



## Curriculum Overview – Mathematics

### Why is the study of Mathematics important?

Mathematics plays a vital role all aspects of life, providing a broad range of skills in problem solving, analytical thinking and reasoning abilities.

Our curriculum is carefully designed to ensure that all students get a firm grounding in the basic rules of number. At KS3 we adopt a mastery approach to develop fluency to consolidate numerical and mathematical capability. This mastery approach develops more confident mathematicians as students move through the curriculum.

At KS4, pupils expand on their knowledge and skills gained at KS3. Either following the Foundation or Mathematics pathways.

The purpose of Mathematics teaching at All Saints is to inspire all pupils through the beauty of Mathematics, be excellent by being fluent with in the fundamentals of Mathematics and succeed with understanding of Mathematics knowledge through an approach in which pupils raise questions and investigate the world in which they live.

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### What skills will you gain from Mathematics?

#### Develop fluency

- Consolidate their numerical and mathematical capability from key stage 2 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 problems.

#### Reason mathematically

- Make and test conjectures about patterns and relationships; look for proofs or counter-examples.
- Interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning.

#### Problem solving

- Develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems.
- Begin to model situations mathematically and express the results using a range of formal mathematical representations.

*"Our curriculum will be structured so that no pupil is prevented from pursuing a course or programme based on their gender, ability, ethnicity, religion or sexual orientation. Pupils with disabilities or special educational needs will, as far as is possible, be provided with reasonable adjustments to enable them to access an ambitious and relevant curriculum."*



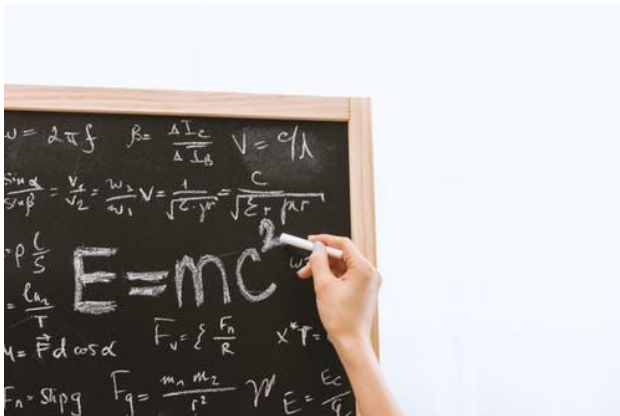
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## What knowledge will you gain from the study of Mathematics?

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Student will gain knowledge of the following strands over the course of their time at All Saints. All will be underpinned with fluency, reasoning and problem solving.

- Number
- Algebra
- Shape and space
- Ratio and Proportion
- Probability and Statistics



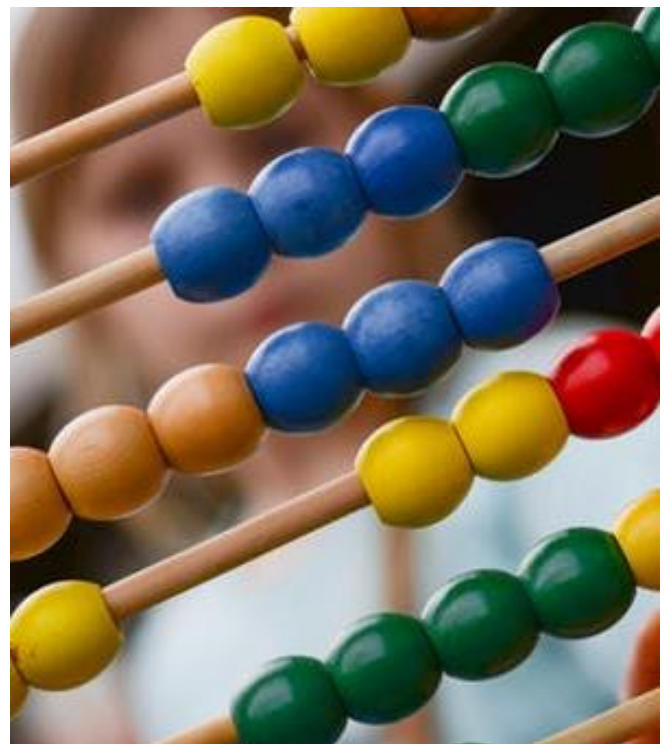
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## How does Mathematics help you in other subject areas?

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Mathematics is universal and vital to all other subject areas, our mastery curriculum allows the transference of knowledge and skills from one topic of learning to another.

- Mathematics touches on many other subjects such as Geography and Science, any subject that analyses data, looks at trends, uses formulae. Computer Science is a subject that uses the algorithmic approach that many topics in mathematics also use. There are opportunities to explore the links between science, engineering and mathematics departments in STEM activities.
- Teachers communicate with each other in these subjects to ensure that pupils are taught the same methods in all subjects and that content is delivered in a sensible order.



