



GOD'S LOVE IN ACTION

St John's and St Peter's CE Academy is a welcoming school family that seeks to serve the Ladywood community by equipping its children and families for success.

By placing **God's love in action** at the heart of everything we do, we hope to see our **children flourish, our culture transformed, and our community thrive.**

Through **high-quality education** and an **enriching curriculum**, we will equip every child with the knowledge and skills they need to **overcome challenges** and therefore **achieve their full potential.**

Our hope is that every child at St John's and St Peter's CE Academy can **uniquely contribute to the community and make it a place they are proud to call home.**

Maths

Implementation

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1. Curriculum and Progression

Our Maths curriculum at St John's and St Peter's CE Academy is underpinned by the White Rose Maths schemes of work. Since moving to this new scheme in 2023, we have adopted a mastery approach to teach maths, underpinned by four key values:

Whole class moves through content at the same pace

When teaching maths for mastery, the whole class moves through topics at *broadly* the same pace. Each topic is studied in depth and the teacher does not move to the next stage until all children demonstrate that they have a secure understanding of mathematical concepts.

Time to think deeply about the maths

Students are given time to think deeply about the maths and really understand concepts at a relational level rather than as a set of rules or procedures. This slower pace leads to greater progress because it ensures that students are secure in their understanding and teachers don't need to revisit topics once they've been covered in depth.

Builds self-confidence in learners

In a traditional primary school maths lesson, children are put in different groups and given different content based on their anticipated ability. This means that from an early age children are classed as those who can and can't "do maths". Teaching maths for mastery is different because it offers all pupils access to the full maths curriculum. This inclusive approach, and its emphasis on promoting multiple methods of solving a problem, builds self-confidence and resilience in pupils.

Differentiates through depth rather than acceleration

Though the whole class goes through the same content at the same pace, there is still plenty of opportunity for differentiation. Unlike the old model, where advanced learners are accelerated through new content, those pupils who grasp concepts quickly are challenged with rich and sophisticated problems within the topic. Those children who are not sufficiently fluent are provided additional support to consolidate their understanding before moving on. The questioning and scaffolding individual pupils receive in class as they work through problems will differ, with higher attainers challenged through more demanding problems which deepen their knowledge of the same content.

The fundamental idea behind our Maths curriculum is to support pupils to be able to perform simpler tasks so that they can then move on to perform more complex tasks. For example, we cannot expect pupils to add two numbers together before they understand what each individual number represents. This thinking gives rise to a typical sequence of 'blocks' of mathematics that you see across most year groups. Within each of these blocks, there are then 'small steps,' which are again sequenced in order of difficulty and dependency. Each step builds carefully from the previous step, building on pupils' prior knowledge to develop new skills, with nothing left out.

Our White Rose Maths curriculum follows the mastery principles – spending longer on topics to help gain deeper understanding, making connections, keeping the class working together on the same topic, and a fundamental belief that, through effort, all pupils are capable of understanding, doing and improving at mathematics. However, we also recognise that just spending a good chunk of time on a topic doesn't mean that all pupils will 'master' it the first time they see it, and that they need to see it again and again in different contexts and in different years to help them truly develop their understanding on their journey to mastery. The curriculum is designed to ensure children know and understand, rather than just be able to do.

In this example below, you can see how the content and knowledge taught in our Place Value units build and build year on year. Beginning with very simple number representations up to 100 in Year 1 and moving to numbers up to 10,000,000 in Year 6, each year adds to the foundation of previous learning.

Place value: Represent

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> identify and represent numbers using objects and pictorial representations read and write numbers to 100 in numerals read and write numbers from 1 to 20 in numerals and words 	<ul style="list-style-type: none"> read and write numbers to at least 100 in numerals and in words identify, represent and estimate numbers using different representations, including the number line 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value 	<ul style="list-style-type: none"> read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit read Roman numerals to 1000 (M) and recognise years written in Roman numerals 	<ul style="list-style-type: none"> read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit
Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1

This is the same for Addition & Subtraction – the foundations of learning are laid in Autumn Year 1 and revisited again in Spring 2. In Year 2 to Year 6, Addition and Subtraction is taught in Autumn 2 once Place Value has been secured.

Addition & subtraction: Calculations

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero 	<ul style="list-style-type: none"> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers 	<ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction 	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers 	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations
Autumn 2 Spring 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2

2. Lesson Structure

Maths lessons follow a simple 6-part structure:

Maths lessons begin with a **Do Now** activity. These short burst recaps help children to recall prior learning, and make connections with the required substantive knowledge for that lesson. This could sometimes take the form of a True/False question, or a quick 4-question recap. After the Do Now, the **Learning Intention** for the lesson and **New Vocabulary** are also shared with the children. Children are signposted to **Sentence Stems** that could help them speak mathematically during the lesson.

