



St Andrew's Primary School

Maths Curriculum Overview

Intent

At St Andrew's, we are passionate about maths and it is our aim to inspire children to develop this same ethos. We want our children to feel confident to explore, to make mistakes, to ask questions, to reason, to investigate different approaches and to work collaboratively in their maths learning. As well as understanding its practical applications, we want to capture the joy and wonder of mathematical concepts in the world around them.

We are guided by the National Curriculum for Mathematics (2014) and the Early Years Foundation Stage Curriculum:

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- 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.

The Statutory Framework for the Early Years Foundation Stage requires that mathematics involves:

- providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure

The early learning goals for mathematics are:

- *Numbers*: children count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.
- *Shape, space and measures*: children use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems. They recognise, create and describe patterns. They explore characteristics of everyday objects and shapes and use mathematical language to describe them.

Intent

It is the intent of the staff at St Andrew's to develop the pupils' understanding of the principles of mathematics; to promote curiosity and to become an active learner with a passion for maths. Pupils will be exposed to carefully designed lessons with opportunities to explore, investigate, question and challenge all while encouraging them to become well-rounded and successful mathematicians. The NCETM curriculum prioritisation in primary maths document gives a framework that allows students to focus on mastering new concepts while building upon previously learned skills. Using this to shape our curriculum, alongside White Rose Maths resources our students develop a strong foundation in mathematics, leading to increased confidence and improved problem-solving abilities. Well sequenced and structured lessons empower students to approach complex problems with confidence and creativity. By developing strong foundational skills and conceptual understanding, students are better equipped to apply their knowledge in various contexts fostering a deeper appreciation for mathematics and its real-world applications.

By the time the pupils at St Andrew's are ready for the next step in their educational journey, they will understand what it means to be a mathematician with transferable problem solving and reasoning skills, they will think critically, challenge their own understanding and become lifelong learners who recognise the importance of maths in the wider world.

Implementation

Maths is taught daily, to provide adequate time for children to develop their maths skills and practise fluency skills. Lessons are taught with a balance of whole class work, group teaching, practical tasks and individual practice to encourage mathematical talk, support and independence.

Whilst children work within mixed ability class groups, teachers may group by ability if they feel it best suits the needs of the children within a specific lesson. A scaffold is provided for children who may need support (e.g. teacher/TA support, use of resources, smaller steps ...), whilst those who need stretch are given an extension task to challenge and stretch their thinking.

In the Early Years Foundation Stage, we follow the EYFS statutory framework, which sets out Early Learning Goals for number and numerical patterns. Teachers use White Rose Maths resources to support their planning, teaching and assessing.

Throughout Key Stage 1 and 2, Mathematics is taught primarily through the steps of the NCETM curriculum prioritisation in primary maths document with White Rose worksheets being used to support learning and critical thinking. Classroom Secrets resources are also available for teachers, offering more opportunities to stretch learners and develop their problem-solving skills. To ensure that key skills taught early in the year are not forgotten by the end, every maths lesson begins with a set of arithmetic questions. Regular fluency sessions revisit and revise these concepts, along with those taught in previous years, in order to strengthen children's memories. In addition, staff use opportunities for cross curricula skills practice for example in science there is the opportunity to revisit statistics and graphs and during History lessons Roman Numerals can be covered.

To further support learning at home and within the classroom, each pupil in KS2 has a Doodle learning account where they have access to AI generated daily questions targeted towards the individual child designed to assist in plugging gaps in learning and consolidating previous knowledge and retrieval practice of secure skills. This resource allows teachers to track closely the gaps in individuals learning, provide additional support for those areas and keep children engaged with Maths as crucial area of the curriculum.

Impact

By implementing the intent, children should be confident and fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They will be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios as well as having an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics.

The impact of our maths curriculum is measured through:

- Key Stage 1 SATs results
- Key Stage 2 SATs results
- Year 4 multiplication Tables Check
- Regular monitoring and updating of Insight Pupil Tracker
- Baseline assessments on Doodle
- Regular monitoring of Maths books by Maths Lead

By the time our pupils leave St Andrew's they are demonstrating a positive attitude towards the learning of maths, able to link mathematical concepts together to support more challenging learning and apply the skills they have learnt to real-world problems. Furthermore, pupils acquire and develop important skills such as critical thinking, collaboration, and resilience which will provide them with life-long knowledge preparing them for future employment within STEM in a role that possibly doesn't even exist yet!

