# Design Technology Curriculum Overview - Year 10

| | Unit | Details |
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| Autumn One | **Clock Project** | Pupils will research and investigate a range of iconic designers before choosing one to influence their clock design. Pupils will create a range of design ideas and annotations considering the aesthetics, cost, customer, environment, size, safety, function, materials and manufacture for each design. Pupils continue to develop a broad knowledge of materials, components and technologies and practical skills to develop high quality, imaginative and functional prototypes. Using 2D design and CAD/CAM pupils will manufacture, assemble their working prototype. Pupils will Evaluate and test their product developing the skills to critique and refine their own ideas whilst designing and making. |
| Autumn Two | **Biomimicry Light** | Pupils will investigate and develop a further understanding of mechanisms, electrical systems and timber properties and uses. Pupils will use a range of communication strategies to design a Light based on an animal of their choice. Iterative design process is explored through ongoing model and mechanism tests and evaluations until the final design has been established. Pupils will be using the iterative design process to model, test and evaluate mechanisms, materials, shapes and joints until they have secured their final design. Pupils will further develop their understanding of timber joints and processes, using tools and machinery confidently and safely to create a successful and high quality outcome. Pupils will apply their knowledge of electrical systems in carefully designing and making the circuit needed for their light. Pupils will Evaluate and test their product developing the skills to critique and refine their own ideas whilst designing and making. |
| Spring One | **Practice NEA** | Pupils will be given a practice NEA which we will work through together as a class, allowing students to understand the coursework in more detail, receive guidance and structure before being able to complete their NEA independently in the summer term two. Pupils will receive a context to explore and analyse, create their own problem, design brief and specification to work on. Pupils will also be covering exam content focusing on designing and making principles. |
| Spring Two | | Pupils will further research their chosen design problem, creating initial design ideas and selecting one to develop further into a final design and manufacturing specification. Pupils will receive ongoing feedback and develop the confidence to independently approach the GCSE NEA. Pupils will also be covering exam content focusing on designing and making principles. |
| Summer One | **Exam Content** | Pupils will focus on the exam content of the AQA Design and Technology GCSE covering the three main categories; Core technical principles, specialist technical principles and designing and making principles. |
| Summer Two | **GCSE AQA NEA** | Pupils will be given a choice of 3 contexts from AQA and will select one to begin to investigate for their GCSE NEA project. Pupils will work independently and will focus on section A01, Identifying & Investigating Design Possibilities, developing the following pages; Context analysis, Client profile and Work of others. |