a major part to this project, allowing students to work in teams of 2-3 to create a collection of designs and one final outcome – taking elements from each individuals designs. Tailored tutorials will take place for each group, differentiating appropriately to challenge higher attaining students with support materials in place for set students/ groups.

Subject Knowledge	Procedural Knowledge
<p>Design is a process that is cyclical/iterative</p> <p>Careers/Employment in the industry are explicitly linked to all or some aspects of the design process.</p> <p>Different careers focus on key areas of the design process and require different skill sets. (To be updated 2022/2023)</p> <p>Term 1: Costume Designers - Film Term 2: Food Nutritionist Term 3: Electrician</p>	<p>Identify attributes and characteristics of different job roles.</p> <p>Understand the design process, the influence and inspiration.</p> <p>Explain how the design process is linked to the DP.</p>
<p>The order of the design process</p>	<p>Create a quality product following a production process.</p>

<p>What the acronym ACCEESSFMM stands for.</p> <p>A – Aesthetics - The appearance of a product C – Cost - The money paid to cover materials, equipment, labour, buildings and services so a product can be manufactured C – Customer - A single person or a target market group that a product or service is aimed at. E – Environment - The positive or negative impact a product may have on the environment. Including the materials and energy used for manufacturing. E – Ergonomics - the process of designing or arranging workplaces, products and systems so that they fit the people who use them. Body measurement data is used. (Anthropometrics) S – Safety - How safe a product is to manufacture and use S – Size - The physical dimension and measurement of a product and how appropriate it is for the user. F – Function - What a product does and how it works M – Manufacture - Techniques and processes used to manufacture/make a product. M – Materials - A resource used to manufacture a product.</p>	<p>Understand costing, how much it costs to make, (Lay plans) the profit and how product costs change depending on brand/ target market.</p> <p>Manufacture final product and understand the different manufacturing processes used in industry.</p> <p>Understand the different types of manufacture and production used in industry – such as mass, batch and one off. (Linking to other subject areas of DT)</p>
<p>C – Cost - The money paid to cover materials, equipment, labour, buildings and services so a product can be manufactured E – Environment - The positive or negative impact a product may have on the environment. Including the materials and energy used for manufacturing. S – Safety - How safe a product is to manufacture and use</p>	<p>Differentiate the quality of different brands and be able to compare them for advantages and disadvantages.</p> <p>Understand the costing of products including set budgets and how this effects the design / manufacturing process.</p>
<p>What is fibre? Recall Fibres are very fine, hair-like structures that are spun or twisted into yarns. There are 3 different types of fibres (synthetic, natural and regenerated). The names of natural fibres and their properties (cotton, linen, silk and wool) The names of synthetic fibres and their properties (polyester, nylon and acrylic) Fibres are turned into thread by pulling and spinning them together. They can then be turned into fabric using an industrial loom. The 2 directions a thread will travel in made into a fabric (warp = up and down, weft = left and right) Fabrics are woven, knitted or bonded (non-woven) and how this happens. The differences between a fibre and a fabric.</p> <p>M – Materials - A resource used to manufacture a product.</p>	<p>Choose fabrics according to their properties. Understand the advantages and disadvantages.</p> <p>Understand and give examples of properties and characteristics of each fibre.</p> <p>Specifically focusing on two types of fibres</p> <ul style="list-style-type: none"> - Natural - Synthetic
<p>Print Skill Mini Project Other methods of surface decoration will be explored in the mini technique project, allowing students to utilise methods in future projects.</p> <ul style="list-style-type: none"> • Tie dye 	<p>Understand each textile technique, the origins and how they have developed to the modern era.</p>

