



**Snarestone Church of England  
(Aided) Primary School**

**MATHEMATICS POLICY**

Date of Review: May 2024

Date of Next Review: May 2027

Signed Headteacher:

A handwritten signature in black ink, appearing to read "T. Jewitts".



## Snarestone CE (A) Primary School

*'Participate, excel, take pride!'*

# MATHEMATICS

### Our Vision:

*As a community, we are working together to ensure educational excellence underpinned by our Christian ethos and values, enabling all to live a rich and abundant life and to achieve their full potential. Each individual should leave us fully prepared for the next stage of their life.*

*(Reflecting John 10:10)*

**Jesus said, 'I have come to give life – life in all its fullness.'**

### Intent

The 2014 National Curriculum for maths aims to ensure that all children:

- become fluent in the fundamentals of mathematics;
- are able to reason mathematically;
- can solve problems by applying their mathematics.

At Snarestone, these skills are embedded within our maths lessons and developed consistently over time. We are committed to ensuring that children are able to use their mathematical skills and knowledge confidently in a range of different contexts. We want to raise standards across the school and provide more opportunity to revisit fluency skills and reasoning tasks. We intend to use a variety of teaching methods and resources that allow all pupils equal access to mathematics. Children will be appropriately challenged and supported through varied fluency, reasoning and problem solving activities. Irrespective of personal starting points, children will explore maths in depth, and use a range of mathematical vocabulary to reason and explain their methods and make links.

We want all children to enjoy mathematics, to recognise the importance of maths in the wider world and to experience success. We are committed to developing the children's curiosity and resilience for the subject, as well as their ability to reason and problem-solve.

## **Implementation**

At Snarestone, we teach mathematics based on the aims and objectives from the 2014 National Curriculum. We implement our approach through high quality teaching and by embedding a mastery approach across the school. The delivery of appropriately pitched work for all groups of learners is supported by the materials from the White Rose Maths scheme of learning, as well as other high-quality resources such as Mastering Number, 'Ready to Progress' and NRich. In Reception, children use a combination of Mastering Number and White Rose maths. Numberblocks programmes and related activities also deepen their number sense.

Mathematical concepts are introduced and built upon through a series of direct teaching sessions. These lessons are planned and delivered in accordance with the White Rose Maths small steps progression. Mathematical topics are taught in blocks, to enable the achievement of mastery over time. We challenge pupils by asking them to explore mathematical concepts in more depth. This focus on depth eventually leads to greater progress because it gives all learners the chance to become secure in their understanding.

In lessons, we use concrete apparatus and visual representations to help children visualise and internalise mathematical concepts. Through the use of apparatus and representations, our pupils gain confidence as independent learners to use resources and solve problems. This is known as the CPA (concrete<pictorial<abstract) approach. A variety of manipulatives or apparatus can be used whenever needed, including place value counters, ten frames, number lines, Numicon and Diennes.

Whilst the large majority of children progress through the curriculum content at the same pace, varied starting points and timely teacher interventions are utilised to help move children on. Some children with SEND will receive personalised learning. Independent work provides the means for all children to develop their fluency further, before progressing to problem-solving and reasoning which is modelled by the class teacher. Each lesson provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory and investigative tasks.

Practice and consolidation plays a central role in helping to commit learning to long-term memory. In addition to daily maths lessons, children will practise their mental and arithmetic knowledge in order to reinforce and consolidate previous learning; increase fluency, speed and accuracy; and improve confidence. Regular use of Mastering Number, Times Tables Rock Stars, Numbots, Flashback 4 and Numberblocks will enable children to practise and retain the number skills and strategies needed to be successful in their learning. The Ready-to-Progress documents are used to identify and address gaps and misconceptions in pupils' maths knowledge.

## **Impact**

Ongoing assessment takes place within each maths lesson, including effective marking and feedback. Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention. These are fed into subsequent planning to ensure the gaps in the children's learning are diminishing.

End of block White Rose assessments, as well as termly PUMA tests, are used to identify gaps in knowledge. These ensure precise teaching and targeted focus for all children in whole class teaching sessions and smaller intervention groups. Regular monitoring of the children's learning will take place.

We recognise that quality first teaching and a consistent practice in maths are essential in improving outcomes for all children. The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills.

At Snarestone, we want all children to experience challenge and success in mathematics by developing a growth mindset and learning to take a risk. Children can underperform in maths because they think they can't do it or are not naturally good at it. Teachers reinforce an expectation that all children are capable of achieving high standards in maths. Engaging activities help to promote the enjoyment of maths. Regular and ongoing assessment informs teaching to support and enable the success of each child with carefully-scaffolded and challenging activities. These factors ensure that we are able to maintain the high standards we strive for as a school and the children experience achievement and a secure understanding of the fundamental skills needed in maths throughout primary school and to prepare them for the next stage of their education.

