Mathematics Policy

‘Love bears all things, believes all things, hopes all things, endures all things.’

1 Corinthians 13:7

Approved: October 2025

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THE NATURE OF MATHEMATICS

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject."

(The National Curriculum for Mathematics 2014)

MATHEMATICAL INTENT

At All Saints Primary we believe that Mathematics is a tool for everyday life. It is a whole network of concepts and relationships which provide a way of viewing and making sense of the world. It is used to analyse and communicate information and ideas and to tackle a range of practical tasks and real - life problems. Our pupils experience maths in a range of contexts and within other subjects by providing a rich and broad curriculum. Mathematics provides the materials and means for creating new imaginative worlds to explore. We want our pupils to be confident mathematicians who are not afraid to take risks, be fully prepared for their next stage in education and ultimately, function effectively in the wider world.

This journey begins in the EYFS where the children explore mathematical patterns and begin to understand the importance of number and learn foundational key skills and knowledge. They are encouraged to investigate, question and taught how to problem solve when exploring different concepts. This is built upon throughout KS1 and KS2 through the National curriculum by following the White Rose maths smalls steps which encourage the pupils to be fluent in key skills and knowledge to enable them to problem solve and reason about maths with confidence.

MATHEMATIC IMPLEMENTATION

Using the Programmes of Study from the National Curriculum for Mathematics we aim to develop:

- An enjoyment and curiosity of mathematics and for children to feel confident to become successful;
- Children's abilities to use and apply mathematics to solve problems in both the classroom and in 'real life' contexts;
- A confidence to communicate ideas in written form and orally;
- Independent and collaborative ways of working, encouraging children to share ideas and solve problems together;
- A wide range of mathematical vocabulary to be modelled and used in the classroom environment;
- The children's ability to recall mental facts accurately and quickly and using effective written calculation methods;
- Children's logical thinking, reasoning and ability to problem solve as transferable life skills.

As a school we follow the White Rose scheme from Year 1 through the Year 6, with Reception following the NCETM Mastering Number Programme. Both schemes follow a mastery approach to teaching mathematics across the school, allowing the children to become fluent in the fundamentals of mathematics, to be able to reason and problem solve. It uses an approach which allows the pupils to progress through using concrete resources, to being able to understand and produce pictorial representations and the use abstract thinking. This is further outlined in our calculation policy. This

helps the children to understand mathematics and make connections. There is a great emphasis on mathematical language and questioning so pupils can discuss the mathematics they are doing and so support them to take ideas further

Teaching 'Quality first teaching' linked to teaching standards:
All teachers:

1. 'Know where their children are' through the use of concise summative assessment, prior learning, assessment, maths talk
2. 'Understand where their children need to be' through a secure understanding of year group expectations and/or pre key stage expectations and incisive, ongoing, formative assessment
3. 'Know how they are going to get them there' through the use of a range of strategies to promote independence, mastery and high expectations of ALL. Work is differentiated and appropriate support and interventions are deployed at the earliest stage.
4. Effectively deploy adults, specifically during introductions, plenaries & catch-up sessions
5. Plan for progression during and between lessons.

Learning 'Quality first learning'
We work as a team to ensure all of our children:
1. are school ready
2. feel safe & secure
3. are supported by effective classroom routines
4. are emerged in an engaging environment
5. have a clear understanding of the high expectations set for them
6. have high expectations of themselves
7. are confident in their mathematical learning
8. feel ready and excited to be challenged
9. are independent learners
10. are effective critical friends

MATHEMATICAL IMPACT

We our nurturing and supporting our children to become mathematically literate and we aim to develop confident learners who can apply knowledge and skills to a wide variety of concepts within lessons and real-life contexts. Children develop the flexibility and fluidity to move between different contexts and representations of mathematics and the ability to recognise relationships and make connections. A mathematical concept or skill has been *mastered* when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations. Children also learn the importance of maths in further education, in employment and living in the real world to enable them to have the necessary knowledge and skills to function effectively in real life.

Through the implementation of our maths curriculum design, we want all children to make good progress from their starting points and have the confidence to complete tests and achieve well in them. Disadvantaged and SEND pupils make accelerated progress through the effective and timely implementation of early targeted support and interventions.

TEACHING AND LEARNING

Each class teacher is responsible for the mathematics in their class in consultation with and with guidance from the mathematics subject leader. There is a daily mathematics lesson of between 45 and 60 minutes for KS1 and KS2 and a daily focussed 15-minute session for EYFS. A typical lesson involves all classes focusing on core topics and small steps learning to build deep understanding.