<ul style="list-style-type: none"> • Block printing • Embroidery • Applique • Batik 	<p>Create a A3 design board of each sample, including hand drawn pattern designs and garment designs – linking to the wider project (Paper Fashion).</p> <p>Understand the equipment used for each technique, compare and contrast methods for each by analysing examples from both past and present time.</p> <p>Choose fabrics according to their properties. Create samples on both natural and synthetic fabrics to understand the differences between them both. (Textile Mini Project). Students will be able to differentiate between material fibres, successfully selecting the best material to use.</p>
<p>Which ACCEESSFMM points are specific to this unit of work and know their individual definitions</p> <ul style="list-style-type: none"> - Aesthetics -Customer -Cost -Environment -Safety -Materials 	<p>Describe products in relation to these words/definitions. (Product analysis) Use the ACCEESSFM to build on textile vocabulary knowledge.</p> <p>Understand the definitions to each word and how this relates to the project brief/ specification.</p>
<p>Textile Equipment & H&S</p> <p>Many styles of equipment are used in textiles depending on the product you intend to make. Focus will be on equipment such as:</p> <ul style="list-style-type: none"> • Fabric scissors • Sewing machine • Stitch unpicker • Needle • Thread • Pins • Pinking Shears <p>Iron Equipment (Cutting Tools Recap)</p> <ul style="list-style-type: none"> • Steel Rule • Perforating tool • Creasing machine • Craft knife • Scalpel • Creasing tool • Drawing aids • Paper sheers • Rotary cutting heel • Paper trimmer • Cutting mat <p>Recall of the sewing machine, a machine with a mechanically driven needle for sewing or stitching fabric. There are main parts to the sewing machine which they will use</p> <ol style="list-style-type: none"> 1. Thread up 	<p>Students will recap on equipment, understand the main uses for each.</p> <p>Students will be using equipment to construct final paper fashion garment and must be aware of the health and safety involved in using certain equipment to ensure safe practice.</p> <p>Students will recap on equipment used last term to build and imbed on prior knowledge. Looking at various images to identify the name and use of each tool.</p> <p>Set up the sewing machine effectively and safely.</p> <p>Students will have a recap into the sewing machine, with time to recap on prior knowledge building on</p>

<p>Fashion Vocabulary –</p> <ul style="list-style-type: none"> • Haute couture. This term is French for high sewing or high dressmaking and often refers to exclusive designer creations. • Extravagant • Ensemble. • Silhouette. • Off-the-rack. • Hemline. <p>Correct fashion Terminology – (Dress Focus)</p> <ul style="list-style-type: none"> • A line • Mermaid • Maxi • Midi 	<p>Students will explore new vocabulary based around the fashion industry allowing them to annotate work correctly.</p> <p>Students must be aware of the correct names used for specific items of clothing.</p>
<p>Design</p> <p>Designs are developed using an iterative process The iterative design process is a continuous cycle where improvements can be made.</p> <p>Complete the following design stages</p> <ul style="list-style-type: none"> - Mind Map (Initial Ideas) - Rough Design Page - X2 Design Developments - X1 final design (A3 folding board) 	<p>Develop ideas through specification and feedback Challenge their design ideas to improve them.</p> <p>Students will design a range of designs to take to the group meeting.</p> <p>Annotation and correct fashion terminology will be used to annotate all design work.</p> <p>Group work tutorials with each student using an element of design to create a final design.</p> <p>Apply the ACCEESSFM terminology in several aspects of the design process i.e. product analysis, specification and initial design annotations.</p>
<p>Working Drawings</p> <p>A technical drawing is the fashion industry equivalent to a blueprint, it shows the factory or pattern cutter the shape of the garment when laid flat, without any artistic flare or stylisation. ... Most of the time, only a front and back drawing is required, but on some occasions an internal view might be needed</p>	<p>Students will make the clear link between fashion technical drawings and a curriculum link – CAD</p> <p>Students will understand the importance of these drawings and have a go at creating their own for their final design garment.</p>
<p>A product must be assembled in a particular order for it to be made to be manufactured correctly.</p> <ul style="list-style-type: none"> - Group Final Design - Use of multiple paper manipulation techniques - Use life size mannequin to display final work. 	<p>Put a product together in the correct order and make a quality product – using a range of techniques.</p>
<p>Curriculum links to careers</p> <p>Unit: All – Lesson completed at beginning of each term/rotation.</p> <p>Term 1: Costume Designers - Film</p> <p>Term 2: Food Nutritionist</p> <p>Term 3: Electrician</p> <p>Links: How careers across the industry link with the design process. Looking at the daily roles of specific people/careers and how their job is reliant on the iterative design process, an integral part of each project students’ study in the rotation of D&T, textiles and food.</p>	

Outcome: Students identify links and explain how the employees work individually or as a team to meet the needs of the consumer/target market. Listing skills required for the role.