Curriculum Intent, Implementation and Impact Statements

Subject	Mathematics

Curriculum Intent

The Mathematics department purposes are to provide a curriculum that allows students to develop their analytical and logical thinking skills, as well as improve the skills needed to solve problems in the working world and in everyday life such as personal finance. Our aim is to provide a love of mathematics through a written and practical learning journey within their mathematics lessons where units of work epitomise problems and enable students to apply their mathematical skills and identify 'the maths' in different fields. We intend to ensure students are confident when applying the Mathematics they have learnt to cross - curricular subjects such as a Sociology and Geography by providing a broad and balanced curriculum.

At KS3, the schemes of work embed enrichment tasks that provide exciting opportunities to introduce various mathematical concepts seen in everyday life. In KS4 a more rigorous approach is taken to deepen the learning and application of concepts which are in the GCSE course. At KS5, students are introduced to Statistics and Mechanics that gives them the opportunity to explore other mathematical fields and see the impact mathematics has in different careers and professions.

The Mathematics department incorporate STRIVE values into lessons thus providing students with the opportunities to discuss worded problems and derive mathematical precepts thus enabling students to be 'Tolerant', and show 'Excellence' as well as develop 'Resilience' as they work on mathematical projects.

The Mathematics curriculum has five components, Number, Algebra, Geometry and Measure, Ratio and Proportion and Probability and Statistics and the content is taught from years 7 to 11 as a spiral curriculum. This ensures that the topics are reinforced, retained and consolidated each time they are revisited and this allows for depth and a logical progression from a simple concept to more difficult and complicated principles.

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Curriculum Implementation

The maths department has started to follow White Rose Maths Scheme of work.

This scheme of work sequences all topics learnt in each year from years 7 to year 11. Each topic is broken down into a sequence of subtopics with each having individual power points, worksheets, flash back questions, problem-solving tasks and end of unit assessments. Other resources are using within lessons to engage students, there include videos, bingos, treasure hunts and numeracy weekly numeracy challenges. Teachers use a number of strategies within lessons such as mini low-stakes quizzes, AFL strategies and in class self/peer assessment within each lesson. KS4 students are given daily '5-a-day' tasks which allows for revision and recall. End of unit assessments will allow for students and teachers to assess the knowledge applied and identify remaining gaps. Application and knowledge quizzes are incorporated into the schools assessment cycle and are written based on topics taught earlier in the year. Standardised lessons and PowerPoints are taught throughout the

department; teachers adapt and differentiate where necessary. Key mathematical concepts are taught consistently and identically throughout the department as this provides students with consistency and aids in retaining key concepts. Self, peer and verbal feedback are utilised within lessons and students mark daily tasks and reflect on learning in green pen. After an end of unit assessment students are given a feedback and a DIRT task. Test scores is given to students as well as formal WWW and EBI after a formative or summative assessment. Students are assessed in line with school policies and there are regular formative and application checks along with summative assessments. There is a data capture once every term. Data is used to inform planning, identify gaps in learning and target certain students/groups for interventions.

Curriculum Impact

We hope that students develop an appreciation and an understanding of mathematics in the real world and everyday life and are able to identify 'the mathematics' all around them and in cross curricular links. We expect students to have a love and appreciation for Mathematics who become independent and confident learners who are able to identify and apply mathematical principles throughout the world around them and in everyday tasks such as shopping, bills and finance, taking measurements and building. We want students to be confident in discussing and analysing mathematical concepts and develop analytical and logical thinking skills they need for their post 16 studies. Students develop the skills needed to interpret and analyse data as well as discuss trends. Enrichment tasks develop the problem-solving skills and develop embed the mathematical problem.

The mathematics department use a range of resources to provide high quality lessons which are sequenced and well prepared. The students are assessed in line with the schools expectations and students have the opportunity to reflect on their learning and improve their skills through DIRT and feedback. Home learning tasks help to consolidate to solidify classroom learning. All students are made aware of their target grades set by teachers.