During these lessons children engage in:

- The development of mental strategies
- Written methods
- Practical work
- Investigational work
- Problem-solving – including regularly choosing challenges linked to the topic. These are differentiated through providing the children with bronze, silver or gold levels, which they then decide themselves which level they want to complete.
- Mathematical Oracy through discussion using precise mathematical language.
- Consolidation of basic skills and routines

In addition to the daily maths lessons, teachers will provide daily opportunities to practice key mental strategies to develop the confident, instant and fluent recall off key facts. In EYFS this is covered through verbal questioning through the day and at the beginning of each lesson. KS1 use a 15 minute *Mastering Number for KS1* programme four times per week. KS2 do a daily arithmetic session which helps children build confidence and fluency with numbers – making problem solving easier. KS2 also follow the *Number Sense* programme for times tables. This programme supports pupils in developing secure recall and understanding of times tables, enabling them to apply multiplication facts confidently across the wider curriculum.

Teachers of the EYFS ensure the children learn through a mixture of adult led activities and child initiated activities both inside and outside of the classroom. Areas of provision within the classroom support maths, ensuring children are able to access throughout the day to practise and develop skills being taught. This is done through a teaching and learning strategy called ‘In the moment planning’. This is a cycle of observation, assessment and planning. Observations will be carried out on a moment by moment basis, with a few focus children each week who receive extra attention. However, all children will be busy and learning all the time through the areas of provision provided.

Children’s Records of Work

Children are taught a variety of methods for recording their work and they are encouraged and helped to use the most appropriate and convenient method of recording. Children are encouraged to use mental strategies before resorting to a written method. All children are encouraged to work tidily and neatly when recording their work. When using squares one square should be used for each digit.

EYFS record informally within the setting. For example: - on the playground - on whiteboards - using jigsaws - physically ordering numbers. Staff in Foundation use photos and annotations to ensure records of each child’s achievements are maintained and cross referenced with the new framework. This is recorded on an app called Family and can be shared with parents . They move towards a squared book to record their work when the teacher feels is an appropriate time. This can be used when working with an adult, or when working independently.

In EYFS 2cm exercise books are used. In KS1 and LKS2 1cm square exercise books are to be used. This changes to 7mm square exercise books in UKS2

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Planning
The National Curriculum for Mathematics 2014, Development Matters and the EYFS Framework(2024) provide the long term planning for mathematics taught in the school. Teachers will also follow the calculation policy appropriate to their year groups stage of development, to ensure consistency and effective teaching methods across the school.

EYFS follow *Mastering Number for EYFS*, with Years 1-6 using the latest version of mixed –age White Rose schemes of learning. These programmes provide a detailed, structured curriculum which is mapped out across all phases, ensuring continuity and supporting transition.

Short term planning is recorded on an Interactive Whiteboard flipchart (Activ Inspire). These plans identify the areas of learning and lesson objectives; key vocabulary; teaching input and independent activities. They are placed on the planning file on the server each week.

Resources
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In order to support the delivery of maths lessons to all children the school has a large range of resources available. Within the classroom maths resources are available to children at all times, these include basic resources such as number lines, 100 squares, rulers, counters, numicon, etc. Other specific resources (eg, balance scales, metre rulers) are made available as required.

We recognise the importance of a stimulating learning environment. The school provides an environment, which is rich in a wide variety of print, pictures, diagrams, charts, tables, models and images. Each classroom has a mathematical display area, which includes a working wall with mathematical vocabulary, visual aids and interactive activities where appropriate. This is updated regularly in accordance with the area of maths being taught at the time.

Assessment, Feedback and Record Keeping

- Short term
  Children's classwork is assessed frequently through regular marking, analysing children's errors, questioning and discussion. Children's work is marked and feedback is given with next steps as in line with the marking and feedback policy.
- Medium Term
  Each term children in each class are assessed. In years 1- 6 teacher judgements against the skills grids –' learning journeys' (stuck in the back of books) are recorded at the end of each term with NTS tests being used alongside to attain a standardised score. The standardised scores are recorded at this time for progress to be measured. These materials are used alongside judgements from class work to form a teacher assessment for each child. Assessment grids are used to track progress against each objective. In the EYFS, teachers use their observations to make a judgement against the mathematics area of learning and development. These judgements are then fed into the whole school tracking system. A moderating meeting to review the accuracy of these judgements is held each term with the other staff members at scheduled staff meeting time. Governors are given a written report of analysis of results at their next meeting.
- Long Term
  The following tests are also carried out annually:
  - SATs at the end of Y6
  - Multiplication check at the end of Y4
  - The children are assessed in the early years using the Foundation Stage Profile

Contribution of Maths to teaching in other curriculum areas
Mathematics is a tool for everyday life. It is a network of concepts and relationships and is used to analyse and communicate information and ideas in practical tasks and problems. By making links to other subjects at the initial planning stage we aim to provide real context in which to apply skills taught during the maths lessons.