## **What our children say about mathematics:**

*'I like times tables. The times tables mountain is good because it helps me get ready for the end of year 4 test. It challenges me.'*

*'There are so many different things in maths, such as brackets.'*

*'I love challenges because I like challenging myself.'*

*'I like learning new language like 'obtuse'.'*

*'I like learning new things about maths like counting numbers to get bigger numbers.'*

*'Maths is really fun because you're exploring new things. It's my favourite!'*

*'I just love maths!'*

# Yearly Overviews

## Reception

| EYFS Maths Overview                  |  |  |  |  |  |  |
|--------------------------------------|--|--|--|--|--|--|
|                                      | Autumn 1   | Autumn 2   | Spring 1   | Spring 2   | Summer 1   | Summer 2   |
|                                      | <p>Developing a <b>strong grounding in number</b> is essential so that all children develop the necessary <b>building blocks</b> to excel mathematically. Children should be able to <b>count confidently</b>, develop a deep understanding of the <b>numbers to 10</b>, the <b>relationships between them</b> and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using <b>manipulatives</b>, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which <b>mastery of mathematics</b> is built.</p> <p>In addition, it is important that the curriculum includes <b>rich opportunities for children to develop their spatial reasoning</b> skills across all areas of mathematics including shape, space and measures. It is important that children develop <b>positive attitudes and interests in mathematics</b>, look for <b>patterns and relationships</b>, <b>spot connections</b>, <b>'have a go'</b>, <b>talk to adults and peers</b> about what they notice and not be afraid to make mistakes.</p> |  |  |  |  |  |
| <b>Number and Numerical Patterns</b> | <p><b>Mastering Number:</b><br/>Creating patterns and exploring numbers within 4, including perceptually subitising within 3</p>   | <p><b>Mastering Number:</b><br/>Creating patterns and exploring numbers within 5, including perceptually subitising within 5; begin to count beyond 5; begin to recognise numerals; explore the composition of numbers within 5.</p> | <p><b>Mastering Number:</b><br/>Continue to explore patterns within 5 and explore the composition of 6; develop verbal counting to 20 and beyond</p>   | <p><b>Mastering Number:</b><br/>Explore symmetrical patterns, linking this to 'doubles'; become more familiar with the counting pattern beyond 20; explore odd and even numbers; explore the composition of numbers within 10.</p> | <p><b>Mastering Number:</b><br/>Practise increasingly familiar subitising arrangements; develop verbal counting to 20 and beyond; explore the composition of 10; order sets of objects.</p>  | <p><b>Mastering Number:</b><br/>Consolidate their understanding of concepts previously taught through working in a variety of contexts and with different numbers.</p> |
| <b>Shape, Space, Measures</b>        | <p><b>Shape, space and measures (WRM):</b></p> <ul style="list-style-type: none"> <li>Talking about the routine of the day and using language like, 'before' and 'after';</li> <li>Using comparative language such as, 'taller', 'shorter' and 'the same';</li> <li>Being more confident in identifying shapes in the environment;</li> <li>Recognising particular shapes that may be useful for certain tasks;</li> <li>Making more meaningful pictures, patterns and arrangements with shapes.</li> </ul>  |  | <p><b>Shape, space and measures (WRM):</b></p> <ul style="list-style-type: none"> <li>Beginning to experiment with length, height and capacity;</li> <li>Beginning to compare length, weight and capacity;</li> <li>Identifying money and using money in play;</li> <li>Recalling the names of some 2D and 3D shapes;</li> <li>Ordering and sorting according to simple properties;</li> <li>Using the language of direction when programming toys.</li> </ul> |  | <p><b>Shape, space and measures (WRM):</b></p> <ul style="list-style-type: none"> <li>Use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities;</li> <li>Create and describe patterns;</li> <li>Explore characteristics of everyday objects and shapes, and use mathematical language to describe them;</li> <li>Use money with increased confidence.</li> </ul> |  |

