



Design and Technology Learning Overview – Key Stage 3

Design Technology

Aims of the Department

Our dedicated Design Technology team is committed to delivering a strong and engaging curriculum to the pupils of Haydock High school. Our team of subject knowledge experts has put together an exciting group of programs designed to give our KS3 pupils a thorough experience of the Design Technology industries of Engineering, Graphics and Hospitality & Catering.

At KS4 pupils can choose to continue their Design Technology studies with level 1/2 awards in Engineering and Hospitality & Catering. We specialise in vocational studies that cater to the needs of all pupils by preparing them for Post 16 further education or the world of work by instilling the key theoretical and practical skills needed.

We are committed through our vocational/skills based curriculum to equip all pupils, whether leaving us at KS3 or KS4, with not only a set of essential life skills but also a passion for Design Technology.

Curriculum Ethos

Lower School - Years 7 & 8

In years, 7 & 8 pupils explore the Design Technology areas of Engineering, Catering and Graphic Design, completing a 12 week project in each area. Pupils are assessed through their practical outcomes, corresponding design portfolio and an end of unit theory test. The Key stage 3 curriculums are designed not only to foster valuable life skills for all pupils but also to adequately prepare and equip pupils with the knowledge and skills to continue their studies on one of our vocational courses at KS4.

Projects include:

- Designing and manufacturing a mobile phone holder
- Designing and manufacturing a ball-bearing maze game
- Graphic design projects based on healthy eating and healthy hydration
- Exploring healthy, balanced diets and nutrition whilst planning and preparing various dishes

Upper School - Years 9, 10 & 11

From years 9-11 pupils will study their chosen option subjects. We currently specialize in vocational options offering WJEC Engineering Level 1/2 & WJEC Hospitality and Catering Level 1/2. Our vocational awards are intended to support pupils who hold an interest in pursuing a career in these industries and act as an ideal foundation to further study where pupils would continue to develop a range of professional and general skills that would support their progress to employment.

KS4 Assessment Overview

WJEC Engineering Level 1/2:

Unit 1: Engineering Design – Coursework

Unit 2: Producing Engineering Products - Coursework

Unit 3: Solving Engineering Problems – Exam



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WJEC Hospitality and Catering Level 1/2:

Unit 1: The Hospitality and Catering Industry – Exam

Unit 2: Hospitality and Catering in Action – Coursework

As a fundamental part of the STEM program, Design Technology will explore the links between Science and Technology. In Hospitality and Catering pupils can expect to explore the science behind what we eat by carrying out a number of experiments to discover interesting facts such why do cakes raise and why do biscuits crumble. Within Engineering pupils can expect to physically investigate a range of modern and smart materials such as shape memory polymers, UV sensitive dyes and smart putty to discover how they are used to develop products in the 21st century.

As an integral part of the STEM program, Design Technology will challenge pupils mathematically throughout the duration of their studies through various problem solving activities linked directly to the program of study, helping to establish a cross curricular mindset. This will present itself in various forms such as weighing and measuring, upscaling and downscaling, calculating area, volume and perimeter as well as basic mathematics skills of addition, subtraction and multiplication.

Pupils will also be expected to demonstrate high levels of literacy throughout their Design Technology studies, pupils are expected to develop an array of subject relevant technical language that can be used to interpret and respond to design briefs through the production of design specifications, annotated design sketches, detailed production plans and critical evaluations.

Pupils develop socially, morally, spiritually and culturally in numerous ways across the Design Technology Curriculum. We feel it is important to educate our pupils to understand the impact that products they design and make have on the environment and mankind. Through our curriculum we expect pupils to develop a sense of social responsibility, mutual respect and compassion for others.

The Design and Technology programs of study are designed to engage pupils through applied learning meaning pupils can expect to obtain and apply knowledge, skills and understanding through meaningful tasks set in industry context that simulate the world of work. Pupils will gain hands on experience of the varying job roles within both the Hospitality & Catering and Engineering sectors. Pupils can anticipate a challenging, engaging, creative and focused learning environment in all lessons, from start to finish. Clear routines and procedures will be established in both theory and practical lessons to make the most of learning opportunities from every lesson. The curriculum is intended to guarantee that all pupils leave Haydock High School with not only a set of valuable life skills but also a passion for Design and Technology.

Educational visits

Our enthusiastic Technology team is working hard to develop links with Engineering and Hospitality & Catering providers within St Helens and the wider Merseyside area in order to provide our pupils with the opportunity of experiencing the world of work. This may be through the form of educational visits to observe how the workplace operates or seminars from industry experts



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discussing their field of work. We aim to engage with external speakers such as a recent key stage 3 workshop on careers in Engineering.

Extra-curricular activities

In 2019 we will launch our *Young Designers - Climb to 9* offering to KS3 pupils, these will be two six week projects across years 7&8 that will stretch and challenge our most able with a series of STEM related activities linked to Engineering and Hospitality and Catering sectors.

Our dedicated Technology team also offers a number of additional learning opportunities to KS4 pupils at lunchtime, after school and during school holiday sessions. These learning opportunities offer pupils the chance to revise with subject knowledge experts, catch up on coursework or refine practical skills.

Homework

Pupils can expect regular homework from Design Technology that will extend their classroom learning and reinforce the curriculum links with Mathematics, English and Science.