Next, the adult will use high quality instruction and modelling to teach the lesson's new learning. Walkthrus teaching strategies, such as **Live Modelling, Modelling Handover (I do, We do, You do)** or **Worked Examples and Backwards Fading** allow pupils opportunity to tackle misconceptions and practice the skills necessary to achieve the learning objective. At a key moment in the lesson, teachers will use a **Check for Understanding** to quickly decide whether pupils are ready to move on. This could be a **Hinge Question, Show Me Boards, Cold Calling** or other related Walkthrus strategies.

Finally, children are given a chance to apply their learning in an **Independent or Group Activity** in their White Rose Maths workbooks. The teacher will use this to assess whether the pupils are ready to move onto the part in the sequence of learning.

When appropriate, the teacher will finish the lesson by recapping the learning and addressing any misconceptions that have arisen. This could be in the form of **Whole Class Feedback, Feedback that Moves Forward**, or **Feedback as Actions**.

3. Practice and Retrieval

We recognise that practice and retrieval is essential for children to build fluency and understanding. For this reason, we provide multiple opportunities for children to practice what they have learned and retrieve knowledge and skills from their long term memory. This includes:

- A Maths Curriculum that revisits prior learning (see progression)
- Every lesson begins with a Do Now retrieval activity to activate prior learning – most children access this independently. This often spans different topics and parts of learning.
- Checks for understanding and Hinge questions are a key part of the lesson– can the children put into practice what they have learned?
- Modelling is an integral part of our Maths lessons – I do, We do, You do provides sufficient time for children to practice what they have been taught.
- White Rose Maths Flashback 4s used to supplement the curriculum – teachers use these as registration activities, homework, or every Maths on a Friday.
- In UKS2, pupils are encouraged to take notes in their Maths Journals so that they can refer back to them when they are working. This promotes independence and helps to prepare them from Secondary School.
- Friday Maths lessons which the teachers use to address misconceptions and recap what has been taught throughout the week.

4. Assessment

Assessment is an integral part of teaching, as it determines whether the goals of education are being met. However, we recognise that assessment goes far beyond tracking spreadsheets and termly knowledge tests. At its core, assessment should lead children to learn more effectively.

Assessments serve the students by letting them know what errors they made and how they could correct those errors. It also helps students to reinforce the content better in the event they don't remember it very well. At St John's and St Peter's Academy we assess Maths through effective formative and summative strategies. It is important to gather as much evidence as possible to ensure that the judgements we make about our children are accurate and informing planning, targeting the needs of the child.

Formative Assessment

- Every lesson starts with a Do Now to activate prior learning and help the children to remember things that they have learnt before.
- Questioning and feedback is a highly effective strategy for assessing Maths within whole class sessions. Teachers finish the session with a recap of learning and addressing misconceptions that have arisen. This could be Whole Class Feedback, Feedback that Moves Forward, or Feedback as Actions – this often looks like going through the completed work in the WRM Workbooks and marking the answers together.
- During shorter Maths lessons on a Friday, teachers recap the learning that has taken place in the week and address any misconceptions that may have arisen. Children are sometimes given extra time to finish work that they haven't completed during their lessons, or work with an extra adult to support their learning on an area they need help with.
- Lessons contain regular Checks for Understanding using strategies such as Show Me Boards, Hinge Questions and Cold Calling. This gives the teacher an opportunity to quickly assess understanding and decide whether the children are ready to access the independent learning.

Summative Assessments

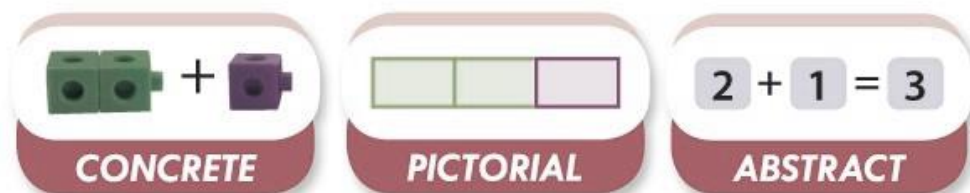
- Termly White Rose Maths Arithmetic and Reasoning Assessments for Y1 to Y6. These are aligned with the curriculum (only covering what the children have been taught) and are standardised using a platform called SmartGrade. The teachers then discuss their data during Pupil Progress meetings and come up with a plan about how to support their pupils.
- National End of Key Stage 2 Maths SATs tests
- National Times Tables Check in Year 4

5. Supporting pupils with SEND

At St John's and St Peter's CE Academy, we aim for all Maths lessons to be accessible for all pupils – this is a key principle in the Mastery approach. We recognise that high-quality teaching is what is best for all pupils, including those with SEND or other additional needs. Our consistent approach to teaching is underpinned by Walkthrus instructional coaching, equipping teachers with a toolkit of research-based strategies that have been proven to work in the classroom.

