KS3 Curriculum Overview 2024-25

**Subject: Design Technology**

Rationale of KS3 Curriculum:

The aim of the Design Technology curriculum at year 7 is to introduce pupils to solving problems through practical skills. By developing a foundation knowledge of materials, components, systems and processes, pupils are then able to create functioning prototypes to solve a range of problems. As pupils progress through Key Stage 3, the problems they solve become more complex and demand an increased knowledge of materials, components, systems, processes and their impacts on the environment.

Year 7 students produce a USB-powered lamp that involves the development of numerous practical skills. As well as developing practical skills, they also begin to learn about materials and why they are used for different applications. This project allows pupils to work with compliant and resistant materials. As an electrical item, pupils learn about how electricity is generated and how this puts their energy use into perspective.

Year 8 focus is on a user-centred design approach. Students design and manufacture an organiser for a particular user. They begin by exploring the user’s needs and wants, leading them through the iterative design process in order to produce a quality prototype using woods and plastics through a range of processes. Alongside the organiser, students explore the art deco movement in order to design and manufacture a pewter-cast piece of jewellery, whilst learning about metals, their properties and applications.

Year 9 focus continues the user-centred design approach to generate ideas for a product that can be mass produced and sold globally. Students design and manufacture an Acrylic/Plywood clock for a large store. They begin by exploring the company’s needs and wants, leading them through the iterative design process in order to produce a quality prototype using laser ply and/or polymers. Alongside the clock, students explore the Memphis and Bauhaus design movements in order to design a clock that can be mass manufactured and sold within a department store. To achieve this, students will be introduced to industry standard computer aided design and manufacture programs to produce their work.

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| Sequence of Learning: |
| KS3 | Term 1 | Term 2 | Term 3 |
| Year 7 | LED Table Lamp | LED Table Lamp | LED Table Lamp |
| Year 8 | Pewter Casting/Object Organiser | Pewter Casting/Object Organiser | Pewter Casting/Object Organiser |
| Year 9 | Designer Influenced Clock | Designer Influenced Clock | Designer Influenced Clock |