

The Mathematics Department

Mathematics is taught by a team of 9 full time and 3 part time teachers who work closely together. Most members of the department teach across the full age and ability range.

The Mathematics department is based in 8 classrooms. Each mathematics room has a computer, screen display and a supply of equipment, including mini whiteboards and pens.

Grouping of Pupils

Years 7 to 11 are taught in half year blocks and they are set within these blocks. Students are moved between sets appropriately, according to their progress and balancing set numbers. Classroom support for some low attaining students is provided by a team of experienced Teacher Assistants.

Curriculum and Resources

Our curriculum is centred around the core mastery principles and we encourage pupils to explore topics in depth before moving on, using concrete manipulatives and visual models to support them in their abstract problem solving and written methods. We follow an adapted version of the White Rose schemes of work for years 7-11 which builds pupils sequentially towards higher tier entry and Foundation. Our bank of coplanned lessons aim to support all teachers in delivering excellent lessons which embed our core principles whilst encouraging creativity and individuality in the delivery and adaptation of content. The schemes of work allow classwork to be differentiated according to the ability of each group but gives the scope for all students to be fully challenged. This is regularly updated to ensure it is preparing students for the challenges of the new GCSE.

Our comprehensive scheme of works indicates the topics pupils will study within each unit breaking this down into small steps and highlighting opportunities for stretch and support and links the maths they are studying to pupils' everyday lives and cross curricular study. At the start of each unit pupils will complete a pretest, which informs the teacher about the prerequisite knowledge of the pupils. At the end of each unit, pupils sit a low-stakes unit test which informs both teacher and pupil about their progress and next steps. Each term, pupils complete a cumulative assessment, which checks pupils' understanding and retention over time. We use cumulative assessment data to make group changes where this is seen to be necessary.

Pupils all have access to the HegartyMaths website which we use to set homework, independent study and follow up tasks based upon their unit tests and cumulative assessments.

Teaching Strategies

At Coombe Girls' Maths Department, we strive ourselves in delivering outstanding lessons, tailored to meet the needs of each class, which inspire our students to feel confident in Mathematics and to want to succeed. Assessment for learning is used effectively in all lessons, allowing teachers to make informed decisions as to a student's progress and differentiate accordingly. The pace of the learning that occurs throughout our lessons empowers students to challenge themselves, and facilitates an atmosphere in which students can remain engaged and enthusiastic. A variety of teaching and learning strategies is encouraged, and it is expected that each member of the department evolves styles which they find most effective for the parts of the course they are addressing. Dissemination of good practice and peer observation is always encouraged within our team, we have an open door policy and make use of informal observations and lesson studies to support our development within the department.

Year 11

Year 11 are currently entered for the new Edexcel (9-1) GCSE. The OCR Additional Mathematics qualification is offered to some as extra-curricular opportunity.

Our Year 11 results are extremely strong, with the department achieving a Progress 8 score of +0.94 in the summer 2018 results, with 73% of students achieving the new demanding grade 5.

Years 12 and 13

Due to the changes to the new A Level course, students will opt for a 2 year linear A Level in both Mathematics and/or Further Mathematics. The exam board we are studying is EdExcel.

On the new linear course the students will sit 3 exams for A Level Mathematics: Pure Mathematics 1, Pure Mathematics 2 and an Applied paper covering topics from both Mechanics and Statistics.

In Further Mathematics the students will sit 4 exams: Further Pure Mathematics 1, Further Pure Mathematics 2, Decision Mathematics and Further Mechanics.

A-Level Mathematics remains one of the most popular subjects in Coombe Sixth Form.

Extra-Curricular

Alongside our regular maths lessons, the Maths Department offer a variety of extra-curricular opportunities to both inspire and support our learners further:

- Maths Challenge
- Inter School Team Maths Challenge
- Number Day
- One to one numeracy
- Maths Club
- Chess Club
- STEM Club
- Additional Maths FMSQ Qualification (OCR)
- Times table competition
- Pi competition
- Regular Year 11 revision sessions
- Weekly sixth form intervention

Results

94% A*- C in 2016

Best non-selective state school maths results in borough in 2016

Progress 8 score of +0.85 in 2017

73% grade 5+ in 2017

37% grades 9-7 in 2017

11% grade 9s in 2017

98%- A* to E at A2 Maths in 2018

84% A*-C in A2 Maths 2018

100%- A* to A at Further Maths in 2018

30% A* to A at A-level in 2019.

40% Grades 7-9 at GCSE in 2019.