

Orsett Heath Academy Maths Department Curriculum Journey

The purpose of the curriculum:

The mathematics curriculum builds up over 5 years, where pupils revisit topics each year, but in greater depth. The curriculum has been structured to ensure pupils have the mathematical skills required to succeed when facing more challenging mathematical concepts. Topics are interconnected allowing pupils to regularly revise key concepts and deepen their knowledge and understanding as they progress through the years. The main aim is to have a good understanding of mathematical concepts through fluency, problem solving and mathematical reasoning, which will enable pupils to have an in-depth understanding of the GCSE syllabus.

Year
7

Unit 1:
Investigating
number systems

Unit 3: Solving
Calculation
Problems

Unit 5: Exploring
Shape

Unit 7:
Discovering
Equivalence

Unit 9: Number
Problems

Unit 11:
Visualising
Shapes

Unit 15:
Measurement
and Estimating

Unit 2: Pattern
Sniffing

Unit 4: General
Arithmetic

Unit 6:
Reasoning with
Measures

Unit 8:
Reasoning with
Fractions

Unit 10:
Investigating
Statistics

Unit 12:
Exploring Change

Unit 14:
Describing
Position

Unit 13:
Proportional
Reasoning

After every unit studied throughout Year 7 an end of unit assessment test will be completed by all students to assess their progress and attainment

At upper KS2 students will be able to extend their understanding of number systems to include larger integers and develop connections between multiplication and division with fractions, decimals, percentages and ratios. Develop their ability to solve a wider range of complex problems and be able to classify shapes with increasingly complex geometric properties and know the vocabulary to describe them

At Lower KS2 pupils become fluent with whole numbers and the four operations including number facts and the concept of place value. They are able to solve a range of problems including fractions and decimals and develop mathematical reasoning the analyse shapes and their properties

At KS1 pupils develop confidence and mental fluency with whole numbers, counting and place value. Develop their ability to recognise, describe, draw and compare and sort different shapes and use the related vocabulary



KS2
Primary
School

What did Key Stage 2 look like?

Can you spot where the skills you gained here link to Key Stage 3?

Baseline tests completed to identify ability and gaps in KS2 skills set

Students will learn the following core content and skills throughout KS3, as shown per topic on the learning journey:

- Number
- Algebra
- Ratio, and Proportion
- Probability
- Statistics

When you reach year 7, The National Curriculum for Maths aims to ensure that all pupils:

- **Develop fluency** including consolidating their numerical and mathematical capability from KS2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots. Select and use appropriate calculation strategies to solve increasingly complex problem and use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships
- **Reason mathematically** including extending their understanding of the number system, making connections between number relationships and their algebraic and graphical representations. Extend and formalise their knowledge of ratio and proportion, identify variable and express relations between variable algebraically and graphically
- **Solve problems** including developing their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems. Develop their use of formal mathematical knowledge to interpret and solve problems, and begin to mode situation mathematically

