



Engineering Science enables learners to apply knowledge and understanding of key engineering facts and ideas, and to understand the relationships between Engineering, Mathematics and Science. The course will develop a range of technological skills, including skills in analysis and problem solving, design skills, skills in the use of equipment and materials, and skills in evaluating products and systems.

Course Structure:

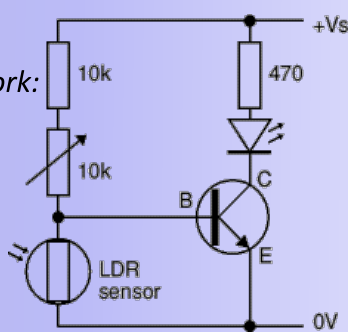
In this course you will develop a broad range of technological skills, including analysis, problem solving and design skills. You will learn how to use equipment and materials, and evaluate products and systems. You will look at key engineering concepts and processes and how to solve a variety of problems. You will also look at the impact of engineering on society and the environment.

More specifically, pupils will:

- ***Develop an understanding of engineering concepts by exploring a range of engineered objects, engineering problems and solutions.***
- ***Explore key concepts and devices used in electronic control systems, including analogue, digital and programmable systems.***
- ***Learn how to problem solve and evaluate through simulation, practical projects and investigative tasks in a range of contexts..***
- ***Learn the fundamentals of mechanisms and structures.***
- ***Develop a greater understanding of the role and impact of engineering in changing and influencing our environment and society.***

*As well as an **Engineering Assignment**, the course includes three main core units of work:*

- 1. Engineering Contexts & Challenges.**
- 2. Electronics & Control.**
- 3. Mechanisms and Structures**



Careers & Opportunities:

Engineering Science leads onto, and is a preferred entry qualification for, degree courses in most engineering disciplines such as:

Electrical
Electronic
Structural
Civil
Mechanical
Energy
Environmental
Sound
Aerospace
Agricultural

Many other courses and careers in areas such as the sciences, maths, ICT and product design will involve, or are supported by, elements that are covered within the Engineering Science course.



Course information:

Engineering is vital to everyday life; it shapes the world in which we live and its future. Engineers play key roles in meeting the needs of society in fields which include climate change, medicine, IT and transport. Our society needs more engineers, and more young people with an informed view of engineering.

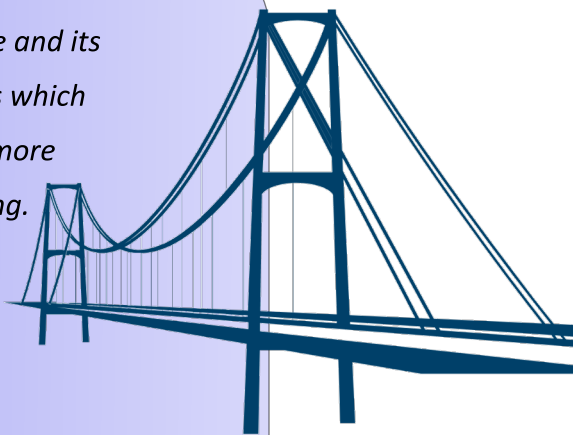
Your work will be assessed on an ongoing basis throughout the course to support your learning and evaluate your progress.

Items of work might include:

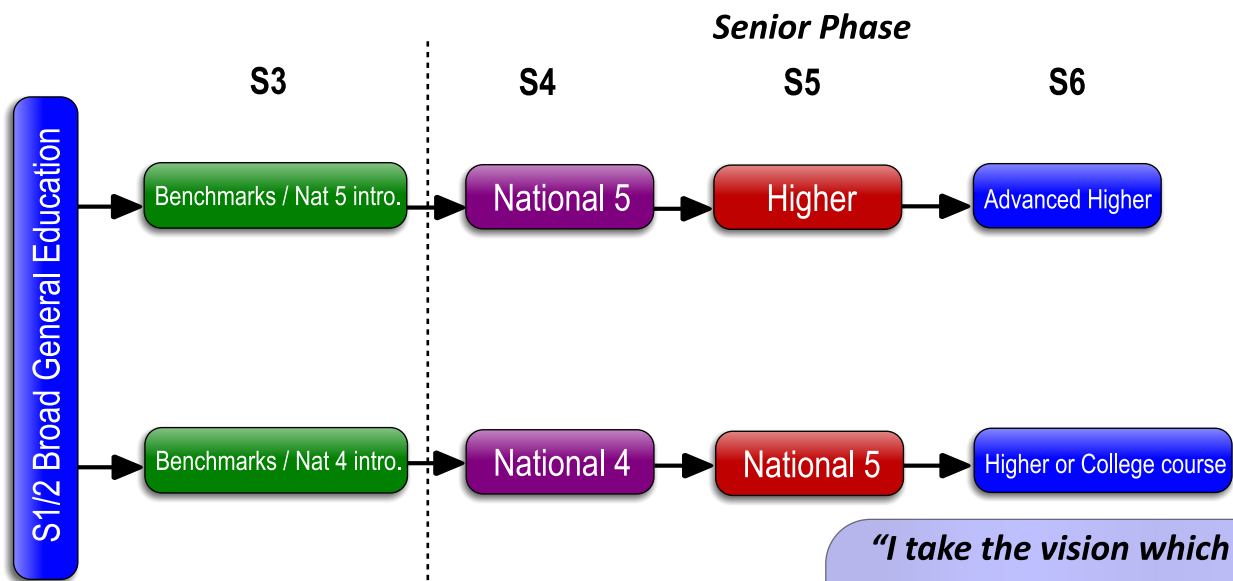
- **practical work** – such as producing hand drawn or electronic diagrams or drawings.
- **project work** – such as answering design briefs or solving engineering problems.
- **report work** – such as producing oral or written reports.

The course assessment for this course consists of two components:

- **question paper (110 marks).**
- **assignment (50 marks).**



The Learner Journey for Engineering Science



Nat 5 - Engineering Science

"I take the vision which comes from dreams and apply the magic of science and mathematics, I am an Engineer, I serve mankind, by making dreams come true."