Year 1 Curriculum Map

Previous Reception experiences and counting within 100 Unit 1 – 7 weeks	Comparison of quantities and part-whole relationships Unit 2 – 3 weeks	Numbers 0 to 5 Unit 3 – 2 weeks	Recognise, compose, decompose and manipulate 2D and 3D shapes Unit 4 – 3 weeks
Numbers 0 to 10 Unit 5 – 3 weeks	Additive structures Unit 6 – 4 weeks	Addition and subtraction facts within 10 Unit 7 – 3 weeks	Numbers 0 to 20 Unit 8 – 4 weeks
Unitising and coin recognition Unit 9 – 5 weeks	Position and direction Unit 10 – 1 week	Time Unit 11 – 2 weeks	

Year 2 Curriculum Map

Numbers 10 to 100 Unit 1 – 4 weeks	Calculations within 20 Unit 2 – 3 weeks	Fluently add and subtract within 10 Unit 3 – 1 week	Addition and subtraction of two-digit numbers (1) Unit 4 – 2 weeks
Introduction to multiplication Unit 5 – 7 weeks	Introduction to division structures Unit 6 – 2 weeks	Shape Unit 7 – 2 weeks	Addition and subtraction of two-digit numbers (2) Unit 8 – 3 weeks
Money Unit 9 – 1 week	Fractions Unit 10 – 2 weeks	Time Unit 11 – 1 week	Position and direction Unit 12 – 1 week
Multiplication and division – doubling, halving, quotitive and partitive division Unit 13 – 3 weeks	Sense of measure – capacity, volume, mass Unit 14 – 2 weeks		

Year 3 Curriculum Map

Adding and subtracting across 10 Unit 1 – 2 weeks	Numbers to 1,000 Unit 2 – 10 weeks	Right angles Unit 3 – 2 weeks	Manipulating the additive relationship and securing mental calculation Unit 4 – 4 weeks
Column addition Unit 5 – 2 weeks	2, 4, 8 times tables Unit 6 – 3 weeks	Column subtraction Unit 7 – 1 week	Unit fractions Unit 8 – 5 weeks
Non-unit fractions Unit 9 – 4 weeks	Parallel and perpendicular sides in polygons Unit 10 – 2 weeks	Time Unit 11 – 1 week	

Year 4 Curriculum Map

Review of column addition and subtraction Unit 1 – 3 weeks	Numbers to 10,000 Unit 2 – 5 weeks	Perimeter Unit 3 – 2 weeks	3, 6, 9 times tables Unit 4 – 4 weeks
7 times table and patterns Unit 5 – 2 weeks	Understanding and manipulating multiplicative relationships Unit 6 – 5 weeks	Coordinates Unit 7 – 2 weeks	Review of fractions Unit 8 – 1 week
Fractions greater than 1 Unit 9 – 5 weeks	Symmetry in 2D shapes Unit 10 – 2 weeks	Time Unit 11 – 1 week	Division with remainders Unit 12 – 2 weeks

Year 5 Curriculum Map

Decimal fractions Unit 1 – 5 weeks	Money Unit 2 – 2 weeks	Negative numbers Unit 3 – 2 weeks	Short multiplication and short division Unit 4 – 6 weeks
Area and scaling Unit 5 – 5 weeks	Calculating with decimal fractions Unit 6 – 3 weeks	Factors, multiples and primes Unit 7 – 4 weeks	Fractions Unit 8 – 7 weeks
Converting units Unit 9 - 2 weeks	Angles Unit 10 - 3 weeks		

Year 6 Curriculum Map

Calculating using knowledge of structures (1) Unit 1 – 6 weeks	Multiples of 1,000 Unit 2 – 2 weeks	Numbers up to 10,000,000 Unit 3 – 4 weeks	Draw, compose and decompose shapes Unit 4 – 2 weeks
Multiplication and division Unit 5 – 4 weeks	Area, perimeter, position and direction Unit 6 – 2 weeks	Fractions and percentages Unit 7 – 6 weeks	Statistics Unit 8 – 1 week
Ratio and proportion Unit 9 – 2 weeks	Calculating using knowledge of structures (2) Unit 10 – 1 week	Solving problems with two unknowns Unit 11 – 2 weeks	Order of operations Unit 12 – 1 week
Mean average Unit 13 – 1 week			