St Gabriel’s

Roman Catholic High School

Learn

Love

Believe

**Department of Mathematics Information**

Vision

Mathematics is the means of looking at the patterns that make up our world and the intricate and beautiful ways in which they are constructed and realised. Numeracy is the means of making that knowledge useful. Mathematics contributes to the school curriculum by developing students’ abilities to:

• Calculate

• Reason logically, algebraically and geometrically

• Think creatively to solve problems

• Handle data

• Make decisions

• Form links between other subjects such as Science, Geography, Technology and Music

Mathematical thinking is important for all members of a modern society as a habit of mind for its use in the workplace, business and finance; and for personal decision-making. The subject transcends cultural boundaries and its importance is universally recognised. Mathematics helps us to understand and change the world.

Staffing within the department, responsibilities and links to other areas

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| Mrs Lisa Rowe (LR)  Curriculum Leader for Mathematics  School Improvement Group (SIG)  Subject Mentor | Mrs Alyson Doonan (AKD)  Assistant Curriculum Leader for Mathematics  Subject Mentor  Geography Link |
| Miss Donna Werner (DMW)  Teacher of Mathematics  Subject mentor  Literacy Link  Science Link  SMSC Link | Mr Matthew Smith (MS)  TLR – Mathematics Intervention  Teacher of Mathematics  Subject Mentor  Enrichment coordinator |
| Mrs Louise Easby (LE)  Acting Assistant Curriculum Leader for Mathematics  Teacher of Mathematics | Miss Caroline Fleming (CMF)  Teacher of Mathematics |
| Miss Robyn Fox (ROF)  Teacher of Mathematics  SEN Champion | Mr Amir Taleifeh (ATE)  Teacher of Mathematics |
| Mr Joseph Georgiou (JG)  Teacher of Mathematics | Miss Aishah Hafeez (AH)  Teacher of Mathematics |

Meeting the needs of individual pupils

We are aiming to become a dyslexia friendly school.

Pupils are banded into half year groups and then set within their band.

Pupils work at similar pace and staff provide enrichment activities to deepen understanding and extension materials accelerate progression, where appropriate.

Learning objectives and home learning are heavily differentiated according to target grades for each class, and finer differentiation is used in class to ensure a balance between consolidation and challenge for each pupil.

Teaching assistants are deployed according to individual needs.

Small group intervention sessions are used to support pupils who are struggling to make expected progress; these are run by specialist mathematics teachers, and sessions are personalised and tailored to meet the exact needs of the individuals in the group.

In Year 9 we begin KS4, in which pupils study 17 units of work; learning objectives are given at the start of each unit, so pupils can see the learning journey for the topic. Pupils sit a pre-learning assessment to gage the depth of their prior understanding of the topics to be studied so teachers can personalise learning by beginning each child’s learning journey for that topic at the correct point. Post-learning assessments track pupil progress on each learning objective and these results are fed back to pupils so they can reflect on their achievements, and find areas to further develop.

We encourage all our pupils to take ownership of their learning and support them to do so. We subscribe to an e-Revision resource, MathsWatch, which we utilise all the way through KS4. It is a collection of hundreds of ‘how to…’ videos explaining each topic that is examined in the GCSE mathematics course. Each set of learning objectives provided at the start of a topic has its MathsWatch clip number stated so if a pupil is absent, struggling with a learning objective or revising they can log on and watch the video, try some questions and even print a worksheet for further practice.

Study support is available to all Year 11 pupils each Tuesday 3.30-4.30pm, for general revision and support.

Assessments

Assessment, recording and reporting are important elements of teaching but they need to be manageable and the information they yield must be useful and used to have the maximum impact on learning.

The Mathematics Department is committed to the principle of ‘assessment for learning’ as well as acknowledging the need for assessment of learning for the purposes of grading and reporting. Assessment, which is explicitly designed to promote learning, is the single most powerful tool we have for both raising standards and empowering lifelong learners. The characteristics of assessment that promote learning include:

It is embedded in a view of teaching and learning of which it is an essential part.

It involves sharing learning objectives with pupils;

It aims to help pupils to know and to recognise the standards they are aiming for.

It involves pupils in self assessment;

It provides feedback which leads to pupils recognising their next steps and how to take them.

It is underpinned by confidence that every pupil can improve.

It involves both teacher and pupils reviewing and reflecting on assessment data.

Pupils’ involvement in the assessment process is vital. We encourage pupils to discuss and demonstrate their solutions, insisting that correct, precise, orderly mathematics is used at all times, both spoken and written.

*If you would like to find out more, please contact Mrs L Rowe, Head of Mathematics at the school.*

