Core Maths
Mathematics in Context

Why study MATHEMATICS?

Mathematics has served humanity in our quest to understand the world and extend the possibilities that this ever changing world can offer. Mathematics underpins the atomic fabric of the universe; the principles and patterns of numbers and laws of geometry allow us to search for meaning in the universe with greater precision.

Core Mathematics was introduced for those pupils who wanted to continue their Mathematical journey but did not want to study A Level Mathematics. The course is ideal for preparing for the mathematics requirements of a number of other A Level qualifications as well as higher education courses. It helps develop the understanding and ability to apply mathematics which equips pupils to apply for employment or higher apprenticeships in a wide range of industry sectors, professional training or university.

What is the course structure?

Exam Board: Edexcel

Core Maths
Two exam papers are taken for an award in the Pearson Edexcel Level 3 Certificate in Mathematics in Context. Paper 1 assess comprehension while paper 2 assesses applications. Paper 1 is worth 40% of the qualification and paper 2 is 60%. Both papers are 1 hour 40 minutes long. Calculator usage is allowed in both papers.

Overview of paper content:

Paper 1 & 2 both cover the following topics:
- applications of statistics
- probability
- linear programming
- sequences and growth.

Paper 1 overview
- Written examination paper with two sections, A and B, and a source booklet.
- The source booklet will detail two real-life contexts. These contexts will be assessed in the written paper, which requires students to comprehend, interpret and analyse the content in order to answer the questions.

Paper 2 overview
- Written examination paper with two sections, A and B, and a source booklet.
- The source booklet will detail one themed task in Section A – this will be the same as one of the contexts provided in Paper 1.Section B will contain three tasks, each of which has a separate theme. The four themes will be assessed in the written paper, which requires students to apply their problem-solving skills in order to answer the questions.

Which activities will I be engaged in during the course?

You will enjoy this course if you enjoy your Mathematics and are prepared to work hard. To achieve the higher grades in this course you must be prepared to put in the hours of work. The content of this qualification is drawn

from a range of GCSE content areas predominantly: statistics, probability, algebra and ratio, proportion and rates of change, together with 20% of content drawn from beyond and above GCSE content.

The kind of learning habits you might be asked to draw upon include:

- Organising your notes and using effective revision strategies to learn facts, terminology and procedures
- Independently reading up on prior knowledge and new theories
- Self-evaluating your understanding and misconceptions within a topic and taking actions to address any shortfall.
- Thinking and communicating with clarity using subject specific vocabulary.
- Constructing rigorous mathematical arguments (including proofs)
- Questioning, posing problems and investigating new ideas
- Translating problems in mathematical and non-mathematical contexts into mathematical processes.
- Developing creative ways to solve problems by being thoughtful, calm and strategic.

How can I prepare for the course?

As you already know, to succeed in mathematics you need to be constantly using and building on your existing skills and knowledge. Your GCSE algebra is very important for a successful start to your studies.

It is very important that you do not "forget" the knowledge and understanding you currently possess at the end of year 11. You will find it helpful to keep certain skills fresh in your mind so that you can use them readily at the start of year 12. Induction and the summer break will also provide an excellent opportunity to explore mathematics in more depth, both in terms of wider applications of areas of maths you have met before and also to 'dip into' mathematics you will meet at A level.

At your induction days in July, you will be given a booklet full of interesting websites to visit, online links to enrichment resources and key questions to keep your mind fresh. Working on these regularly throughout the summer will ensure that you are well prepared for the challenges of Core Mathematics.

Further information: Adriana Reeves (Head of Mathematics)