

KS4 Long Term Curriculum Plan: Textiles (Year 10)

Curriculum Aim: The GCSE in Design and Technology enables students to understand and apply iterative design processes through which they explore, create and evaluate a range of outcomes. The qualification enables students to use creativity and imagination to design and make prototypes (together with evidence of modelling to develop and prove product concept and function) that solve real and relevant problems, considering their own and others' needs, wants and values. It gives students opportunities to apply knowledge from other disciplines, including mathematics, science, art and design, computing and the humanities.

Link to prior learning: Students will acquire subject knowledge in Design and Technology that builds on Key Stage 3, incorporating knowledge and understanding of different materials and manufacturing processes in order to design and make, with confidence, prototypes in response to issues, needs, problems and opportunities. Students learn how to take design risks, helping them to become resourceful, innovative and enterprising citizens.

Rationale of sequencing: This qualification is linear. Linear means that students will sit their exam and submit their non-exam assessment at the end of the course. Non-exam assessment tasks will be released in Year 10. Practical work will link with non-exam assessment allowing students to demonstrate their knowledge of all areas of learning.

	Focus / Topic	Knowledge & Skills	Assessment
Autumn 1	Core Design and Technology Content <ul style="list-style-type: none"> Mini contextual challenge (Tabard design and make project) 	<ul style="list-style-type: none"> Impact of new and emerging technologies Informing design developments How energy is generated and stored Developments in modern and smart materials, composite materials and technical textiles The functions of mechanical devices used to produce different sorts of movements, including the changing of magnitude and the direction of forces How electronic systems provide functionality to products and processes, including sensors and control devices to respond to a variety of inputs, and devices to produce a range of outputs 	<ul style="list-style-type: none"> Maths formative assessment homework on Google classroom Half Term Test on theory content covered (w/b 17th October 2022)
Autumn 2	Core Design and Technology Content <ul style="list-style-type: none"> Mini contextual challenge (Tabard design and make project) 	<ul style="list-style-type: none"> The use of programmable components The categorisation of the types, properties and structure of ferrous and non-ferrous metals The categorisation of the types, properties and structure of papers and boards The categorisation of the types, properties and structure of natural and manufactured timbers Investigate environmental, social and economic challenges when identifying opportunities and constraints that influence the processes of designing and making 	<ul style="list-style-type: none"> Assessment Week: (w/b 7th November 2022)
Spring 1	Specialist Material Categories (Textiles) <ul style="list-style-type: none"> Mini Contextual challenge – Manufacture samples to reflect different construction and embellishment techniques. 	<ul style="list-style-type: none"> The categorisation of the types, properties and structure of natural, synthetic, blended and mixed fibres and woven, non-woven and knitted textiles Developments in modern and smart materials, composite materials and technical textiles 	<ul style="list-style-type: none"> Maths formative assessment test on Google classroom Half Term Test on theory content (w/b 6th February 2023)

Spring 2	Specialist Material Categories (Textiles) <ul style="list-style-type: none"> • Mini Contextual challenge – Manufacture samples to reflect different construction and embellishment techniques. 	<ul style="list-style-type: none"> • Impact of forces and stress on textiles products. • Typical stock forms, types and sizes used for textiles • Processes used to manufacture products to different scales of production. • Specialist techniques used for high quality textiles prototypes. • Surface treatments and finishes. 	<ul style="list-style-type: none"> • Maths formative assessment homework on Google classroom • End of Term Test on theory content (w/b 27th March 2023)
Summer 1	Specialist Material Categories (Textiles) <ul style="list-style-type: none"> • Mini Contextual challenge – Manufacture samples to reflect different construction and embellishment techniques. 	<ul style="list-style-type: none"> • Investigate social and economic challenges • Investigate and analyse the work of past and present professionals and companies in order to inform design • Avoiding design fixation • Developing design ideas 	<ul style="list-style-type: none"> • Maths formative assessment homework on Google classroom • Half Term Test on theory content (w/b 22nd May 2023)
Summer 2	Non-exam assessment	<ul style="list-style-type: none"> • Contextual challenge – Investigate • Contextual challenge – Specification • Contextual challenge – Design 	<ul style="list-style-type: none"> • End of Year exams (w/b 12th June 2023)

Further Information

The Course specification:

<https://qualifications.pearson.com/content/dam/pdf/GCSE/design-and-technology/2017/specification-and-sample-assessments/Specification-GCSE-L1-L2-in-Design-and-Technology.pdf>

Website: <https://www.chace.enfield.sch.uk/curriculum-technology/>

DFE Subject content: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/239089/SECONDARY_national_curriculum_-_Design_and_technology.pdf

Assessment:

- Design and Technology – Component 1: Written paper (100 Marks – 2 Hours) (50% of GCSE 9-1)
- Iterative Design Challenge – Component 2: Non-exam Assessment (100 Marks - Approx. 40 hours) (50% of GCSE)