



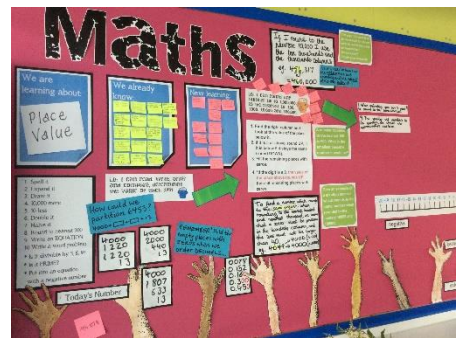
*Our vision is a nurturing community that expects respect, encourages creativity and embraces aspiration.*

Our Federation provides a broad and balanced education that is relevant, engaging and challenging whilst meeting the needs of our pupils. It aims to furnish them with the skills, knowledge and understanding they will need in preparation for their future lives, to be decent, proactive and happy citizens in our local and global community.

## *Maths at Sandford*

Securing number sense and the foundations of Maths matters a lot at Sandford. We believe that ensuring all children make the best progress in Maths allows them to make the most of all the opportunities that our curriculum and life in our school has to offer. This information explains how we approach teaching children the key skills and knowledge of Mathematics and apply them further. We hope it helps you understand our school strategies, and how you as parent can best support your child's learning within mathematics. We also hope that by reading this information you will understand how ambitious we are for your child, how we want to see them achieve in all areas during their time at Sandford, and how we want them to fully enjoy their learning, no matter their starting points.

## *What Mathematics looks like at Sandford*



## How we teach Mathematics at SANDFORD

Our school intention is always to develop a love for mathematics, first and foremost. We have strived to ensure every child feels valued, confident and able to participate unbounded in every lesson. If any pupil fails to grasp a concept or procedure, this is identified quickly and early intervention ensures the pupil is ready to move forward with the whole class in the next lesson. We put a great emphasis on how we teach Mathematics at Sandford. When it comes to being successful Mathematicians we have clear expectations for staff and children, and we continue to develop methods to help parents support their child. We follow the White Rose overviews – a Maths Mastery approach - and compliment these with Number Sense in Y1-3 as well as relevant and meaningful resources for each cohort, which encourage a growth mindset in both pupils and teachers. This approach ensures topics are introduced to children in a logical order and revisited throughout the year to encourage deep learning and make certain children have the number sense and foundational knowledge they need, before moving on to more advanced maths concepts and tackling more challenging number problems.

Below are the methods we use and the skills we teach:

- Our Number Sense programme begins with Visual Number Foundations and Make and Break numbers to 10. This vital skill of subitising provides our pupils with the opportunity to develop a deep and visual understanding of the numbers 1 - 10. They practice subitising quantities up to 5, and learn to subitise quantities between 6 - 10 when presented in structured arrangements. Children also meet the tens frame, and learn to recognise the quantities 1 - 10 presented both twos-wise and fives-wise on the tens frame.
- Fluency in all the addition and subtraction facts within 10 is the next stage. Through the teaching of 12 calculation strategies, children learn to spot key number relationships and to "use what you know to work out what you don't yet know". Learning and applying these strategies gives children a deep understanding of number and number relationships. Explicit teaching of derived fact strategies is an effective route to fluency in addition and subtraction facts for all children, including lower attainers.
- Alongside these methods we embed the Mathematical skills of Fluency, Reasoning and Problem Solving to develop confident mathematicians, following a Maths Mastery approach.

*Fluency* enables children to develop the fundamentals of mathematics, through varied and frequent practice. This enables pupils to develop their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. Fluency is about our pupils understanding why they are doing what they are doing and know when it is appropriate to use different methods, to apply to different contexts.

*Reasoning* involves thinking through mathematical problems logically in order to arrive at solutions. It involves being able to identify what is important and unimportant in solving a problem and to explain or justify a solution using mathematical vocabulary and choosing efficient methods.

*Problem Solving* encourages pupils to identify what mathematics is needed and how it should be used. It allows pupils to make connections between different strands of mathematical knowledge and understanding, to solve a problem. And then, of course, to pose their own problems!

## In the Early Years

We use the White Rose #MathsEveryoneCan guidance to inform our termly overview for Early Years. This is used alongside daily 'Number Sense' sessions to embed the fundamentals of Mathematics. Both of these schemes help bring numbers and ideas to life in the world around them and supports children in diving deeper into what a number actually is and the range of ways in which a number can be represented.

## In Key Stages 1 and 2

Overviews:

We have termly overviews based on the White Rose Mixed Year expectations #MathsEveryoneCan. This is used as a guide and the amount of time on each strand is flexible depending on the needs of the children/cohort.

Resources to support planning:

As a school we use White Rose, Classroom Secrets, Twinkl 'Diving into Mastery', Times Tables Rockstars, NUMBOTS and NCTEM resources to support our teaching strategies. Daily Mathematics lessons incorporate skill-based activities with plenty of talking! Then, Fluency followed by a Reasoning or Problem Solving activity to embed and dive deeper into the children's understanding.

