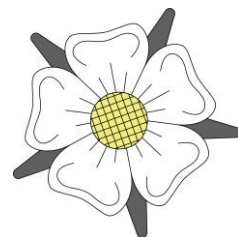


John Taylor Free School



JOHN TAYLOR
FREE SCHOOL

Year 7 Maths

Aims:

- *Create students who think, write, and speak like mathematicians.*
- *Develop their level in mathematical fluency by building effectively from Year 6 mathematics*
- *Understand how to structure and record their thoughts and processes in a clear and logical way*
- *Improve techniques for problem solving through generating links between topics*

Content:

Year 7 – Foundations and Fluency

Key Focus:

- Secure number sense
- Introduction to algebra
- Core geometric reasoning

Main Content Areas:

- Number: place value, integers, fractions, decimals, percentages
- Algebra: expressions, substitution, simplifying, 1- and 2-step equations
- Sequences (linear and introductory non-linear)
- Ratio & proportion (introductory level)
- Geometry: angles, 2D shapes, perimeter, area
- Data & probability: averages, charts, basic probability
- Directed numbers introduced carefully later in the year

Pedagogical Emphasis:

- Heavy use of representations (bar models, number lines)
- Explicit vocabulary teaching
- Avoidance of early overload with negatives and algebraic complexity

Curriculum Map

Year	Term	Curriculum	Assessment
7	Term 1	Sequences, Algebra, Place Value, Fractions, Decimals & Percentages	Exit ticket assessments End of term assessment
	Term 2	Problem solving with the 4 operations and fractions	Exit ticket assessments End of term assessment
	Term 3	Geometry, angles, number properties, probability, data	Exit ticket assessments End of term assessment

Assessment:

Students will be assessed at the end of each unit on their knowledge and understanding of that particular topic. There is a mixture of extended writing assessments along with smaller, more knowledge-based assessments. There will be opportunities on a week-by-week basis for students to self and peer assess their own and each other's understanding of key topic areas. Learning of key words in glossary tests is an important part of the subject. The teacher will also strive to utilise opportunities for formative assessment in every lesson to address any misconceptions students may have before we arrive at the summative assessment.

Extended Learning:

Students will be encouraged to research topics studied in class to consolidate key knowledge and understanding so all learners can progress with confidence. Sometimes, this will take the form of a creative task such as making an earthquake model to help reinforce core learning from the classroom. Learning key words will be set as part of homework.

Connection to the JTFS Approach

Whole School Theme	How does Maths support this?
STRIPE	All units inherently develop the STRIPE skills. The topics are enquiry based with discussion and debate which enable all the key skills to be developed and strengthened over time. Students are consistently asked to be effective participators and contribute ideas to help solve problems that are presented in lessons.
STEAM	Scientific approaches to hazard management are explored. The role of STEAM in the Superpowers is significant and developed throughout the unit, including the influence of the oil and gas industries.
Literacy	Specific language is identified in glossaries specific to each unit. Students complete quizzes on these key words. During formal assessments it is a requirement of S, E and O criteria that subject specific language is used. Deliberate practice of writing extended answers in the Movement project.
Numeracy	Hazard maps and graphs are used which develop use of number. Population density maps, grid references and bar graphs are used regularly. Students are encouraged to use statistical evidence to form substantiated judgements throughout the whole course.
SMSC, British Values and Citizenship	By studying different places in Year 7, students understand the role of different countries in the world. They also develop an understanding of the notion of global power. International Aid develops their understanding of how countries support each other and work together.