

# Numeracy policy

**2024-2025**



## Vision Statement

'Faith, Family, Future'

Jesus built his church upon the strength of St Peter – who was his rock. At St Peter's, we provide a solid foundation on which our community thrives through our rich, aspirational curriculum. As a family, we nurture and unlock individual potential through mutual love and respect; enabling all to flourish now and in the future.

**'Each of you should use whatever gift you have received to serve others'**

**1 Peter 4 v10**

**Last review date:** November 2024

**Numeracy Lead:** Miss Ella Collins

**Next review date:** November 2026

### Vision:

Mathematics is a beautiful subject which has its own unique place in the curriculum. It provides pupils with powerful ways to describe, analyse and change the world. Pupils can experience a sense of awe and wonder as they solve a problem for the first time, discover a more elegant solution and make links between different areas of Mathematics.

Mathematics is the means of looking at the patterns that make up our world and the intricate and beautiful ways in which they are constructed and realised. The language of Mathematics is international. The subject transcends cultural boundaries and its importance is universally recognised. Mathematics helps us to understand and change the world.

Mathematics makes a significant contribution to modern society:

- The basic skills of Mathematics are vital for the life opportunities of our children;
- Mathematics develops the mind and those highly valued cognitive skills.

Pupils at St Peter's study Mathematics to become functioning adults, who are able to think mathematically enabling them to reason, solve problems and assess risk in a range of contexts.

*"Good Mathematics teaching is lively, engaging and involves a carefully planned blend of approaches that direct children's learning....the pitch and pace of the work is sensitive to the rate at which children learn while ensuring expectations are kept high and progress is made by all children"*  
(The Primary National Strategy).

### Aims:

- To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts;
- To develop a 'can do' attitude in our children;
- To broaden children's knowledge and understanding of how Mathematics is used in the wider world;
- To enable our pupils to use and understand mathematical language and recognise its importance as a language for communication and thinking;
- For all children to become fluent in the fundamentals of Mathematics in order that children can develop their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- To be able to reason mathematically;
- To be able to solve problems by applying their Mathematics to a variety of routine and non-routine problems.
- To develop the ability to teach for mastery so that all children have a secure understanding of the National Curriculum for Maths.

### Purpose of Study:

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas. They should also apply their mathematical knowledge across other subjects in the curriculum at all opportunities.

### Organisation / Expectations:

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace, with intervention and class-based support being implemented to ensure that this is achievable where possible. However, decisions about when to progress should always be based on the security of pupils'

understanding and their readiness to progress to the next stage. We will use the National Curriculum Ready to Progress Steps to guide our decisions on this. It is expected that only children who have significant needs will follow an altered curriculum. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Our aim is to ensure that the children have a deep understanding of the individual concepts rather than just a broad understanding of all of them.

Mathematics will be taught in discrete year groups, with TA's being used at the teacher's discretion to support and challenge children's learning.

#### Planning:

The programmes of study for Mathematics are set out year-by-year for Early Years and Key stages 1 and 2.

Planning is taken from the White Rose Maths scheme with teachers using professionalism to scaffold the learning as appropriate to meet the needs of children in their class. There will be no 'old style' differentiation where certain children will be on a different level of work. Instead, scaffolding – such as using templates or multiplication grids – will be used to support each child to achieve the learning for their age-related year group.

Short term planning: Our daily plans are taken from the White Rose Scheme. We use the PowerPoints created by White Rose. Each teacher looks through these and adapts the teaching slides to best prepare the children for the questions they will answer in the work booklets. Each week, alongside the PowerPoints, each teacher completes a planning overview which states the Learning objectives, key questions, possible misconceptions, key vocabulary, use of scaffolding, use of extensions, use of manipulatives and an area to evaluate the week. Reasoning and problem solving is now incorporated into every lesson and is no longer taught as a discrete subject.

Get Ready - Each lesson will begin with a 'Get ready' session. This is incorporated into the planning and links directly to the key skills that the children have already learnt that will then support them with their new learning in their current lesson. They are generally four or five questions that the children then discuss together in pairs. These questions will help prepare them for the next stage in their learning.

Let's Learn- This is the main input for the lesson. It will gradually build upon key skills that the children have already learnt and will then progress onto developing new skills within the unit outcome. There are lots of representatives used throughout the PowerPoints to encourage an understanding of variation e.g. Bar models, part-whole models and arrays. The 'Let's Learn' section is split up so that each new concept is taught discretely. The children learn the new concept and then complete the questions in their workbook related to the input. A development onto the concept/a new concept will then be taught and the children will then complete the questions related to that part of the input in their workbooks. This is a ping-pong style approach.

