

Year 9 Design and Technology

Electronics: mood lighting

- Understand the function of electronic components within a circuit.
- Understand how to use a multimeter to test functionality and impact of resistors.
- Make an electronic circuit to a brief.
- Design a mood light.
- Plan and draw the design using 2D CAD software.
- Be able to use the laser cutter to make components.
- Manufacture the design to a brief.
- Evaluate the finished product and modify the design.

Timber project: Formula 1

- Understand a range of timber joining methods.
- Be able to use a range of hand held power tools.
- Understand timber manufacturing processes of laminating, steaming, routing and biscuit jointing.
- Sources of energy, finite and infinite.
- Automation and robotics.
- The environment, the 6R's, pollution.
- Understand how and why the Sinclair C5 was designed and manufactured and why it was a failure.
- Be able to design a futuristic F1 car.
- Be able to create a CAD drawing using 2D design.
- Be able to make the design using a range of jointing processes.
- Evaluate the finished product and analyse how the design could be improved.

Designer/company research

- Research into a designer/company to find out about what makes them successful, the design processes used, and wider impacts of their work.
- Prepare a presentation or portfolio to summarise findings.

Advice to students for independent study

- Complete homework on the day it is set, which will consolidate learning from lessons.
- Regularly keep up to date with the news and watch relevant TV programmes to develop awareness and understanding of current global, environmental and manufacturing issues.