Inclusion
Children with special educational needs and Provision Plans:

- Within the daily mathematics lesson teachers provide activities to support children who find mathematics difficult. Children with SEN are taught their year group's objectives within the daily mathematics lesson and are able to take part at their level through supported scaffolding, modelling and appropriate activities and resources.
- Where applicable children's Provision Plans will incorporate suitable objectives from the Maths curriculum.
- Intervention Groups will take place at times throughout the year, in order to give further support to children working below national expectations.

All children at All Saints Primary, have an equal entitlement to access the Maths curriculum and make progress in order to attain the best they can in the subject.

Monitoring Teaching and Learning
This will be undertaken by the Subject Leader and the Headteacher.
Areas to be monitored will be decided and discussed with members of staff before monitoring week (of which there are one a term) .Results of any monitoring will be fed back to staff quickly at the next staff meeting so that any action required can be carried out effectively. Results of monitoring should also be shared with the Governors.

Roles and Responsibilities

1. **Subject Leader:**
   - Supports teachers in their planning and teaching;
   - Lead by example in the way they teach in their own classroom;
   - Prepare, organise and lead INSET, with the support of the Head teacher;
   - Monitor different aspects of maths teaching and learning feeding back to the Headteacher and staff on findings and future actions.
   - Complete a yearly Action Plan, taking into consideration: OFSTED recommendations; analysis of data, results of previous monitoring. This Action plan will be assessed, added to or amended, where necessary, throughout the year. A review will be made at the end of the 12 months and a new set of actions will be written.
   - Attend Updates provided by LA consultants and Maths Hubs;
   - Be available to discuss with the head teacher, class teachers, parents and governors the progress of maths in the school.

2. **Class Teachers:**
   - To deliver a Daily Maths lesson to their children which is engaging and motivating, is informed by the National Curriculum for Mathematics 2014 and EYFS framework and is accessible to all children.

3. **Children:**
   - To develop their skills, understanding and attainment in Maths through engagement with the lesson, behaviour conducive to learning, independent work and thought and confidence to challenge or ask for help.

4. **Parents / Carers:**

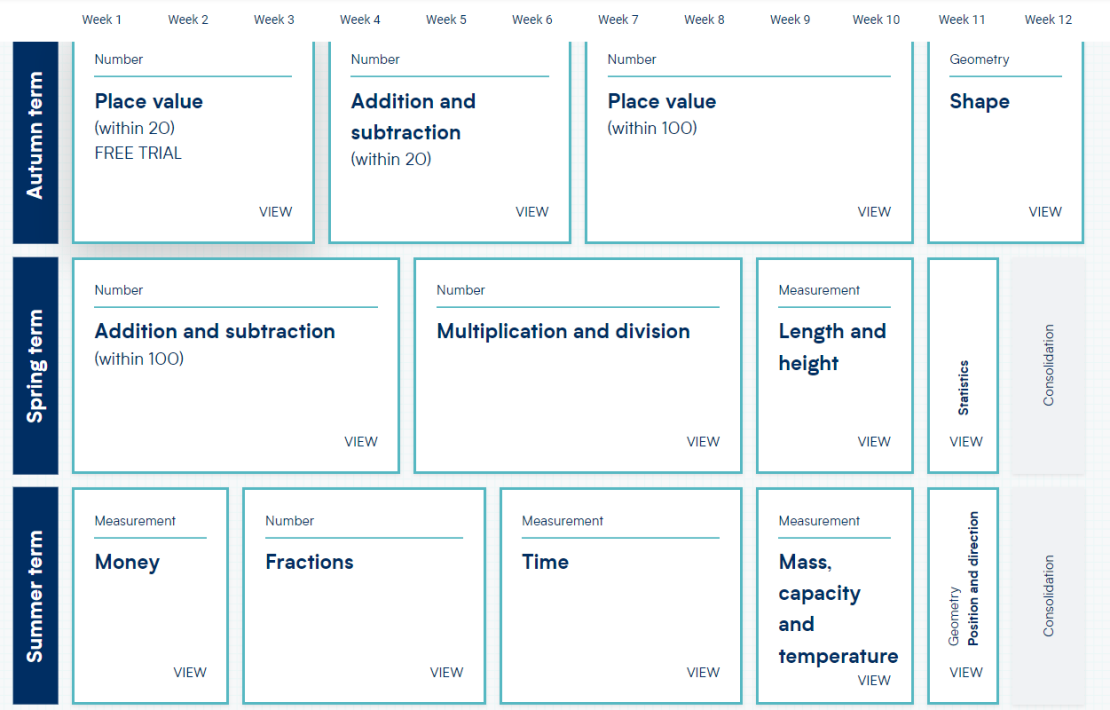
- To support their children's learning in maths by taking an interest in their child's progress, encouraging the children to complete maths homework and having a good relationship with the class teacher so that queries and problems regarding maths can be dealt with easily.

