



Trafford Alternative Education Provision



TRAFFORD HIGH SCHOOL
Trafford, Greater Manchester

Mathematics Curriculum

2019

1. Mathematics Department

The Mathematics Department is a highly experienced and committed team of qualified specialist teachers and teaching assistants. They are committed to closing the gap and providing targeted intervention in order to ensure that students come close to meeting or exceeding their target grades.

Specialist Teachers:

Teacher	Year Group
Mike Scragg	KS3/4
Jill Mundy	KS3/4
Kevin Smith Numeracy	KS3

2. Mathematics Teaching Philosophy

In this Mathematics department, we believe in empowering students. Negative past experiences, learning disabilities, and current life stressors all affect a student's ability to gain access to the linear, analytic functions of the brain required to do Mathematics. All students are encouraged by the belief that by working hard at Mathematics they can succeed and that making mistakes is to be seen not as failure but as a valuable opportunity for learning. It is now widely known that Albert Einstein and Thomas Edison appeared dull and slow as students. Winston Churchill flunked English. Leonardo da Vinci, Ludwig von Beethoven, Louis Pasteur, and Hans Christian Andersen had learning disabilities. As we look out over our Mathematics students or mark their exams, we cannot know the depths of their abilities. All we know is what they can currently access.

Therefore, it is in their best interests that we provide an atmosphere that is safe and positive so that they can begin to open their minds to Mathematics. This is not to say that we "lower our standards" or that we become floor mats and "water down our courses."

We provide our student with support. We give them consistent feedback on the progress that they make. Milestones they achieve so that they continue to become confident mathematicians we aim to develop students' resilience and mental discipline through the use of reasoning and logical thought. This adds to students' wellbeing and ability to be constructive and efficient in their lives beyond school.

3. Cornerstones of Great Teaching in Mathematics

- Great teaching in Mathematics builds confidence, a rigorous understanding of mathematical concepts, and rapid recall of key knowledge; all underpinned by a secure conceptual understanding.
- Rich questioning is used throughout our teaching to promote deeper understanding and expose misconceptions.
- High quality practice allows pupils to consolidate understanding, develop efficient methods, and instil in pupils the ability to make logical extensions of gained knowledge to solve unfamiliar problems.
- Lessons are designed to build resilience and independence, supporting students in working in unfamiliar situations, dealing with mistakes and tackling challenging or complex problems.
- Teaching is informed and supported by high quality feedback, marking, accurate self, and peer and teacher assessment to inform the learning journey.
- Fostering a good relationship between students and teachers is essential to promote effective learning and teaching.
- An awareness of the bigger picture makes the journey as important as the solution and real life contexts are used where appropriate

4. Key Stage 3

In Years 7, 8 and 9 pupils will study mathematics according to National Curriculum specifications. All pupils will cover a mastery scheme of learning that will encourage depth of understanding of all topics in Mathematics.

5. Key Stage 4

In Years 10 and 11 pupils are encouraged to study for GCSE and Functional Skills exams. Those who may take a bit longer to access GCSE will be entered for the Number and Measure Level 1 or Entry 1 / 2/ 3 level Mathematics.

6. Reporting to Parents

Progress Reports are completed every half-term. All students are set individual Learning Challenges.

7. Department Meetings

Calendared half-termly department meetings take place, to discuss new initiatives share resources, good practice or moderation.

8. Evaluation and Assessment

Student's progress is evaluated using Fischer Family Trust predictions and their baseline assessments upon entry to the Trafford Alternative Education Provision and the progress they make. This allows necessary intervention to be put in place in order to give students the best chance of obtaining their expected outcomes.

Students complete a diagnostic paper baseline assessment. All students are continually assessed on their grasp of content covered and weekly target questions are set to support or extend their understanding. Formative assessments involving student's self-assessment and feedback take place at the end of larger units of work.

Key stage 4 students complete termly interim assessments which generate a GCSE grade in order to track their progress. Their performance on these assessments is analysed and used to inform intervention to take place in preparation for their GCSE exam.

9. AQA Unit Award Scheme

Trafford Alternative Education also offers AQA Unit Award scheme. This allows the school to accredit the work that students complete throughout the Key Stages.

10. Functional Skills English

Online BKS B GCSE Mathematics' resources offer supplementary activities for students to study at home and support Functional Skills Level 1 qualifications .

11. Cross-curricular links

Vocabulary	Events/People/Places	Concepts	Procedures
Students are required to express their views and ideas in a clear and grammatically correct manner. Good literacy is necessary to understand, respond to, and use a range of specialist language to describe the problems and communicate idea.	The contributions of famous mathematical figures and/or events from the past, as well as present, are not just related to mathematics but society as a whole; therefore, it encompasses all areas of the curriculum. It allows the study of people, places and events from different angles and can put these various subjects into perspective in relation to each other	It is essential that students become thinkers and problem solvers. Mathematics is skills that are applicable to all areas. Learned concepts can be applied in other areas of the curriculum	Mathematical procedures are common to all the aspects of the curriculum; assumption, deduction, use of reasoning, conclusion

12. Career Links

- Civil Service fast streamer
- Financial manager
- Financial trader
- Insurance underwriter
- Meteorologist
- Operational researcher
- Quantity surveyor
- Software tester
- Acoustic consultant
- Actuarial analyst
- Actuary
- Chartered accountant
- Data analyst
- Data scientist
- Investment analyst
- Research scientist
- Secondary school teacher
- Software engineer
- Statistician