

Yr. 11 CURRICULUM PLAN for Design and Technology

The curriculum for this stage of students' education has been designed to be inclusive for all and build on the knowledge gained in KS3 where students should have produced creative work becoming increasingly proficient in designing, manufacturing using simple workshop tools and evaluating their own work. The aim is to increase their proficiency in the handling of different materials and their confidence to develop their own ideas and style; to extend their range of subject specific vocabulary and enable them to competently analyse and evaluate their own work, and that of others. Students will also acquire skills that can be applied to cross-curricular topics, allowing them to reflect on and explore topics in greater depth. This should foster a love of the D&T and its application across the whole curriculum.

HALF TERM 1: Making principles theory and NEA Section B

Students will spend lesson time working on the design brief and specification of their NEA. Homework will be devoted to looking at the making principles, including tolerances, allowances and specialist tools and equipment.

STUDENTS MUST KNOW:

- How to investigate a given topic area and produce a brief and specification.
- Understand the different tolerances and when they are used.
- The names of different workshop tools, the materials they are used for and any safety requirements.

HOW THIS WILL BE ASSESSED:

Formal assessment based on their NEA work and using the examination set criterion for section A. They will also be formally assessed on the theory side of the course with marked homework sheets and end of unit test. Self and peer assessment opportunities and informal verbal feedback.

HALF TERM 2: Other designers work and NEA section B/C

Students will be designing ideas related to their researched topic. They will then be experimenting to develop their ideas. Homework will be devoted to studying design movements and designers linked to these movements.

STUDENTS MUST KNOW:

- How to annotate their experiments and designs, while relating design ideas to initial investigation work.
- How to investigate and analyse the work of others and how this can inform designing.
- How to use different design strategies to help produce imaginative and creative design ideas.

HOW THIS WILL BE ASSESSED:

Formal assessment based on their NEA work and using the examination set criteria. Section B and C. They will also be formally assessed on the theory side of the course with marked homework sheets and end of unit test. Self and peer assessment opportunities and informal verbal feedback.

HALF TERM 3: NEA section C and D and Unit 1 and 2 revision.

Students will manufacture their prototype for their NEA, analysing and evaluating throughout the process. Homework topics will be devoted to revision of Yr. 9 work initially.

STUDENTS MUST KNOW:

- How to model and test ideas, documenting the process as part of their NEA.
- To produce a manufacturing specification, which includes a cutting list, parts list and a working drawing.
- Understand new and emerging technologies revision.
- How energy systems, storage and devices progress technological advances.

HOW THIS WILL BE ASSESSED:

Formal assessment based on their NEA work and using the examination set criterion D, and C still if necessary. They will also be formally assessed on the theory side of the course with marked homework sheets and end of unit test. Self and peer assessment opportunities and informal verbal feedback.

<p><u>HALF TERM 4: NEA sections E and F and hand in deadline. Revision of Materials and their working properties.</u></p> <p><u>Students will spend time in the workshop modelling and finalising their final prototype for final submission, along with evaluation and recording modifications. Students will also be revising unit 3, materials and their characteristics.</u></p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • How to analyse and evaluate their final prototype how to identify modification. • The primary sources of woods, papers, textiles, electronics and metals revision. <p>HOW THIS WILL BE ASSESSED: Formal assessment based on their NEA work and using the whole examination set criteria. They will also be formally assessed on the theory side of the course with marked homework sheets and an in-class end of unit test.</p> <p>Self and peer assessment opportunities and informal verbal feedback.</p>	<p><u>HALF TERM 5: Revision of specialist area and common specialist technical principles.</u></p> <p>Students will spend time this term revising, working through past papers and preparing the final 2hr examination.</p> <p>STUDENTS MUST KNOW:</p> <ul style="list-style-type: none"> • The layout of the examination paper and how to choose the correct questions on the paper to maximise results. • How to apply 'custard' to the long-extended answers of the paper. • All the formulae that are needed for recall in the D&T exam. <p>HOW THIS WILL BE ASSESSED: They will also be formally assessed on the theory side of the course with marked homework sheets and practice papers. Self and peer assessment opportunities and informal verbal feedback.</p>	<p>Students are on study leave.</p>
<p>Embedding this knowledge can be supported at home by encouraging them to be more interested in the world around them. By watching programs like Click on BBC 1 – all about emerging and future technology. Other programs that support technology are, inside the factory and How it's made. These along with websites such as GCSEpod, GCSE bitesize and Technologystudent.com will help students link what they cover in lessons to the world around them.</p>		