“*Enjoy failure and learn from it. You never learn from success.”*

James Dyson

“*Creativity is nothing but a mind set free*”

Torrie Asai

**Design and Technology at Noel-Baker**

The Design and Technology curriculum at NBA consists of a broad range of creative, imaginative and innovative experiences of designing and practical-based activities, using a range of materials and processes across a wide range of learning experiences. At the same time as encouraging creativity and originality, our subject relies equally on its STEM roots, and is delivered with the academic rigour that would be expected in this area. The curriculum content has been carefully selected and sequenced across the 3 or 5 year journey in order to give all students the opportunity to learn the skills and knowledge to engage positively with materials, components, products, and technologies in the world around them. Through these types of activities students are actively contributing to the creativity, culture, wealth and well-being of themselves and their community.

The expert, experienced and passionate Design and Technology (DT) staff provide a safe and enjoyable learning environment in which students can be innovative, take risks, become more resourceful, be problem solvers and develop as capable learners being able to learn a range of new skills and to learn that, if they fail, that failures and obstacles can be turned around into success. As educators, we aim to provide our students to have the strength of character to know that they can learn from their mistakes and create a better product in the future through practising and developing the skills and knowledge that they are experiencing across the key stages.

**Design and Technology at Key Stage 3.**

The curriculum is, at Key Stage 3, designed to be delivered on a ‘carousel’, in order that every student can have access to specialist rooms with specialist equipment. For this reason, every unit is underpinned by our 5 ‘Fundamental Pillars’ of Design and Technology, and our 6 ‘Common Principles’ of Design and Technology, meaning that, in whatever order the units are studied, this key knowledge will be revisited and developed again and again. In this way the curriculum is progressive, and allows every student access to every specialist area of study which they are entitled to experience.

**Design and Technology at Key Stage 4.**

At Noel-Baker we offer two courses at KS4 within our subject area; OCR Engineering Design and AQA Food, Preparation and Nutrition.

**Engineering Design**

The Engineering Design curriculum is designed to build on the core knowledge of D&T within the KS3 curriculum, while focusing on the applied study of the engineering industry. This gives students the opportunity to understand how to develop a design specification and study the processes involved in designing new engineered products, while understanding how you consult with a client and, with its practical focus, will engage them in producing, testing and evaluating a prototype. We encourage students to take an analytical approach to their understanding of methods, processes and outcomes of engineering design and developed problem solving skills that will enable them to look at the world differently. The course is structured to encourage students to develop a passion for design & development and will inspire students to continue with Engineering Design in further education.

**Assessment within Engineering Design**

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| --- | --- | --- | --- | --- |
| **Module​** | **Elements​** | **Assessment ​** | **Date​** | **%​** |
| R038​ | Principles of engineering design​  ​ | This unit is assessed by an exam. The exam is 1 hour 15 minutes. It has two Sections —  Section A – 10 marks Section B -60 marks  The exam has 70 marks in total . | June 2023​ | 40%​ |
| R039​ | Communicating designs​  ​ | This is assessed by a set assignment. ​ | June 2023/    Jan 2024​ | Combined with R040—60%​ |
| R040​ | Design, evaluation and modelling​  ​ | This is assessed by a set assignment. ​ | June 2024​ | Combined with R039—60%​ |

**Careers in Engineering**

Studying an engineering based course automatically places you in a demand industry. Engineers are constantly in high demand so you will enjoy fantastic employment prospects. A career in engineering is interesting and fun and below is just a small selection of career choices you could make within the world of engineering.  ​

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Aerospace engineer, agricultural engineer, automotive engineer, biomedical engineer, chemical engineer, civil engineer, computer engineer, design engineer, electrical engineer, environmental engineer, geological engineer, marine engineer, mechanical engineer, petroleum engineer, or software engineer.

**AQA Food Preparation and Nutrition**

GCSE Food Preparation and Nutrition is an exciting and creative course which focuses on practical cooking skills to ensure students develop a thorough understanding of nutrition, food provenance and the working characteristics of food materials. At its heart, this qualification focuses on nurturing student’s practical cookery skill to give them a strong understanding of nutrition. This course is perfect for anyone who has a love for cooking and trying new foods. Students who choose this course should also want to learn about the nutritional side of food.

**Assessment within Food Preparation and Nutrition.**

There are three assessments for Food Preparation and Nutrition. The non-examined assessments are internally assessed and are completed in controlled conditions during lesson time in Year 11. This involves producing a portfolio of work and will include a practical exam. At the end of Year 11 students will complete a written exam which is externally assessed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Module​** | **Elements​** | **Assessment​** | **Date​** | **%​** |
| **Paper 1**​ | Written exam​ | 1 hour 45 minutes​ | June 2024​ | 50%​ |
| **Non- exam assessment**​ | Food investigation​ | 10 hours​ | September 2023​ | 15%​ |
| **Non-exam assessment**​ | Food preparation assessment ​ | 20 hours​ | November 2023​ | 35%​ |

**Careers in Food**

There are a variety of different job opportunities linked to Food Technology, such as a chef, catering manager, dietician, nutritionist and Food Technology teacher.