Tailoring the curriculum:

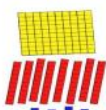
Class teachers tailor the content of each lesson to suit the needs of the children in their class. This is really important to understand, especially as we work as a mixed-year group school. Fortunately, the nature of the Mathematics curriculum means that every year group follows a very similar annual timetable, starting with Place Value and Calculation; moving on through Shape, Measure, Fractions and Statistics as the year progresses. So, every class delivers a general input which spans across both year groups' objectives, then teachers can offer pupils differentiated activities to ensure they are progressing from their individual starting points. They ensure that all children are exposed to key elements whatever their ability. Mathematical language and questioning is used effectively to dive deeper into the children's knowledge within mathematics. The class moves through concepts together, with a 'hug closer' group always available with class teachers and learning support assistants.

Practical resources:

A range of concrete and pictorial resources are used to embed confidence within Mathematics and ensure our pupils are exposed to a variety of different representations.



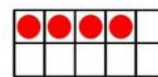
Place value counters



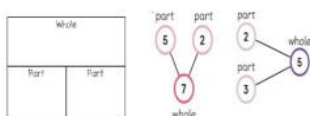
Diennes



Multi-link cubes



Ten frames



Part whole models



Numicon



Family of facts

## *How we make Mathematics exciting and motivating for the children*

The range of strategies, resources and staff enthusiasm have ensured the profile of Mathematics within our school is a positive and fun experience. Every child's needs are at the forefront of what we do and tailoring the curriculum to suit all needs has ensured every child's learning journey in mathematics is a positive one. The use of Maths Talk makes learning accessible to all, especially with the use of stimulating images and talking points to get conversations started!

### *How we assess Mathematics*

Quality First Reflective Teaching: We use this to inform our planning and adapt teaching strategies and resources to support every child's needs. In KS1 and KS2, elements of self-assessment are used to give children a voice and to take ownership of their learning.

Times-table and Arithmetic quizzes: KS2 have weekly times-table and/or Arithmetic quizzes which they self-mark so they are aware of which facts they are unsure of.

Verbal feedback: During sessions teachers actively give verbal feedback and guidance to support the children's learning and confidence within their own abilities.

End of block quizzes: As a school we use the White Rose end of block assessment quizzes. These are to assess the specific skills taught in the block through fluency, reasoning and problem solving questions.

Standardised Assessments: In Years 1, 3, 4 and 5, pupils undertake three termly assessments using NFER materials. In Years 2 and 6, pupils are assessed using past SAT papers. These assessments help teachers to inform their overall teacher judgments three times across the year and provide discussion in Pupil Progress Meetings.

INSIGHT: We input data at the end of each block of teaching. There are objectives for each area of mathematics to assess the children against. We grade them at significantly below, below, working towards, working at and greater depth. Some objectives will not be fully met until the end of the year as the objectives in each area continue to be taught throughout the year and are consolidated.

### *How we help children who find Mathematics difficult*

Phase 1: We use first quality teaching to support children who find maths difficult. We adapt our planning to suit individual needs and use a range of concrete and pictorial resources to support the children's learning. We also ensure support and consolidation is planned into maths sessions. Information is recorded on individual progression maps to inform the SENDCO.

Phase 2: Intervention groups run by class LSAs (or CTs where possible). These sessions focus on the pre-teaching to bridge the children's gaps in knowledge. Practical activities, concrete



apparatus and pictorial recording are used to ensure consolidation and recall of information. Observations and notes are made on the children's progress. Information is added to children's individual progression maps by the class teacher to inform the SENDCO.

Phase 3: Dyscalculia portfolio- children are assessed and areas of weakness are identified. The SENDCO then creates an Individual Maths Intervention programme for the children to follow weekly on a 1:1 basis.

## *How parents can help their children with Mathematics*

At school we teach the children the skills they need to develop fluency and understanding in Maths. We set maths homework with step by step instructions for parents, where relevant, and ask that **multiplication facts and number bonds** are practised at home. We also send out a questionnaire for parents to indicate which areas of maths they are not confident with so we can tailor some maths workshops to support them. We provide a digital platform, through Times Table Rockstars and Numbots, which provides additional opportunities to explore and recall their number and multiplication facts.

However, playing, building, measuring, baking, reading signs, talking about time/timetables and so many other everyday activities are full of mathematical skill. These opportunities are often the most powerful way parents can support their children at home.

## *How we celebrate Mathematics*

Throughout the school we celebrate maths in many ways. We have Mathematical Working Wall displays in every classroom to indicate children's learning journey which generates a positive attitude towards maths and celebrates what we have learned together. Each term the Subject Leader sets a Question on a Maths Grafitti Wall, for pupils, staff AND parents to respond to. Celebration assemblies allow teachers to award pupils Learning Power certificates, Work and/or Conduct marks for Maths. Pupils' books indicate the passion and ability of the pupils in our school for maths. We also take part in National Number Day to continue to develop a love and recognition of maths in the world around us.