Review Date: October 2026

Appendix 1: Curriculum Drivers

Our 6 Christian values underpin everything we do at All Saints. Our knowledge-based curriculum has been specifically designed to fit the locality and context of our school.
To achieve our vision, we have identified five 'drivers' for our curriculum, which are rooted in our Christian values. These drivers will run throughout our curriculum to ensure that children are equipped with the essential knowledge and skills needed for everyone to fulfil their unique potential.

Appendix 2: yearly overview example – mixed age



Appendix 3: - learning journey example

Year 5 – Maths Learning Journey **Name:**

	Topics				
	Number: Place Value	**Number: Addition & Subtraction**	**Number: Multiplication & division**	**Fractions A**	**Statistics**
Autumn Term	**Small Steps of Learning:** 1. Roman numerals to 1,000 2. Numbers to 10,000 3. Numbers to 100,000 4. Numbers to 1,000,000 5. Read and write numbers to 1,000,000 6. Powers of 10 7. 10/100/1,000/10,000 /100,000 more or less 8. Partition numbers to 1,000,000 9. Number line to 1,000,000 10. Compare and order to 100,000 11. Compare and order to 1,000,000 12. Round to the nearest 10, 100 or 1,000 13. Round within 100,000 14. Round within 1,000,000 **Negative numbers:** 1. Understand negative numbers 2. Count through zero in 1s 3. Count through zero in multiples 4. Compare and order negative numbers 5. Find the difference	**Small Steps of Learning:** 1. Mental strategies 2. Add whole numbers with more than 4 digits 3. Subtract whole numbers with more than 4 digits 4. Round to check answers 5. Inverse operations 6. Multi-step addition and subtraction problems 7. Compare calculations 8. Find missing numbers	**Small Steps of Learning:** 1. Multiples 2. Common multiples 3. Factors 4. Common Factors 5. Prime numbers 6. Square numbers 7. Cube numbers 8. Multiply by 10, 100 and 1,000 9. Divide by 10, 100 and 1,000 10. Multiples of 10, 100 and 1,000	**Small Steps of Learning:** 1. Find fractions equivalent to a unit fraction 2. Find fractions equivalent to a non-unit fraction 3. Recognise equivalent fractions 4. Convert improper fractions to mixed numbers 5. Convert mixed numbers to improper fractions 6. Compare fractions less than 1 7. Order fractions less than 1 8. Compare and order fractions greater than 1 9. Add and subtract fractions with the same denominator 10. Add fractions within 1 11. Add fractions with a total greater than 1 12. Add to a mixed number 13. Add 2 mixed numbers 14. Subtract fractions 15. Subtract from a mixed number 16. Subtract from a mixed number – breaking the whole 17. Subtract 2 mixed numbers	**Small steps of Learning:** 1. Draw line graphs 2. Read and interpret line graphs 3. Read and interpret tables 4. Two-way tables 5. Read and interpret timetables

Year 1/2 | Autumn term | Block 1 – Place value (within 20)

Small steps

Step 1	Count objects within 10
Step 2	Represent numbers to 10
Step 3	Count on and back within 20
Step 4	Understand 10
Step 5	Understand 11 to 15
Step 6	Understand 16 to 20
Step 7	1 more
Step 8	1 less

Count objects within 10

White Rose MATHS

Notes and guidance

The aim of this small step is for children to be able to fluently count to 10 when counting objects, which is a skill both year groups should be familiar with. Focus on the five counting principles when assessing children's ability to count accurately.

The one-to-one principle: One number name is assigned to each object that is being counted.

The stable-order principle: When counting, the numbers have to be said in a certain order.

The cardinal principle: The final object in a group is the total number of objects in that group.

The abstraction principle: Anything can be counted, including things that cannot be touched, such as sounds and movements.

The order-irrelevance principle: The order in which a group of objects is counted is irrelevant.

Children will also explore counting a specific number of objects from a larger group, which requires them to be more organised and careful when counting.

Things to look out for

- Children may count objects more than once or miss out an object that needs to be counted.

Key questions

- How many objects are there? If I move them around, is there still the same number of objects?
- How do you know that you have counted all the objects?
- Did you need to count all the objects? How many are left?

