

HIGHFIELDS SCHOOL

OVERVIEW - SCHEME OF WORK 2023-24



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SUBJECT: A LEVEL DESIGN & TECHNOLOGY

EXAMINATION BOARD: AQA

AUTUMN TERM - YEAR 12	SPRING TERM - YEAR 12	SUMMER TERM - YEAR 12
<p>During the first term of the A Level course students will be put through an intensive program of skill development to help bridge the gap from GCSE to A Level.</p> <p>Materials and manufacturing techniques form a large part Term 1. There is a focus on polymers, timbers and compliant materials which build significantly on GCSE learning and their ability to model using varied materials and communicate their ideas effectively, meeting new expectations, is given time to develop.</p> <p>Students complete practical skills projects, using the school's facilities, and students' accuracy is assessed.</p> <p>Additionally, students learn about material properties, testing of materials and apply this knowledge to the selection of materials for specific products. Scales of production is revisited throughout the term, integrating the adaptation of manufacturing methods for these varying scales.</p> <p>Throughout the entire year students will regularly study mathematical elements of the new specification to ensure confidence in this area.</p>	<p>In the second term students will continue to develop the skills required to successfully complete their NEA whilst gaining greater focus on the subject knowledge required to perform well in the external examinations.</p> <p>Students will continue to bridge the skill gap by studying manufacturing techniques specific to woods, polymers, and compliant materials. The second term introduces metals as more of a focus area, with greater emphasis on both CAD and quality control/assurance methods whilst manufacturing. Students' ability to manufacture functional products from varying materials will be assessed at key points alongside their ability to manufacture within strict guidelines/tolerances.</p> <p>Students will also be introduced to Biopolymers and their increasing use alongside other topics associated with Paper 1 of the course</p>	<p>In the final term of the year, students will complete their skill development projects before moving on to the start of their NEA towards to end of the term.</p> <p>Preparation for the examination will continue and grow in stature, ensuring students fully comprehend the nature of the external assessments.</p> <p>Students will be provided the opportunity to focus their development in areas specific to their own needs/areas of interest. This term will also be used to develop students' ability to conduct differing methods of primary and secondary research with empathetic design challenges.</p> <p>Students will study H&S element of the design industry and look more in depth at designing for manufacture, use and disposal. Additionally, students will also study the responsibility of a designer and responsible product design.</p> <p>NEA – Towards the end of the summer term the NEA portfolio requirements will be introduced, and students will research and develop their own project ideas. Prior to summer all students will have an identified project, proved the viability of this project, and outlined (in detail) their target audience. Students should have around twelve pages of research completed before returning to school in September.</p>

ASSESSMENT

Assessment throughout KS5 takes varying forms including the use of OneNote, Teams and Forms for self and peer assessment activities, Forms quizzes, long answer exam responses, standard assessments and mock examinations in lessons and finally practical skills assessments at relevant points. Students' grades are calculated using 50% of their written examination scores and 50% of the NEA style activities. This is reflective of the assessment at the end of the course. Written assessments will be conducted each half term to help inform student progress and focus areas for improvement.

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AUTUMN TERM - YEAR 13	SPRING TERM - YEAR 13	SUMMER TERM - YEAR 13
<p>Term 1 focusses predominantly on the development of students' NEA project, with the aim of completing all design and development work prior to the Christmas break.</p> <p>Alongside this, students continue to study towards the 2 written assessment papers at the end of the year.</p> <p>The first two terms of Year 13 will predominantly focus on the completion of students' NEA projects. This forms 50% of their final grade and is essential to high levels of achievement in the subject. By the end of the first term students will have developed their project to a point of have a comprehensive design specification and will complete all work up to their final design.</p> <p>Whilst completing NEA work students will continue to develop their knowledge and skills specific to the examination. Developing a greater understanding of real-world scenarios and case studies whilst broadening their knowledge of new materials introduced at this level.</p> <p>In addition to this students' ability to apply mathematical knowledge and understanding to specific D&T contexts will also continue to be worked on.</p>	<p>Term 2 continues to focus predominantly on the development of students' NEA project, with a hand in deadline prior to Easter. This includes all NEA work, both folder and practical.</p> <p>Alongside this, students continue to study towards the two written assessment papers at the end of the year.</p> <p>The portfolio of evidence along with well photographed final products form the NEA submission and consequently 50% of students' final grade. This is submitted prior to the easter break.</p> <p>Alongside this project students will maintain their preparation for the external examinations, studying the final elements of the course which include product lifecycles, feasibility studies, iterative design processes in industrial design contexts, prototyping in mass production, manufacturing's impact on design, H&S in a commercial setting, non-destructive product testing, QA systems and national standards in product design. Additionally, to this students' ability to apply mathematical knowledge and understanding to specific D&T contexts will also continue to be worked on.</p>	<p>Term 3 focusses entirely on preparation for the 2 written assessment papers at the end of the year.</p> <p>The final term of A Level studies turns focus to their external examinations, having covered all the content for the examinations students will develop their revision and study techniques to prepare fully for both papers. The 4Rs will be utilised throughout the duration of the course and these skills will be drawn upon heavily in this term. Students will be able to direct their personal study to meet their own needs whilst also ensuring preparation is fully focused on the needs of the exam.</p> <p>Essential mathematics skills for D&T will be recapped and practiced in this term based on students' personal necessity for this topic.</p>

ASSESSMENT

NEA work will be assessed in line with guidelines against the AQA grading criteria that is shared with students. They will continue to follow a programme whereby a realistic mock paper is completed each half term, to help assess their progress and develop personal learning checklists that help direct their study.