Curriculum overview: Textiles

Content studied during Key Stage 2		
▪ Understand a range of both natural and synthetic fibres and their properties ▪ Understand how both synthetic and natural fabric is made ▪ Understand textiles impact on the environment ▪ Recognise ways of reducing textile's impact on the environment using an sustainable approach ▪ Understand how textiles engineering is used in many aspects of society ▪ Recognise the difference between a drawing and a design ▪ Understand how modern technology is used to produce textile products ▪ Demonstrate safe practices when using equipment. ▪ Demonstrate working in a safe manner ▪ Recognise what techniques will be appropriate in order to produce a product based on their designs. ▪ Demonstrate how computer aided design can be used and benefit work.		
Key skills/content requirements at GCSE		
• The impact of new and emerging technologies • Generation of energy • Modern and smart materials • Functions of mechanical devices and forces • Electronic systems • Programmable components	• Types of metals • Types of papers and boards • Types of plastics • Types of fabrics and fibres • Types of timbers and manufactured boards • Environmental issues • Past and present designers	• Develop and communicate design ideas • Textiles manufacturing • Specialist textiles equipment • Surface decoration

Year 7	**Year 8**
Core aim **10-14 week rotation** For students to understand how fabric is sourced from both natural and synthetic fibres and how that effects their properties. Students are to be taught about Textiles negative impact on the	**Core aim** **10-14 week rotation** For students to understand the technology and engineering benefits of Textiles in society. Students will learn about smart and modern materials and how they are used. Students will learn about the new technologies that make textile products

environment and the importance of sustainable solutions to improve the future **Knowledge** ▪ To be able to explain the 4 Rs of sustainability & upcycling and how they benefit the environment ▪ To be able to identify a range of natural and synthetic fabrics and their properties ▪ To be able to explain how natural and synthetic fibres are sourced and made in to fabric ▪ To be able to explain why synthetic fibres are bad for the environment ▪ To be able to explain the environmental damage of cotton production ▪ To be able to identify different textiles/ fashion designers past and present. **Practical skills** ▪ How to safely operate a sewing machine ▪ How to thread a needle and know thread ▪ Basic hand embroidery – running, back and cross ▪ Applique ▪ Resistant dyeing methods: tie-dye & stencil	**Knowledge** ▪ To be able to explain how modern textiles enhance lives ▪ To be able to identify how current designers use technology to enhance their designs ▪ To be able to explain why designers create and evolve designs. ▪ To be able to identity a range of modern and smart materials and explain how they work ▪ To be able to explain the importance of CAD and CAM in the textiles industry ▪ To be able to explain how technologies enhance production within the textiles industry ▪ To be able to develop and use different ways to communicate design ideas. **Practical skills** ▪ How to use CAD to enhance designs in DT ▪ How to attach a button, sequences ▪ Resistant dyeing methods: Batik ▪ How to create and use lino printing

	Term 1	**Term 2**	**Term 3**	**Portable knowledge**	**Keywords**
Year 9	Natural, synthetic and regenerated fibres (recap and extension of knowledge). Physical characteristics and working properties of fabrics. Industry production – types of production, methods used in production	Make a product constructing their own fabric - Inspired by a fashion designer – alexander McQueen, Vivienne Westwood Fabric construction – woven, knitting and non-woven link to how fibres are made	Garment – baseball cap Pattern cutting - link to industry methods Link to construction techniques Recycling project – cushion How to design/ what a designer needs to consider	From KS3 in to year 9 Fibres yarns and fabrics Introduction to natural, synthetic and regenerated fibres Basic fabric construction	Fibres Yarn Thread Fabric Construction Garment Press Tack Design Analysis Evaluate

