

Design Technology KS4 Learning Journey



Top 3 tips for parents and carers during KS4

- ✓ Purchase a revision guide & scientific calculator.
- ✓ Use flashcards to test your child on recalling facts.
- ✓ Make sure you know the progress of the NEA Assignment. Practice the Mathematical design questions.



What's your Plan A?

FE: A-Level Chemistry or BTEC Applied Science
HE: Design, Engineering, graphical design.
Architect, British Aerospace. Graphic Designer, Electrical engineer



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PPE preparation for KS4

Identify command words in questions and make sure you know what they mean; make sure you can name equipment accurately; describe and explain a variety manufacturing processes. Using Mathematics in order to explain graphs, percentages, areas and gear ratio including choice of materials, sustainability and of materials.



Study skills for KS4

Create flashcards of key definitions, use questions in each chapter in revision guide to develop recall, use writing frames on Google Drive to structure answers, complete past paper questions and use mark scheme, download spec to use as a checklist

Knowledge, skills and understanding

Project 1: Iterative Design / Sketching and Drawing

They will begin the year looking at iterative designs and modelling techniques. There are to refine practical skills and developing the complexity of a design and build project.

Year 10

Project 2: Systems and Control

Students will then look at how electrical circuits are implemented within everyday life, and how the systems and control process is influenced by Input-Process-Output. They will learn how to independently, operate the laser cutter, and how to wire a pre-manufactured circuit board.

Year 10

Project 3: Metal work

Students will learn about the categorisation and properties of materials from the raw source to the stock form. Within Thornleigh pupils will have the opportunity to use the brazing hearth gas torch whilst developing a project that uses the low melt metal Pewter. Students will learn the physical properties of materials related to use and knowledge applied when designing and making.

Year 10

Project 4: Flat Pack Furniture

Using the skills that they have accumulated over the year, the students will partake in a focused practical task. Pupils will be guided on how to develop a portfolio. (In lines with the Year 10 and 11 NEA examples).

Year 10

Year 11

Year 11 students will be required to develop a NEA GCSE portfolio based on an exam board theme. They are to follow the GCSE examiners brief and complete a range of pages to demonstrate their ability to follow a design brief. Students will be expected to manufacture their product using a variety of techniques from laser cutting, 3D printing to hand manufacturing of parts of the project.

Students will also sit their GCSE exam in May / June and this will be the remaining 50% of their course grade.

Year 11

Year 11

Students will be expected to manufacture their product using a variety of techniques from laser cutting, 3D printing to hand manufacturing of parts of the project.