

SUBJECT: Design Technology

YEAR GROUP:9

Overview:

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products throughout the key stage 3 period that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

In Year 9, pupils investigate into why we have National flags and the history of Vexillology in relation to these graphic symbols. To help further pupils skills they will take this project on as if they are about to undertake a Mini GCSE project developing a bedside Mushroom Night Light. To start pupils will be given a list of requirements that they will need to formulate together to create a Design Brief. Research will focus on components, the client, materials, and the machines and tool that they will use. Pupils will then construct a specification and create a selection of design ideas considering Biomimicry within the creativity side of the design.

Design Technology is on a carousel throughout the academic year along with Computer Technology and Food Studies; students spend a term in each area.



PROGRAMME OF STUDY

During the Design Technology rotation students will:

- The history of Vexillology in the graphic design of Flags
- Be introduced to an extensive range of tools to manufacture the base of the light
- Learn how to apply a finish to a range of different materials
- The advantages of CAD/CAM using 2D Design alongside a Vinyl Cutter and Laser Cutter
- The basics of using 2D Design software to create designs
- Learn how to identify key aspects of a design following a client specification.
- How to use a Vacuum Forming Machine to create a Dome.
- Develop Practical skills and learn the differences of the different types of Woods
- Develop electrical skills and learn how to connect a mains power supply to the light.
- Develop knowledge and how to use different tools and machines
- How to use the laser cutter safely and the influences that CAD/CAM has on industrial design and prototyping

METHOD OF ASSESSMENT

- Completion of work in individual subject booklet
- Class discussions
- Self and peer marking
- Reviewing knowledge and skills acquired during the term
- Successful outcome of practical work from following step-by-step instructions given by the teacher
- Teacher feedback and self-evaluation of pupils work identifying successes and targets for improvement
- Weekly homework monitoring
- Mid-term and end of term assessments