## Year 1

|               | Week 1   | Week 2 | Week 3 | Week 4  | Week 5 | Week 6  | Week 7  | Week 8 | Week 9  | Week 10                            | Week 11                                       | Week 12              |
|---------------|--|--------|--------|---|--------|---|---|--------|---|------------------------------------|---|----------------------|
| <b>Autumn</b> | <p>Number<br/><b>Place value (within 10)</b></p>     |        |        |   |        | <p>Number<br/><b>Addition and subtraction (within 10)</b></p> |   |        |   |                                    | <p>Geometry<br/><b>Shape</b></p>              | <p>Consolidation</p> |
| <b>Spring</b> | <p>Number<br/><b>Place value (within 20)</b></p>     |        |        | <p>Number<br/><b>Addition and subtraction (within 20)</b></p> |        |   | <p>Number<br/><b>Place value (within 50)</b></p>  |        | <p>Measurement<br/><b>Length and height</b></p> |                                    | <p>Measurement<br/><b>Mass and volume</b></p> |                      |
| <b>Summer</b> | <p>Number<br/><b>Multiplication and division</b></p> |        |        | <p>Number<br/><b>Fractions</b></p>                            |        | <p>Geometry<br/><b>Position and direction</b></p>             | <p>Number<br/><b>Place value (within 100)</b></p> |        | <p>Measurement<br/><b>Money</b></p>             | <p>Measurement<br/><b>Time</b></p> |   | <p>Consolidation</p> |

## Year 2

|        | Week 1                | Week 2 | Week 3                                | Week 4              | Week 5                             | Week 6 | Week 7     | Week 8                           | Week 9                             | Week 10                                       | Week 11       | Week 12 |
|--------|-----------------------|--------|---------------------------------------|---------------------|------------------------------------|--------|------------|----------------------------------|------------------------------------|---|---------------|---------|
| Autumn | Number<br>Place value |        |                                       |                     | Number<br>Addition and subtraction |        |            |                                  |                                    | Geometry<br>Shape                             |               |         |
| Spring | Measurement<br>Money  |        | Number<br>Multiplication and division |                     |                                    |        |            | Measurement<br>Length and height |                                    | Measurement<br>Mass, capacity and temperature |               |         |
| Summer | Number<br>Fractions   |        |                                       | Measurement<br>Time |                                    |        | Statistics |                                  | Geometry<br>Position and direction |   | Consolidation |         |

## Year 3

|        | Week 1                                  | Week 2 | Week 3               | Week 4                              | Week 5              | Week 6 | Week 7                | Week 8            | Week 9                                  | Week 10                          | Week 11 | Week 12       |
|--------|---|--------|----------------------|-------------------------------------|---------------------|--------|-----------------------|-------------------|---|----------------------------------|---------|---------------|
| Autumn | Number<br>Place value                   |        |                      | Number<br>Addition and subtraction  |                     |        |                       |                   | Number<br>Multiplication and division A |                                  |         |               |
| Spring | Number<br>Multiplication and division B |        |                      | Measurement<br>Length and perimeter |                     |        | Number<br>Fractions A |                   |   | Measurement<br>Mass and capacity |         |               |
| Summer | Number<br>Fractions B                   |        | Measurement<br>Money |                                     | Measurement<br>Time |        |                       | Geometry<br>Shape |   | Statistics                       |         | Consolidation |

## Year 4

|        | Week 1                                  | Week 2 | Week 3               | Week 4                              | Week 5                             | Week 6              | Week 7            | Week 8              | Week 9                                  | Week 10                            | Week 11 | Week 12       |
|--------|---|--------|----------------------|-------------------------------------|------------------------------------|---------------------|-------------------|---------------------|---|------------------------------------|---------|---------------|
| Autumn | Number<br>Place value                   |        |                      |                                     | Number<br>Addition and subtraction |                     |                   | Measurement<br>Area | Number<br>Multiplication and division A |                                    |         | Consolidation |
| Spring | Number<br>Multiplication and division B |        |                      | Measurement<br>Length and perimeter |                                    | Number<br>Fractions |                   |                     | Number<br>Decimals A                    |                                    |         |               |
| Summer | Number<br>Decimals B                    |        | Measurement<br>Money | Measurement<br>Time                 |                                    | Consolidation       | Geometry<br>Shape |                     | Statistics                              | Geometry<br>Position and direction |         |               |

## Year 5

|        | Week 1                                  | Week 2 | Week 3 | Week 4                             | Week 5 | Week 6                                  | Week 7 | Week 8 | Week 9                            | Week 10                         | Week 11    | Week 12               |
|--------|---|--------|--------|------------------------------------|--------|---|--------|--------|-----------------------------------|---------------------------------|------------|-----------------------|
| Autumn | Number<br>Place value                   |        |        | Number<br>Addition and subtraction |        | Number<br>Multiplication and division A |        |        | Number<br>Fractions A             |                                 |            |                       |
| Spring | Number<br>Multiplication and division B |        |        | Number<br>Fractions B              |        | Number<br>Decimals and percentages      |        |        | Measurement<br>Perimeter and area |                                 | Statistics |                       |
| Summer | Geometry<br>Shape                       |        |        | Geometry<br>Position and direction |        | Number<br>Decimals                      |        |        | Number<br>Negative numbers        | Measurement<br>Converting units |            | Measurement<br>Volume |