	Samples of construction techniques Production line – bookmark	Woven - Pile and satin fabric Non-woven - Vilene fabric Accessory production Smart & modern materials Technical textiles Technology used in fashion - Iris van Herpen, Suzanne Lee, Rafael Rozenkranz CAD – link with production 2D Design – laser cutter	Social factors, Manufacturing factors, Cost factors, Culture and ethical factors, Availability factor Trend forecasting Ecological footprint/ 6 Rs of sustainability & upcycling Impact of farming and material production on communities and wildlife Patchwork Screen printing Sublimation printing	Smart and modern materials Properties of natural fibres Environmental issues Practical Applique Pinning/ tacking Operating a sewing machine Hand embroidery	Factors Production Abrasion Elasticity Absorbent Insulation
Year 10	1.5.1 types of movement **1.5 mechanical devices** 1.15 product based on specification 6.4.1 & 2 forces of fabrics – link to properties of fabric and fabric construction Contextual challenge Research: Theme: Going travelling Link to different ways to present a design **1.9 paper & board** 6.3.1 aesthetic factors – link to designs 1.2.2 evaluating designs	**1.6 electronic system** 1.2.1 evaluating new & emerging tech 1.4.1 modern & smart materials – link to polymers & metals 6.8.1 smart materials Flow charts E- Textiles Contextual challenge Making: 1.14 environment – link to emerging tech Sustainability **1.3 energy** 6.2.8 social footprint 6.2.9 ecological footprint 6.6.1 shaping material	1.14 environment – link to emerging tech Sustainability **1.3 energy** 6.2.8 social footprint 6.2.9 ecological footprint 6.6.1 shaping material Contextual challenge Evaluate **6.3.3** availability factors Environmental factors Cost factors Social factors Cultural & ethical factors Different designers and companies 1.1.1 Industry – link production 1.1.2 enterprise	Production CAD/CAM Environmental issues Factors which affect the textiles industry Basic fabric construction Resistant dyeing Printing methods How technology is used in the textiles industry A range of fabric construction and their properties	Mechanical Electronic Evaluate Analysis Ecological Construction Prototype Sustainability Malleable Ductile Tough Hard

	1.16 different design strategies Contextual challenge Design: Theme: primary school	Contextual challenge Evaluate	1.1.4 People 1.1.5 Culture 1.1.6 society Contextual challenge: research introduction		
Year 11	Contextual challenge: design develop/ final design Start making their prototypes, produce a diary of making the prototype Exam paper practise, How to plan for answering an exam question Design development **Contextual challenge:** making Start making their prototypes, produce a diary of making the prototype Manufacture	**Contextual challenge: make** Exam paper practise, How to plan for answering an exam question Complete final design . Manufacture Evaluation	Revision for textiles paper exam Exam questions, recapping on 9, 10 & 11 Revision for core paper exam Exam questions, recapping on 9, 10 & 11	Basics of polymers Basics of metals Basics of timbers Basics of paper and card Basics of gears and levers Energy and the responsibility of the designer Practise of contextual challenge	Research Analysis Design development Prototype Evaluation Critical thinking Problem solving Manufacture

GCSE external assessment:

Design & Technology GCSE (9-1) with a specialism in Textiles

- Controlled assessment - 50% of final grade to be started in Summer of Year 10,
- Written examination worth 50% of the final grade to be sat at the end of Year 11.

SMSC in D&T Textiles

In design technology social, moral, spiritual and cultural is developed in a number of ways. We teach our students to think about the impact of their designing and making on the environment, people and the wider world. We teach our students about the importance of the 4 R's and sustainability to encourage them to think about their responsibility as part of the future generation. Students are expected to demonstrate high standards of behaviour and encourage their peers to do the same to develop a sense of social responsibility and respect. Respect and positivity is encouraged through the process of peer evaluation of each other's work. Within lessons we encourage students to take and give criticism positively and to verbally explain their thoughts in a respectful and positive way. We encourage students to take chances within their work taking inspiration from the wider world and enjoying the process of developing and manufacturing functioning products which reflect the personality and style of each individual student.

Spiritual development in D&T Textiles

Spiritual development and self-belief is of high importance in design and technology. The creative designing and making process inspires students to bring out their hidden talents, which helps all students with self-confidence and belief in their own abilities. Our students are taught how to investigate products, aesthetic and functional, past and present and examine how they affect the quality of our daily lives. They are encouraged to develop their thinking skills and explore the wider world and use this inspiration when developing their own design ideas

Moral development in D&T Textiles

In design and technology we try to develop a sense of 'moral conscience in our students. We teach students to consider the wider impacts on the environment when designing and making new products, and encourage them to think about their chosen materials and components and whether they are taking into account sustainability and the environmental impact of their design choices. The 3 R's are frequently discussed throughout the designing and making process. Within the lessons pupils are expected to show respect to others and take responsibility for their own actions and encourage others to do the same.

Social development in D&T Textiles

As part of the student's social development within design technology we encourage students to accept responsibility for their behaviour and the safety of others by enforcing clear expectations which in turn provides our students with a safe, secure and structured learning environment. We encourage team and pair work to help build mutual respect and to be accepting of each other's strengths and weaknesses. We encourage our students to take part in self and peer evaluation, which allows students to give their opinions and to give and accept constructive criticism as a way to improve their outcomes.

Cultural development in D&T Textiles

Within design technology students are taught to consider that all their design work should be sensitive to needs and beliefs of different cultural backgrounds or groups of people, ensuring all imagery, text and products produced will not be deemed as being offensive. Students are given opportunities to use the work of artists, designers and inspiration from the wider world and from a wide range of cultures and historical contexts to influence and help develop their own work