



Subject Story: Maths

Intent - What are we trying to achieve?

At Saint Michael's, we aim for our pupils to enjoy Maths, become fluent in the fundamentals and understand how having good mathematical understanding and skills informs our knowledge and understanding of the world around us. We want our pupils to see the beauty in Maths and understand how it helps us to solve real-world problems. This means they need to have mastered the basic concepts of number, measurement, geometry and statistics. Our pupils should be able to solve problems and justify their reasoning using accurate mathematical vocabulary with confidence.

Implementation – How is the curriculum being delivered?

All Year groups use the White Rose medium term planning, which supports teaching to meet the National Curriculum programme of study. The White Rose approach enables the children to have a deep understanding of the Maths curriculum.

Teachers will use a range of schemes and resources to inspire and support the White Rose medium-term planning. These include Classroom Secrets, Third Space and Master the Curriculum. This is supplemented by a large range of concrete materials, which we expect children to use more independently as they grow older. Resources are well stocked and accessible for pupils and teachers.

A number of interventions are available to support and challenge mathematicians. These include Times table interventions, Same-Day interventions led by the teacher, First Class@Number and Success@Arithmetic. The curriculum for each year group is planned and adapted by the teachers to meet their specific year group objectives and a curriculum map is available on the school website for parents to access so they can support learning. We have also written a bespoke calculation policy to ensure consistency and progress in the methods of teaching calculations.

Each week, children receive a Maths home learning task. We use Maths CGP books In Reception, Year 1, Year 2, Year 3, Year 5 and Year 6. Year 4 use the website Timetables Rockstar's to complete home learning. This is sometimes supplemented with SATs practice papers e.g. Year 6. This allows parents to support their child's learning.

Maths is taught in the Maths hour-long lesson each day and each piece of work is assessed by the teacher in accordance with our Assessment and Feedback policy. Where appropriate, 'Chili Challenges' are set to encourage children to choose their level of challenge. This encourages a growth mindset and enables children to challenge themselves. Maths is also reinforced throughout the whole curriculum where possible. Each term the children will also complete a PUMA 'End of Term Assessment' which will provide a percentage and give the teacher a summative assessment of mathematics.

We promote the use of practical investigations and problem-solving activities and balance independent learning with collaborative learning. We strive for our pupils to see Maths in the 'real world' context at every opportunity to build confidence and see the relevance of the subject.

Impact - What difference is the curriculum making?

Our pupils are able to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. They can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Our academic results in statutory assessments are consistently above national averages.

Mathematics will promote the pupils' spiritual, moral, social and cultural development by allowing children to realise that Maths is applied all around us and is a key component of various professions within society. Maths can be used to solve problems that the world may face e.g. engineering advances.

Mathematics



- I can solve problems
- I can calculate fluently
- I know how to use maths in the real world



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Mathematics will promote British Values by encouraging innovation, hard work and teamwork skills. Mathematics will help pupils develop a Growth Mindset by promoting the effort that pupils exert within a Maths problem, reassuring them that perseverance will pay off in their working out. Maths proves to children that perseverance can solve a problem.

If you visited a Maths lesson at St Michael's you would see:

- Enthusiasm, excitement and passion about Maths.
- Children using specialist mathematical vocabulary and terminology confidently.
- Children using their prior learning in moving their Maths understanding forward.
- Access to appropriate and high-quality Maths resources to support and extend children's learning.
- A variety of practical investigations, problem solving activities with a balance of independent and collaborative learning.
- Pupils viewing Maths in the 'real world' context at every opportunity.
- Teachers and Teaching Assistants supporting different groups of children to deepen their understanding.
- Children using a growth mindset.

Pupil Voice

Year 1: 'I like Maths because I get to learn new equations. I like adding. Maths is important because we need to know about numbers.'

Year 2: 'I enjoy Maths because I learn different ways to solve problems.'

Year 4: 'I love Maths because you can learn lots of different methods to solve problems'.

Year 5: 'I enjoy Maths because I learn something new every day. Maths is important because it helps us to get ready for real life.'

An example of progression in our curriculum

Multiplication and Division						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Explore and represent patterns within numbers up to 10 including evens and odds and double facts.	Count in multiples of 2s, 5s & 10s.	recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	recall multiplication and division facts for multiplication tables up to 12×12	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19	identify common factors, common multiples and prime numbers

Our Ambitious Curriculum

Our curriculum is designed to give all our children the knowledge and cultural capital they need to succeed in life.

Pupils with Special Needs: In Maths, children are supported to achieve through carefully chosen, differentiated tasks that may be adapted to meet their individual needs. Adult support is available in lessons, which is designed to include children with special needs so that they can achieve alongside their peers. Children have access to high quality Maths resources such as numicon, dienes, place value counters etc to support their learning and understanding. One of our teaching assistants is trained in the Sandwell Mathematics Test to identify specific numeracy skills requiring targeted teaching. SEN and Disadvantaged pupils are prioritised to attend our Maths interventions. These interventions include Times Tables Intervention, Success at Arithmetic and First-Class @ Number. All of these interventions take place after school and are funded by the school. Other strategies to support pupils accessing the curriculum include:



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- Practical resources to support children's mathematical understanding.
- Visual tool kit on every classroom wall to support each specific topic.
- Knowledge organisers available on each desk to support children's learning and understanding.
- Trained Teaching Assistants and Teachers trained in Dyscalculia and Sandwell Assessments highlight any barriers to learning.
- Pre-teaching and Maths interventions to target support where it is needed.
- Subscriptions to support children such as Times tables Rockstar's.
- Times tables interventions, Success @ Arithmetic, First Class @ Number.

Disadvantaged Pupils: All children at St Michael's have access to the excellent resources and facilities we provide. They all benefit from excellent teaching and learning. All educational visits and workshops at school are fully funded for disadvantaged pupils so every child has access to the same high-quality learning experiences. SEND and Disadvantaged pupils are prioritised to attend our Maths interventions. As well as the after-school interventions named above, class teachers provide specific interventions for the needs of pupils in their year class such as a times tables boost and mathematics pre-teaching.

More Able Pupils: We identify pupils that show exceptional attributes in our curriculum. We have a gallery of excellence which we display excellent Maths work. We have also identified 'Star Mathematicians' who have the opportunity to share their knowledge with others at lunch time with a box of Maths resources. This includes, Maths games, problem solving activities and a wide range of resources such as measuring equipment, numicon, money.

Outstanding Examples of Learning



Year 5 created wooden bridges for DT.
This required measuring and cutting lengths and angles.



Year 2 explored 3D shapes by creating cubes out of jelly and cocktail sticks. They discussed the edges, vertices and faces of each shape.



EYFS enjoyed learning about capacity.
They discussed whether their container was full, half full or empty.