## Year 6

|        | Week 1                | Week 2 | Week 3  | Week 4                                | Week 5   | Week 6 | Week 7   | Week 8                | Week 9   | Week 10               | Week 11    | Week 12                         |
|--------|-----------------------|--------|---|---------------------------------------|--|--------|--|-----------------------|--|-----------------------|------------|---------------------------------|
| Autumn | Number<br>Place value |        | Number<br>Addition, subtraction,<br>multiplication and division |                                       |  |        |  | Number<br>Fractions A |  | Number<br>Fractions B |            | Measurement<br>Converting units |
| Spring | Ratio                 |        | Algebra   |                                       | Number<br>Decimals                                 |        | Number<br>Fractions,<br>decimals<br>and<br>percentages |                       | Measurement<br>Area,<br>perimeter<br>and<br>volume |                       | Statistics |                                 |
| Summer | Geometry<br>Shape     |        |   | Geometry<br>Position and<br>direction | Themed projects, consolidation and problem solving |        |  |                       |  |                       |            |                                 |

## Calculation Policy

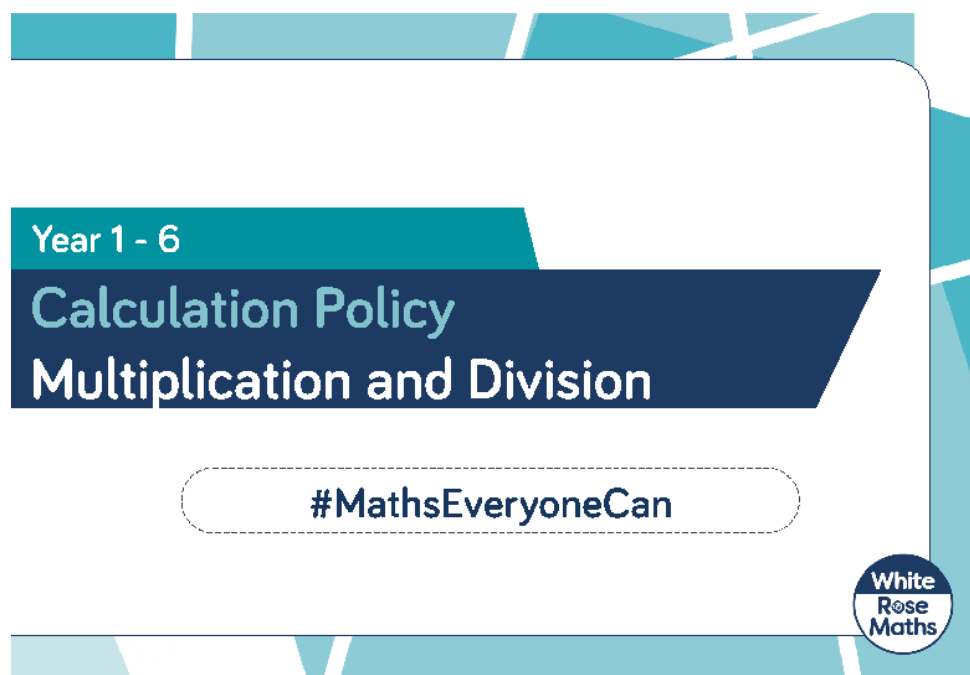
Our calculation policy for addition and subtraction:

Year 1 - 6  
**Calculation Policy**  
**Addition and Subtraction**

#MathsEveryoneCan

White  
Rose  
Maths

Our calculation policy for multiplication and division:



## Times Tables

The national expectation is that children should be able to quickly recall all their times tables to 12x12 by the end of Year 4, and all Year 4 children take the national Multiplication Tables Check in June. This chart illustrates when children should have mastered their times tables facts (these are by the end of each year group):

|        | x2 | x5 | x10 | x3 | x4 | x8 | x6 | x7 | x9 | x11 | x12 |
|--------|----|----|-----|----|----|----|----|----|----|-----|-----|
| Year 2 |    |    |     |    |    |    |    |    |    |     |     |
| Year 3 |    |    |     |    |    |    |    |    |    |     |     |
| Year 4 |    |    |     |    |    |    |    |    |    |     |     |
| Year 5 |    |    |     |    |    |    |    |    |    |     |     |
| Year 6 |    |    |     |    |    |    |    |    |    |     |     |

At Snarestone, we use Times Tables Rock Stars (TTRS), which is proven to help children in Years 3 and 4 develop the fluency and speed needed to complete the check, whilst supporting and motivating those children in Years 5 and 6 who have already completed the check to gain even better quick recall of their tables. All children from the summer term in Year 2 onwards have their own TTRS log-in. Here, they can access games and practice targeted times tables set by the teacher.