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## What can you do to deepen your knowledge and skills of Mathematics?

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To develop a further understanding on Mathematics pupils can:

- Use Hegarty Maths in order to further knowledge of topics that are not yet secure.
- Use a revision guide and other online resources to embed knowledge such as formulas and key terms
- Practice Mathematic skills in everyday life.

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## How are you assessed in Mathematics?

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At **KS3**, students are assessed using the school system of

- Not yet accessing
- Emerging
- Developing
- Secure

At **KS4** students are graded 1-9 on GCSE Assessments. This is three equally weighted exam papers: one calculator, two calculator.

- Foundation (Grade 1-5)
- Higher (Grade 3-9)

Students complete a mastery assessment on one of the 5 Mathematical strands (or a mixture). These are marked by the teacher; then pupils are given a chance to recap over topics they are not yet secure on. Once a week pupils complete a skills check, which is a mixture of all the previous topics to ensure recall and retention.



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## How can *Mathematics* help you in your future?

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The goal is for students to be literate in mathematics so that we can prepare them for a world where the subject is rapidly growing and is extensively applied to a diverse number of fields.

Mathematics develops the analytical skills to process information and support decision making in a variety of contexts and applications.

All careers require an understanding of Mathematics, numeracy and problem solving.

Mathematics is vital to our everyday access to life. We use maths so frequently that we barely think about it and when that happens it comes from an excellent foundation of the skills in maths and the further exploration across the curriculum at Key Stages 3 and 4.



# INSERT SUBJECT – Curriculum Maps

## Year 7:

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Topics	Data	Data	Data	Calculations	Calculations	Calculations	Calculations	Calculations
	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16
Topics	Algebra	Algebra	Algebra	Decimals	Decimals	Decimals	Revisit/Assessments	Fractions
	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24
Topics	Fractions	Fractions	Multiplicative Reasoning	Multiplicative Reasoning	Revisit/Assessments	Angles	Angles	Angles
	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32
Topics	Equations/graphs	Equations/graphs	Revisit/Assessments	Shape	Shape	Shape	Transformations	Revisit/Assessments
	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	
Topics	Transformations	Probability	Probability	Revision	Revision	Revision	Revision	

## Year 8:

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Topics	Number properties	Number properties	Number properties	Number properties	Shapes	Shapes	Shapes	Shapes
	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16
Topics	Algebra and graphs	Algebra and graphs	Algebra and graphs	Algebra and graphs	Algebra and graphs	Algebra and graphs	Revisit/Assessment	Decimals
	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24
Topics	Decimals	Decimals	Angles	Angles	Revisit/Assessment	Number	Number	Number
	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32
Topics	Number	Number	Revisit/Assessment	Sequences and graphs	Sequences and graphs	Sequences and graphs	Fractions, decimals and percentages	Revisit/Assessment
	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	
Topics	Fractions, decimals and percentages	Probability and Statistics	Probability and Statistics	Probability and Statistics	Revision	Revision	Revision	

## Year 9: Foundation

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Topics	Number	Number	Algebra	Algebra	Data	Data	Data	Data
	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16
Topics	Fractions, decimals and percentages	Fractions, decimals and percentages	Fractions, decimals and percentages	Fractions, decimals and percentages	Equations, Inequalities and sequences	Equations, Inequalities and sequences	Recap	Equations, Inequalities and sequences
	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24
Topics	Equations, Inequalities	Equations, Inequalities	Equations, Inequalities	Angles	Angles	Data	Data	Perimeter, area and volume



## Year 10: Higher

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
<b>Topics</b>	Number	Number	Number	Number	Number	Number	Number	Number
	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15	Week 16
<b>Topics</b>	Algebra	Algebra	Data	Data	Fractions, decimals, percentages	Fractions, decimals, percentages	<b>Recap</b>	Angles and Trigonometry
	Week 17	Week 18	Week 19	Week 20	Week 21	Week 22	Week 23	Week 24
<b>Topics</b>	Angles and Trigonometry	Angles and Trigonometry	Graphs	Graphs	Recap	Area and volume	Area and volume	Transformations
	Week 25	Week 26	Week 27	Week 28	Week 29	Week 30	Week 31	Week 32
<b>Topics</b>	Transformations	Equations-quadratic	Recap	Probability	Probability	Multiplicative Reasoning	Multiplicative Reasoning	Further Statistics
	Week 33	Week 34	Week 35	Week 36	Week 37	Week 38	Week 39	
<b>Topics</b>	Further Statistics	Revision/Recap II/Recap	Revision/Recap II/Recap	Revision/Recap II/Recap	Revision/Recap II/Recap	Revision/Recap II/Recap	Revision/Recap II/Recap	



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