

**‘Numbers are the highest degree of knowledge. It is knowledge itself.’**

**Plato**

## **Mathematics at Noel-Baker**

Mathematics is essential for everyday life and understanding our world. It is also essential to science, technology and engineering, and the advances in these fields on which our country’s economic future depends.

Our aim as a Mathematics team, is to make sure that our pupils have the core mathematical knowledge, and the ability to apply that knowledge, to a variety of situations. It is our intention to ensure that all pupils have the best possible mathematics education and qualifications. This will enable them to be creative in solving problems, as well as being confident and fluent in developing and using the mathematical skills so valued in the world of industry and higher education.

## **Key Stage 3 Mathematics**

### **Year 7**

In Maths at Noel Baker, we use the White Rose Mastery secondary scheme of learning. A number of our feeder Primaries use the Primary version of this resource, so some of the features of the curriculum should feel familiar to pupils arriving at the Academy.

A large proportion of time in Year 7 is spent reinforcing Number to build competency. We also provide plenty of time to build reasoning and problem-solving elements into the curriculum.

### **Year 8**

Having established a firm foundation in Number, we start to explore other key mathematical area such as Algebra, Geometry, Ratio and Statistics. At each stage of learning pupils should be able to demonstrate a deep, conceptual understanding of the topic and be able to build on this over time.

### **Year 9**

In year 9, having mastered the basics, pupils will start to use their knowledge of Mathematics to explore more advanced areas such as Transformations, Probability and Pythagoras.

## **Key stage 4 Mathematics**

GCSE Mathematics is an essential qualification for all students to gain. Many courses and jobs require you to have a basic mathematical understanding and ability. Once you have gained a grade four or higher in Mathematics you will be able to progress to the next step for any career or course.

The exam board for Mathematics at Noel Baker is **Edexcel**

## **What will I study?**

Student will study the following topics throughout their GCSE:

- Number
- Algebra
- Ratio
- Geometry
- Probability and Statistics

## How will I be assessed?

This qualification will be assessed through three equally weighted written examinations at the end of year 11, all of which are compulsory:

- Paper 1 – Non calculator (1 hour 30 minutes)
- Paper 2 – Calculator paper (1 hour 30 minutes)
- Paper 3 – Calculator paper (1 hour 30 minutes)

## Skills required

Throughout this course you should develop skills in the following areas:

- develop fluent knowledge, skills and understanding of mathematical methods and concepts
- acquire, select and apply mathematical techniques to solve problems
- reason mathematically, make deductions and inferences and draw conclusions
- comprehend, interpret and communicate mathematical information in a variety of forms appropriate to the information and context.

## Mathematics enrichment activities

As well as after school support sessions, this year the Mathematics faculty will be offering an after school GCSE Further Mathematics extension class for year 11 pupils considering A level Mathematics.

## Progression pathways

A Grade 4 or above GCSE in Mathematics offers the opportunity to access Further Education and the numeracy skill acquired with such a qualification will be used in almost any area in the world of work.

A grade 6 or above offers the opportunity to study A level Mathematics and would also be useful in Nursing, Teaching, Engineering and Finance careers. Pupils who then succeed in A level Mathematics can follow a variety of pathways at Higher education in areas such as Pure Mathematics, Engineering and Economics.