Scaffolding: As mentioned previously, scaffolding and the use of manipulatives will support those children who struggle to access the work without them. However, the children will not be grouped and automatically always given scaffolding as we are aware that all children learn differently and therefore sometimes may need support whereas in other areas they may not. A classic example is some children often need scaffolding in the calculation lessons but then do not need it for shape lessons (and vice versa). Therefore, scaffolding and manipulatives are planned for in each individual lesson and will be flexible throughout the lessons with regards to which children use them and when.

Manipulatives: Manipulatives will always be available for any child to use: they will not just be available for the lower ability children. Manipulatives actually support children in gaining a deeper understanding of maths and enable them to explore concepts further.

Extensions/Challenges: Children will have an extension book that they can record any extension or challenge work in. Extensions will be given in the form of mini challenges, reasoning and problem solving questions and by the children creating their own questions based on the concepts that they have learnt in the lesson.

Mastering Number at Reception and KS1: Children in Reception, Year 1 and Year 2 access Mastering Number lessons 4 times a week (daily in Reception). These are 10 minute sessions which aim to secure firm foundations in the development of good number sense for all children. The aim over time is that children will leave KS1 with fluency in calculation and a confidence and flexibility with number. Attention is given to key knowledge and understanding needed in Reception classes, and progression through KS1 to support success in the future.

Mastering Number at KS2: Children in Year 4 and Year 5 access Mastering Number lessons daily. These are 10 minute sessions which aim to enable pupils to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense. This is so crucial as knowledge of multiplication and division and its applications forms the single most important aspect of the KS2 curriculum, and is the gateway to success at secondary school.

#### Assessment:

- Teachers will use both summative and formative assessment throughout.
- Teachers will aim to mark as much as possible within the lesson so any misconceptions can be addressed immediately.
- Correct answers will be marked with a tick.
- Incorrect answers will be indicated with an orange highlight. Children will then be expected to try and independently correct their work. They will be expected to show their working out so we know that they have actually calculated the answer rather than guessed or copied. If they need support with getting the correct answer, the teacher can do this and then indicate next to the answer with a WT/S (we talked/supported). Once the answer is correct, it will be highlighted green.
- The learning objective/title in the workbook will be highlighted either green or orange (green for achieved / orange for not achieved). There will then be a indication of either I, T, P or G based on how/who with the child has worked (Independently, Teacher, Partner or Group).
- The children will self-assess with a smiley/middle/sad face based on how they felt about the lesson. This will be drawn next to the title in the workbooks.
- Any use of manipulatives or scaffolding will be written in the workbooks so that we can assess the children based on this.
- Formal written assessments will be taking place in terms 2, 4 and 6, using the White Rose assessments.
- The end of block/unit assessments can be used as an informal way of assessing the children's understanding along the way.

#### Homework

Homework will be set weekly by class teachers on TT Rockstars. The children will be expected to complete 30 sessions (roughly 30 minutes) per week. TT Rockstars will then analyse their results and teachers will use this to inform their future planning.

#### Monitoring and Evaluation:

The numeracy Leader will be responsible for ensuring the quality of teaching and learning in Mathematics across the school. This will be done by a combination of:

Lesson observations, learning walks, talking to children, book looks, monitoring data, staff meetings and updates, assessing the quality of planning, and The White Rose Scheme.

The numeracy co-ordinator will be responsible for providing support, advice and training.

#### Use of ICT:

Calculators should not be used as a substitute for good written and mental arithmetic. They should therefore only be introduced near the end of Key Stage 2 to support pupils' conceptual understanding and exploration of more complex number problems - only if written and mental arithmetic are secure. Teachers should use their judgement about when ICT tools should be used. IPADs are to be used for TT Rockstars or intervention purposes.

#### Spoken Language:

The National Curriculum for Mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

#### Resources:

The successful teaching of Mathematics is dependent upon children understanding the abstract concepts of number and this is best achieved by using concrete apparatus to support and develop their understanding. Manipulatives are to be used by all children in both key stages as required, giving children increasing responsibility for selecting appropriate apparatus to help them solve problems. IPADs are to be available to all year groups for TT Rockstars and intervention purposes.

Reviewed: October 2024