Possible sentence stems

- The last number I said was _____, so there are _____ objects in total.

Single age small step links

- Count objects (Y1)
- Count objects from a larger group (Y1)

- N/A

National Curriculum links

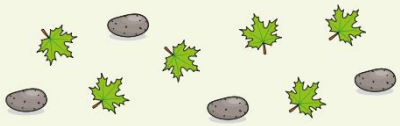
- Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number (Y1)
- Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least (Y1)

Count objects within 10

White Rose MATHS

Key learning

Give children a selection of stones and leaves and ask them these questions.



How many stones are there?

How many leaves are there?

How many objects are there in total?

What happens if I arrange the objects differently? Does the total change?

- How many dots are there on each dice?

Read *The Button Box* by M Reid.

Give children a selection of buttons and ask them to count out:

- 4 yellow buttons
- 6 buttons with 2 holes
- 8 buttons with 4 holes.

Put children in pairs and give them 10 cubes.

Ask children to take it in turns to say a number between 1 and 10

When one child says a number, the other then counts it out in cubes.

How many cubes are left?

- Count 5 conkers.

How many conkers are left?

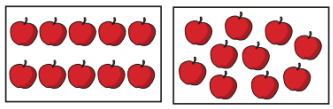
How many conkers are there in total?

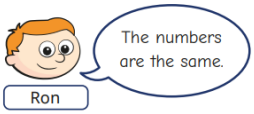
Count objects within 10

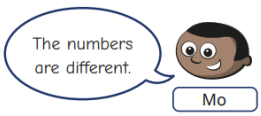
White Rose MATHS

Reasoning and problem solving

The apples show two numbers.







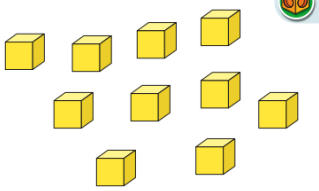
Who do you agree with?

Why?

Which apples were easier to count?

Ron

Tiny counts 4 cubes from this group.



Do you agree with Tiny?

Why?

No

Mastering Number

Reception Overview

Term 1	Term 2	Term 3
Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. **Pupils will:** • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. **Pupils will:** • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. **Pupils will:** • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2
• connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	• begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek

Autumn 1	Week 1	Week 2	Week 3	Week 4	Week 5
Focus	Subitising	Counting, ordinality and cardinality	Composition	Subitising	Comparison
Set 1	Subitising within 3	Focus on counting skills	Explore how all numbers are made of 1s Focus on composition of 3 and 4	Subitise objects and sounds	Comparison of sets - 'just by looking' Use the language of comparison: *more than* and *fewer than*
Autumn 2	**Week 6**	**Week 7**	**Week 8**	**Week 9**	**Week 10**
Focus	Counting, ordinality and cardinality	Comparison	Composition	Composition	Counting, ordinality and cardinality
Set 2	Focus on counting skills Focus on the 'five-ness of 5' using one hand and the die pattern for 5	Comparison of sets - by matching Use the language of comparison: *more than, fewer than, an equal number*	Explore the concept of 'whole' and 'part'	Focus on the composition of 3, 4 and 5	Practise object counting skills Match numerals to quantities within 10 Verbal counting beyond 20

In the main cupboard

- Timers and stopwatches - Sand and digital. We can also use IPADs for timers and stopwatches
- Bee Bots
- Analogue clocks inc One large one and a large digital clock
- Brand new place value flipcharts TH.H.T.O
- Mirrors
- 3D shapes and some 2D with sorting circles
- Large and small peg boards
- Foam dice – symbols and numbers

Class 1

- Counting / number resources appropriate to EYFS
- Shapes – 2D and 3D plus folding sorting circles
- Money -coins and resources appropriate to EYFS
- Measure -balance scales and containers / non standard units to measure

Class 2

- Small measuring tapes / 2x surveyor tapes
- KS1 time resources
- 2D shapes
- mirrors
- Fractions – dominoes and fraction wheels and walls
- Money – coins and KS1 resources
- Dominoes
- Counting and number resources appropriate to KS1

Class 2.5

- Number resources appropriate to LK2
- Small number of protractors
- Coins

Class 3

- Number resources appropriate to SEN and UKS2
- Tray of protractors and compass

Hall cupbord

- Weights / balance scales
- Bag of mixed measuring containers with scales and a box of mixed non- scaled containers
- Newton metres (with science equipment)
- Thermometers (with science equipment)
- Trundle wheels and metre sticks

Staff room

- Polydron for making 3D shapes and structure

All children have access to IPADS and the maths programmes Numbots / TTRS