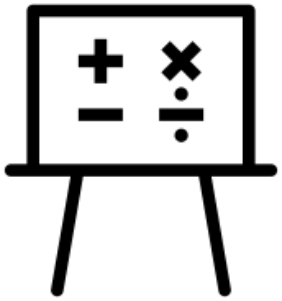
Friskney All Saints
Church of England
Primary School



## Friskney All Saints Church of England Primary School

## Mathematics Curriculum Intent

At Friskney All Saints Primary School, we are **Mathematicians!**

We want our children to love all things mathematical! At Friskney All Saints, we believe mathematics is an important part of children's development throughout school, right from an early age. Mathematics is important in everyday life and, with this is mind, the purpose of Mathematics at Friskney, is to develop an ability to solve problems, to reason, to think logically and to work systematically and accurately.

As is in line with our vision, we Explore Old and New Horizons by ensuring we use knowledge the children are secure with to support new learning. We feel that developing a positive mathematical mindset, is the key to all children fulfilling their mathematical potential. We strive for excellence in the mathematical curriculum we deliver in order that children Realise their Gifts by reaching their potential in their mathematical understanding. All children are challenged within lessons and lessons are delivered using the Mastery Maths approach. New mathematical concepts are introduced using a 'Concrete, Pictorial and Abstract' approach; enabling all children to experience hands-on learning when discovering new mathematical topics, and allows them to have clear models and images to aid their understanding. Arithmetic and basic math skills are practised daily to ensure key mathematical concepts are embedded and children can recall this information to see the links between topics in Maths.

# Mathematics Curriculum Drivers

**Inspiration –** Our bespoke Mathematics curriculum is crafted to ignite students' curiosity, fostering a lifelong passion for numbers and problem-solving. We aim to spark creativity and adaptability, preparing our pupils for a future that demands mathematical fluency and innovative thinking. Tailored learning experiences are meticulously designed to captivate and support all learners at Friskney Primary School and beyond, including those with Special Educational Needs and Disabilities (SEND), dismantling barriers and instilling a deep fascination with mathematical concepts. Enrichment activities, such as local and residential visits, are thoughtfully orchestrated to immerse learners in diverse mathematical environments. Our curriculum is crafted to be irresistible, empowering pupils to recognize and develop their innate talents as mathematicians.

**Excellence** - Our ambitious Mathematics curriculum is structured to ensure that every student achieves their full potential, consistently **striving for excellence**. Progression in learning is carefully scaffolded, with each year building upon previously acquired knowledge through meticulously planned, sequenced units that delineate both substantive and procedural understanding. We place a strong emphasis on vocabulary acquisition, employing a systematic and explicit approach to teaching mathematical language across all subjects. Timely opportunities for retrieval practice are strategically embedded throughout the curriculum, enabling students to reinforce and retain previously learned mathematical concepts.

**Exploration –** We encourage students to explore mathematical concepts, building on prior knowledge and applying knowledge in different situations. Fostering a culture of inquiry and critical thinking empowers students to investigate, problem-solve, and think independently. Our curriculum design is centred on developing oral communication and reading skills, enabling students to explore and deepen their understanding of both familiar and novel mathematical concepts. Through our concrete, pictoral and abstract approach, students develop their knowledge through doing, analysing trends, patterns, and real-world applications of mathematical principles. Anchored in a robust framework of personal development, we ensure that students have a strong sense of the importance of mathematics both educationally and in everyday life, so they can be prepared for the next stage of their mathematical education.

# Maths in the EYFS

| Maths | |
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| Characteristics of effective learning | Children will engage in their learning through the characteristics of effective teaching and learning.<br>The three characteristics of effective teaching and learning are:<br>• **Playing and exploring** – children investigate and experience things and have a go<br>• **Active learning** – children concentrate and keep on trying if they encounter difficulties and enjoy achievements<br>• **Creating and thinking critically** – children have and develop their own ideas, make links between their ideas and develop strategies for doing things |
| Educational Programme | Maths – statutory framework<br>Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes. |

