



# Curriculum Overview

Curriculum Area: Design and Technology Timbers/Textiles

Year: 10

## Curriculum covered

The GCSE in Design and Technology enables pupils to understand and apply iterative design processes through which they explore, create, and evaluate a range of outcomes. The curriculum enables pupils 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 pupils opportunities to apply knowledge from other disciplines, including mathematics, science, art and design, computing, and the humanities. Pupils will acquire subject knowledge in design and technology that builds on Key Stage 3, incorporating knowledge and understanding of different materials and manufacturing processes to design and make, with confidence, prototypes in response to issues, needs, problems and opportunities. Through the critique of the outcomes of design and technology activity, both historic and present day, pupils develop an understanding of its impact on daily life and the wider world and understand that high-quality design and technology is important to the creativity, culture, sustainability, wealth and wellbeing of the nation and the global community.

**Autumn Term** Core knowledge is covered; Unit 1 - New and emerging technologies, Unit 2 Informing design decisions, Unit 3 Energy, materials, devices and systems, Unit 4 Material types. **Specialist knowledge Timbers/ Textiles T5** - Material processing

**Textiles:** Specialist techniques, tools, equipment, and processes that can be used on natural, synthetic, woven, and non-woven, knitted, blended and mixed-fibre textiles to shape, fabricate, construct, and assemble a high-quality prototype

**Timbers:** Specialist techniques, tools, equipment, and processes that can be used on each natural and manufactured timber to shape, fabricate, construct and assemble a high-quality prototype

**Spring Term:** Maths skills for DT: Arithmetic and numerical computation. Handling data, Graphs, Geometry, and trigonometry

**Specialist knowledge Timbers/ Textiles T1** - Sources, origins, and properties

**Textiles:** The sources, origins, physical and working properties of natural, synthetic, woven, and non-woven, knitted, blended and mixed-fibre textiles and their social and ecological footprint. The way in which the selection of natural, synthetic, blended, and mixed-fibre textiles is influenced by

**Timbers:** The sources, origins, physical and working properties of each natural and manufactured timber and their social and ecological footprint. The way in which the selection of each natural and manufactured timber is influenced.

### Summer Term

Pupils will complete a Mock NEA. The context will be set by the school and then the pupils will complete a portfolio based on the four areas of the real NEA.

Investigate, Design, Make and Evaluate.

On June 1<sup>st</sup> the exam board contexts will be released, pupils will choose a question to focus on for their NEA. This will be the start of the 50% section of their final grade. Pupils will aim to complete the Investigate (16 marks) Section before the end of year 10.

## Internal Assessment

Pupils will complete a range of formative assessments throughout year 10. These will include:

- Mini tests at the end of each topic
- Practice examination questions
- Spring term -Mock NEA – Non examination assessments (which will be graded, and next step feedback given).

A strong focus on formative assessment will ensure each pupil understands how they can improve and build on their learning. Many methods of assessment will be used including questioning, discussion, peer/self-assessment, class/teacher review and a summative assessment (mock examination). Written feedback will also be given regularly by the teacher throughout the year. We also like to encourage self and peer assessment as a valuable tool for learning and pupils are encouraged to actively create a written dialogue with their teacher.

## Exam Board/Exam Paper Requirements/% Weighting

### Key dates (mocks and final exams)

**Exam Board** - Pearson Ed Excel Course title GCSE Design Technology (1-9)  
50% NEA (non-examined assessment) 50% Exam (1hour 45).

**NEA** Consist of 4 sections (section 1 of NEA completed in the summer term of year 10). 1 – Investigate (16 marks) 2 – Design (42 marks) 3 – Make (36 marks) 4 – Evaluate (6 marks)

### **Year 10 Mock examination – February 2023**

The paper consists of two sections. Section A is assessed on the core content and Section B is assessed on the material category students have chosen. 1DT0/1E – Textiles, 1DT0/1F – Timbers

**Section A: Core** This section is 40 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 10 marks of calculation questions in Section A.

**Section B: Material categories** This section is 60 marks and contains a mixture of different question styles, including open-response, graphical, calculation and extended-open-response questions. There will be 5 marks of calculation questions in Section B.

## Helpful resources/revision guides/websites/exam preparation

- Ensure you have a copy of the revision guide. This allows you to revise and read through a topic and then allows you to test yourself. Weekly homework will be set using this guide to build a revision resource for year 11.
- As you revise, produce a mind map, revision clock or a revision card so you are beginning to build a bank of subject specific resources.
- Use Seneca learning at home to practice answering subject specific questions. (Link opposite and on Synergy)
- Ensure you have Knowledge Organisers for all of the 'core knowledge' topics (listed opposite in bold) and for your specialist area.

### Helpful Websites.

- <http://www.technologystudent.com/index.htm>
- <https://qualifications.pearson.com/content/dam/pdf>
- <https://app.senecalarning.com/classroom/course/b>

Revision guide Collins Design and Technology All in one Revision and Practice guide.