You will learn to design and manufacture products that solve genuine, relevant problems within different contexts whilst considering your own and others’ needs, wants and values.

Entry Requirements:
Grade 5 in Timbers, Metals or Engineering.
Grade 5 in Maths & English

Assessment overview
50% Exam
50% Coursework

Component 1: Principles of Design and Technology (Paper code: 9070/01)*

Written examination: 2 hours 30 minutes
80% of the qualification
120 marks

Content overview
Topic 1: Materials
Topic 2: Performance characteristics of materials
Topic 3: Processes and techniques
Topic 4: Digital technologies
Topic 5: Factors influencing the development of products
Topic 6: Effects of technological developments
Topic 7: Potential hazards and risk assessment
Topic 8: Features of manufacturing industries
Topic 9: Designing for maintenance and the cleaner environment
Topic 10: Current legislation
Topic 11: Information handling, Modelling and forward planning
Topic 12: Further processes and techniques.

Assessment overview
• The paper includes calculations, short-answer and open-response questions, as well as extended-writing questions focused on:
  o Analysis and evaluation of design decisions and outcomes, against a technical principle, for prototypes made by others
  o Analysis and evaluation of wider issues in design technology, including social, moral, ethical and environmental impacts
• Students must answer all questions.
• Students must have calculators and rulers in the examination.

Component 2: Independent Design and Make Project (Paper code: 9070/02)

Non-examined assessment
50% of the qualification
120 marks

Content overview
• Students individually and/or in consultation with a client identify a problem and design context.
• Students will develop a range of potential solutions which include the use of computer aided design and evidence of modelling.
• Students will be expected to make decisions about the designing and development of the prototype in conjunction with the opinions of the user group or client.
• Students will realise one potential solution through practical making activities with evidence of project management and plan for production.
• Students will negotiate issues related to sustainability and the impact that their prototype may have on the environment.
• Students are expected to analyse and evaluate design decisions and outcomes for prototypes/products made for themselves and others.
• Students are expected to analyse and evaluate wider issues in design technology, including social, moral, ethical and environmental impacts.

Assessment overview
• The investigation report is internally assessed and externally moderated.
• Students will produce a substantial design, make and evaluate project which consists of a portfolio and a prototype
• The portfolio will contain approximately 40 pages of A3 paper (or electronic equivalent)
• There are four parts to the assessment:
  o Part 1: Identifying Opportunities for Design
  o Part 2: Designing a Prototype
  o Part 3: Making a Prototype
  o Part 4: Evaluating own Design and Prototype

YEAR 12

This year is about encouraging creativity, learning core knowledge and understanding how to adapt a commercial design approach to your work, reflecting how a professional designer might deal with a design problem and its resolution. You will be taught key communication and presentation skills as well as advanced drawing techniques, learn how to use various CAD programs and understand how to use various workshop tools and equipment. These skill sets will be taught through one main project. The project is split into 4 main sections that are detailed below. All contain different area focuses that of core skills and knowledge, to help give you an in-depth understanding of all sections you will complete for the major assessed project in year 13. Along side the projects there will also be core theory lessons throughout the year.

Project structure:

Section 1
• Investigation skills, research & specification writing.

Section 2
• Concept creation, development process & final design visualisations.

Section 3
• Production planning & Manufacturing technique/skills (hand & machine).

Section 4
• Evaluative and Analytical skills.

YEAR 13

Exam Assessment
As the course is fully linear, the exam will be at the end of the this year. You will continue to learn core theory and receive focused revision sessions closer to the examination.

Coursework Assessment
Here you will undertake a substantial design, make and evaluate project. You will be expected to build on skills acquired from the year 12 projects and develop a unique product that solves a real design problem for a real client.

Possible project themes:
• Storage Units
• Lamps
• Speakers
• Instruments
• Display Stands
• Tables
• Chairs
• Cabinets

Career Options
With a qualification in Product Design you can go onto study: Engineering, Electronics, Furniture Design, CAD, CGI, Product Design and Industrial Design.

Past project examples are on the other side

Saffron Walden County High Sixth Form, Audley End Road, Saffron Walden, CB11 4UH
Tel: 01799 513030 Fax: 01799 513031
www.swchs.net

For further information contact:
Mrs L Smith Email: LSmith@swchs.net & Mr Bennett Email: dbennett@swchs.net
PAST PROJECTS

“I chose this subject as I have an interest in design and I wanted to also know how things are made. This course will feed directly into my chosen degree. This course gives me massive opportunities and it has a wealth of equipment.”

Elly Roberts Past student

“I love to achieve my best and I feel that the teachers are super supportive and are always there to help.”

Tom Porter Past student