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| Development Matters Reception Statements (Examples of what this could look like) | Counts objects, actions and sounds<br>*(Develop the key skills of counting objects including saying numbers in order and matching one number name to each item.*<br>*Say how many there are after counting to help children appreciate that the last number of the count indicates the total number of the group – cardinal counting principle.*<br>*Say how many there might be before counting to give a purpose for counting "I think there are 8, shall we count to see?"*<br>*Count out a smaller number from a larger group, knowing when to stop shows that children understand the carinal principle.*<br>*Build counting into everyday routines such as register, snack, tidying up, lining up etc.*<br>*Sing counting songs and number rhymes and read stories that involve counting.*<br>*Play games which involve counting.*<br>Subitise<br>*(Show small quantities in familiar patterns and random arrangements.*<br>*Play games which involve quickly revealing and hiding numbers of objects.*<br>*Put objects into five frames and then ten frames to begin to familiarise children with the tens structure of the number system.*<br>*Prompt children to subitise first then count to check.*<br>*Encourage children to show a number of fingers 'all at once', without counting.)*<br>Link the number symbol (numeral) with its cardinal number value<br>*(Display numerals in order alongside dot quantities or tens frames arrangements.*<br>*Play card games such as snap or matching pairs with cards where some have numerals and some have dot arrangements.*<br>*Discuss the different ways children might record quantities for example scores in games, such as tallies, dots and using numeral cards.)*<br>Count beyond 10<br>*(Count verbally beyond 20, for example when playing hide and seek or to time children getting ready.*<br>*Provide images such as number tracks, calendars and hundred squares so children become familiar with two-digit numbers and can start to spot patterns within them.)*<br>Compare numbers<br>*(Provide collections to compare, starting with a very different number of things.*<br>*Use vocabulary 'more than, less than, fewer, the same as, equal to. Encourage children to use these words as well.*<br>*Distribute items evenly, make deliberate mistakes to provoke discussion.*<br>*Tell a story about a character distributing snacks unfairly and invite children to make sure everyone has the same.)*<br>Understand the 'one more than/one less than' relationship between consecutive numbers<br>*(Make predictions about what the outcome will be in stories, rhymes and songs if one is added or taken away.*<br>*Provide staircase patterns which show that the next counting number includes the previous number plus one.)*<br>Explore the composition of numbers to 10<br>*(Focus on composition of 2,3,4 and 5 before moving onto larger numbers.*<br>*Provide a range of visual models of numbers, for example six as double three on dice, or the fingers on one hand and one more or as four and two with ten frame images.*<br>*Model conceptual subitising – there are three here and three here so there must be six.*<br>*Emphasise the parts within the whole.*<br>*Plan games which involve partitioning and recombing sets.)* |

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| | Automatically recall number bonds for numbers 0-10<br>*(Have a sustained focus on each number to and within 5. Make visual and practical displays in the classroom showing the different ways of making numbers to 5.*<br>*Help children to learn number bonds through lots of hands on experiences of partitioning and combining numbers in different contexts and seeing subitising patterns.*<br>*Play hiding games with a number of objects in a box, under a cloth, in a tent, cave etc – "6 went in the tent and 3 came out, I wonder how many are still in there?"*<br>*Spot and use opportunities for children to apply number bonds.*<br>*Place objects into a five frame and talk about how many spaces are filled and unfilled.)*<br>Select, rotate and manipulate shapes in order to develop spatial reasoning<br>*(Provide high-quality pattern and building sets, including pattern blocks, tangrams, building blocks and magnetic construction tiles ad well as found materials.*<br>*Challenge children to copy increasingly complex 2D pictures and patterns.*<br>*Teach children to solve a range of jigsaws of increasing challenge.)*<br>Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.<br>*(Investigate how shapes can be combined to make new shapes: for example two triangles can be put together to make a square.*<br>*Encourage children to predict what shapes they will make when paper is folded. Wonder aloud how many different ways there are to make a hexagon using pattern blocks.*<br>*Find 2D shapes within 3D shapes, including through printing or shadow play.)*<br>Continue, copy and create repeating patterns<br>*(Make patterns with varying rules (including AB, ABB, ABBC) and objects and invite children to continue the pattern.*<br>*Make a deliberate mistake and discuss how to fix it.)*<br>Compare length, weight and capacity<br>*(Model comparative language using 'than' and encourage children to sue this vocabulary. For example, this is heavier than that.*<br>*Ask children to make and test predictions – What if we pour a jugful into the teapot, which holds more?)* |
| End of year Expectations: (ELG) | Mathematics<br>ELG: Number<br>*Children at the expected level of development will:*<br>- Have a deep understanding of number to 10, including the composition of each number;<br>- Subitise (recognise quantities without counting) up to 5;<br>- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.<br><br>ELG: Numerical Patterns<br>*Children at the expected level of development will:*<br>- Verbally count beyond 20, recognising the pattern of the counting system;<br>- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;<br>- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. |

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| Vocabulary: | Vocabulary – enriching and widening (subject specific relating to overarching topics)<br>Mathematical vocabulary children will be exposed to:<br><br>Subitise, groups, equal, more, less, fewer, greater, long, short, big, small, compare, sorting, rules, heavy, light, shapes, 2D, 3D, circle, square, triangle, oblong, pentagon, hexagon, sides, corners, straight, curved, faces, sphere, cylinder, cube, cuboid, pyramid, cone, share, double, same, number, count, pattern, repeating, composition, numicon, |

Our Maths Curriculum has been designed in consultation with Jenny Cook, an independent maths consultant. The spiral curriculum is ambitious and bespoke for the children at our school. The overview can be found below and further information can be found at jennycookconsultancy@gmail.com.

