

Use basis in skills to pursue a career within the engineering sector such as maintenance engineer, mechanical engineer, welder, fabricator, electrical or electronic engineer.

Further their studies through an apprenticeship

Complete accredited course at alternative provider

Study Level 3 Advanced Diploma in Engineering at 6th form

THE DESIGN & TECHNOLOGY CURRICULUM

ROAD MAP To - Engineering

Continue in alternative and supporting vocational career

R016 Manufacturing in quantity
For this unit students will learn how to manufacture in volume using CAD/CAM methods, and how to use quality control and assurance techniques.
Topics include:

- preparing for manufacture
- develop programmes to operate CNC equipment
- safely using processes and equipment to make products in quantity.

OCR-set assignment
Approx. 10-12 hours

YEAR
11

R015 Manufacturing a one-off product
In this unit students will learn how to plan and how to use manual processes and techniques to manufacture a one-off product.
Topics include:

- planning the production of a one-off product
- measuring and marking
- safely using processes, tools and equipment to make a product.

OCR-set assignment
Approx. 10-12 hours

Cambridge Nationals Engineering Manufacture

OCR Level 1/\ Level 2 Cambridge National in Engineering Manufacture

R014 Principles of engineering manufacture

In this unit students will learn about manufacturing processes, how engineering materials are used within manufacturing, scales of manufacture and quality assurance techniques.

Topics include:

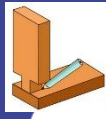
- manufacturing processes
 - engineering materials
 - manufacturing requirements
 - developments in engineering manufacture.
- Examination: 1 hour 15 minutes

YEAR
10

SPECIALISM
Resistant
Materials
Wood,
Acrylic

CORE SKILLS: WOOD/
USING TOOLS/ISOMETRIC
DRAWING

Students design and make their own gumball dispenser using pine and acrylic. They look at moving parts and are introduced to specialist tools, machinery and joints. Through their research and designing they will understand about the properties of the woods they are using and how it is prepared to commercial use, as well being introduced to the basic principles of isometric drawing



CORE SKILLS: USING RECIPES AND
SPECIALIST EQUIPMENT/EVALUATION

Students expand their knowledge of how to prepare healthy and varied meals. In addition to following recipes they will also use the Eatwell Plate to design their own healthy meals from around the world

SPECIALISM
Food



CORE SKILLS: METAL/CAD/ ITERATIVE DESIGN

Students complete a DMA based on a chosen theme using pewter This unit aims to introduce students to a new materials and method of production and focus on the need to work iteratively, continually evaluating and making judgments dependent on the success of the outcome
Students preparatory work utilised a range of materials and methods including CAM

SPECIALISM
Resistant
Materials,
Metals, CAD

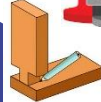


YEAR
9

SPECIALISM
Resistant
Materials,
Wood, Acrylic

CORE SKILLS: WOOD/
USING TOOLS/ISOMETRIC
DRAWING

Students design and make their own gumball dispenser using pine and acrylic. They look at moving parts and are introduced to specialist tools, machinery and joints. Through their research and designing they will understand about the properties of the woods they are using and how it is prepared to commercial use, as well being introduced to the basic principles of isometric drawing



CORE SKILLS: USING RECIPES AND
SPECIALIST EQUIPMENT/EVALUATION

Students expand their knowledge of how to prepare healthy and varied meals. In addition to following recipes they will also use the Eatwell Plate to design their own healthy meals from around the world

SPECIALISM
Food



CORE SKILLS: METAL/CAD/ ITERATIVE DESIGN
Students complete a DMA based on a chosen theme using pewter This unit aims to introduce students to a new materials and method of production and focus on the need to work iteratively, continually evaluating and making judgments dependent on the success of the outcome
Students preparatory work utilised a range of materials and methods including CAM



YEAR
8

CORE SKILLS: WOOD/RECYCLING/DESIGNING/
HEALTH AND SAFETY

Students are introduced to the workshop and use a simple design brief to design a lamp based using "green materials" and simple electronics. They will look at basic construction, structures, health and safety and designing for purpose

SPECIALISM
Resistant
Materials,
Wood,
Metal



CORE SKILLS USING RECIPES AND
SPECIALIST EQUIPMENT/EVALUATION

Students learn to follow a simple recipe and prepare a dish. They are taught to evaluate their work in regards to taste, texture and smell, students learn about the eatwell guide, consider healthy options and basic recipes

SPECIALISM
Food



CORE SKILLS GRAPHICS

Students complete a project based on simple branding based on drinks logos The design element covers introduction to a brief, designing from own research, designing for clients, rendering, annotation, understanding technical drawings, British standards and tolerance
There is also a CAD element of the course where students develop their ideas using specialist CAD Graphic software

SPECIALISM
Graphics
CAD



YEAR
7

Take part in
Transition day
activities at AHS