# Mathematics Curriculum Overview 2023-24

*Review annually*

| AUTUMN TERM – 14 WEEKS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **WK** | **EYFS** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| 1 | **Reception Baseline Assessments** | **Measurement** Time | | **Measurement** Time | | **Number** Number & Place Value | |
| 2 | | | | | | | |
| 3 | **Number - counting** | **Number** Number and Place Value | | **Number** Number and Place Value | | **Number** Mental Methods | |
| 4 | **Number – comparison** | | | | | **Number** Addition & Subtraction | |
| 5 | | **Number** Addition | | **Number** Addition | | **Number** Multiplication | |
| 6 | **Number – cardinality** | | | | | | |
| 7 | **Number – composition** | **Number** Subtraction | | **Number** Subtraction | | **Number** Division | |
| 8 | | | | | | | |
| 9 | **Number - counting** | **Measurement** Money | | **Measurement** Perimeter | **Measurement** Perimeter & Area | **Number** Multiplication & Division | **Number & Fractions** |
| 10 | **Number - counting** | | | **Number** Multiplication and Division Number & Place Value | | **Fractions** | |
| 11 | **Pattern** | **Number** Multiplication Number & Place Value | | **Number** Multiplication | | | |
| 12 | | | | **Number** Division | | **Fractions** | **Fractions & Measurement** |
| 13 | **Spatial awareness** | **Geometry** Properties of 2D shapes | | | | **Geometry** Properties of Shape | |
| 14 | **Shape** | **Measurement** Length & Height | | **Geometry** Properties of 2D shapes | | **Statistics** | **Statistics & Measurement** |

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# Mathematics Curriculum Overview 2023-24

*Review annually*

| SPRING TERM – 12 WEEKS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **WK** | **EYFS** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| 1 | **Number – counting** | **Number**<br>Number and Place Value | | **Number**<br>Number and Place Value | | **Number**<br>Number & Place Value | |
| 2 | | **Number**<br>Addition | | **Number**<br>Addition | | **Fractions** | **Fractions**<br>**Ratio & Prop** |
| 3 | **Number – counting** | **Number**<br>Subtraction | | **Number**<br>Subtraction | | **Number**<br>Addition & Subtraction | **Number**<br>Addition & Subtraction<br>**Statistics** |
| 4 | **Number – comparison** | **Number**<br>Subtraction | | **Fractions** | | **Number**<br>Multiplication | **Number**<br>Multiplication and Division<br>**Fractions** |
| 5 | **Number – composition** | **Number**<br>Multiplication<br>Number & Place Value | | | | **Fractions** | |
| 6 | | **Number**<br>Division | | **Statistics** | | **Fractions** | **Fractions**<br>**Ratio & Prop**<br>**Statistics** |
| 7 | **Measure – length, weight & capacity** | | | **Number**<br>Multiplication & Division | | **Measurement**<br>**Geometry**<br>Properties of Shape | **Measurement**<br>**Algebra** |
| 8 | | **Number**<br>Fractions | | **Number**<br>Multiplication | | **Geometry**<br>Position and Direction | |
| 9 | **Pattern** | **Number**<br>Fractions | | **Number**<br>Division | | **Geometry**<br>Properties Of Shape<br>**Measurement**<br>**Number** | **Geometry**<br>Properties Of Shape<br>**Measurement**<br>**Algebra** |
| 10 | | **Measurement**<br>Time | | | | **Division** | **Ratio & Proportion** |
| 11 | **Spatial awareness** | **Geometry**<br>Position & Direction | | **Measurement**<br>Money | | **Number**<br>Multiplication & Division | **Algebra** |
| 12 | **Shape** | **Assessment** | | **Assessment** | | **Assessment** | |

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# Mathematics Curriculum Overview 2023-24

*Review annually*

| SUMMER TERM – 13 WEEKS | | | | | | | |
|---|---|---|---|---|---|---|---|
| **WK** | **EYFS** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| 1 | **Number – counting** | **Number** Number & Place Value | **Statistics** | **Number** Addition | | **Number** Number and Place Value | **Revision and Consolidation** |
| 2 | **Number – comparison** | | | **Number** Subtraction | | **Number** Addition | |
| 3 | **Number – composition** | **Number** Addition | | **Fractions** | | **Number** Subtraction | |
| 4 | **Number – composition** | **Number** Subtraction | | | | **Number** Multiplication & Division | |
| 5 | **Number – composition** | **Number** Addition & Subtraction | | **Measurement** Mass, Volume & Capacity | **Measurement & Fractions** | **Statistics** | **KS2 Assessments** |
| 6 | **Number – composition** | **Measurement** Mass & Weight | | **Measurement** Time | | **Measurement** Time | |
| 7 | **Number – composition** | **Number** Multiplication | | **Measurement** Time | **Statistics** | **Measurement** Time **Statistics** | |
| 8 | | **Number** Division | | **Number** Multiplication | | **Number** Multiplication | |
| 9 | **Measure - time** | **Fractions** | | **Number** Division | | **Number** Division | |
| 10 | **Shape** | **Measurement** Capacity & Volume | **Measurement** Capacity, Volume & Temperature | **Number** Multiplication and Division | | **Measurement** **Number** Multiplication and Division | |
| 11 | **Shape** | **Geometry** Properties of Shape | | **Geometry** Properties of Shape | | **Geometry** Properties of Shape **Number** Multiplication & Division **Measurement** | **As Y5 & Algebra** |
| 12 | **Pattern** | **Measurement** Time | | **Geometry** Properties of Shape | **Geometry** Position and Direction | **Geometry** Properties of Shape | |
| 13 | | **Assessment** | | **Assessment** | | **Assessment** | |

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