Where pupils may have additional needs that could prevent them from engaging with the content of a lesson, the class team will make adaptations to ensure that each child can access the learning. Some pupils may require extra time or support in the classroom, while others may require pre-teaching of specific vocabulary or concepts.

In Maths particularly, we emphasise the use of concrete resources to support children who are developing their understanding, in line with the CPA approach. Usually, those children who find maths hard to understand are feeling that way because of how abstract the subject is and how removed many of its symbols are from day-to-day life. Using a CPA approach allows children to get to grips with new concepts by making use of their existing knowledge and experiences by providing them with a more familiar and real-world entry point to new learning.



In addition to this, the expectation is that where necessary, teachers provide scaffolds for difficult tasks. Rather than setting lower expectations for students, they support them to reach ambitious goals using a range of scaffolding processes that guide them forward. We do, however, recognise that at some point, the scaffolding needs to be taken down and children should be able to attempt a task independently.

In exceptional circumstances, some children with a high level of need access an entirely different Maths curriculum based on targets from their SOLAR assessments.

As part of termly Pupil Progress meetings, the Deputy Head and SENDCo meet with the class teacher to identify any barriers to learning that may be hindering progress, liaising with the Pastoral Care Manager to build up a holistic view of all pupils. Staff are confident to raise any concerns they have about specific pupils, and regularly seek guidance for additional strategies or advice.

6. Maths in EYFS

Maths in the EYFS encompasses many skills, from number recognition and simple addition, to describing properties of shape and pattern. Our Reception class has a daily taught maths session, as well as access to high quality resources, focus activities with an adult and exciting maths games and provocations. Maths lessons in Reception follow the White Rose Maths Schemes of work, which closely align with the statutory framework for EYFS 2021. The White Rose Maths Schemes of work are designed to develop mathematical skills in a logical, step-by-step way. As our children learn about counting, problem solving, patterns and shapes (among others) through fun games and activities, they develop positive attitudes to maths and an enthusiasm for learning.

As with the Y1 – Y6 WRM schemes of work, Early Years maths is broken down into blocks, and from blocks into easy, logical steps. Their resources use games, colourful graphics, video and real-world examples of maths in action to nurture an enjoyment of the subject at an early age. We let children explore mathematical concepts with curiosity and without a fear of making mistakes.

Here is the curriculum map for Maths in Reception:

	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 term	Getting to know you		Match, sort and compare FREE TRIAL VIEW	Talk about measure and patterns VIEW	It's me 1, 2, 3 VIEW		Circles and triangles VIEW	1, 2, 3, 4, 5 VIEW		Shapes with 4 sides VIEW		
Spring term	Alive in 5 VIEW	Mass and capacity VIEW	Growing 6, 7, 8 VIEW	Length, height and time VIEW	Building 9 and 10 VIEW	Explore 3-D shapes VIEW						
Summer term	To 20 and beyond VIEW	How many now? VIEW	Manipulate, compose and decompose VIEW	Sharing and grouping VIEW	Visualise, build and map VIEW	Make connections VIEW	Consolidation					

In addition, teachers use the supporting guidance from White Rose Maths to see how schemes of learning link to the two forms of non-statutory curriculum guidance for the EYFS, Development Matters (DFE 2021) and Birth to 5 Matters (Early Education 2021). You can see this from the example below:

Comparison			
Development matters		Birth to 5 matters	
3 and 4 year olds	Reception	Range 5	Range 6
<ul style="list-style-type: none"> Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. 	<ul style="list-style-type: none"> Count objects, actions and sounds. Compare numbers. 	<ul style="list-style-type: none"> Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same! 	<ul style="list-style-type: none"> Uses number names and symbols when comparing numbers, showing interest in large numbers Estimates of numbers of things, showing understanding of relative size
Autumn 3, Autumn 5 Spring 1 Summer 2	Autumn 1, Autumn 5 Spring 1, Spring 3, Spring 4, Spring 5 Summer 1, Summer 6	Autumn 2, Autumn 5	Spring 1, Spring 3, Spring 5 Summer 1, Summer 4

7. Supporting classroom teachers

At St John's and St Peter's CE Academy, we aim to offer our classroom teachers a high level of support. As well as fortnightly individual instructional coaching working on specific teaching strategies, teachers receive maths specific training to help their mathematic pedagogy. Before moving away from Mathematics Mastery and implementing White Rose Maths, we spent a significant amount of time training staff and ensuring they were confidence with the scheme. This included a trial period during Summer 2 (2023) where teachers were given freedom to try out different strategies and see what elements of the scheme did and didn't work.

Now that White Rose Maths is being used across the school, all teachers have access to the White Rose online curriculum materials the scheme provides, including planning, training, and resources. Our Maths lead supports teachers to ensure the scheme is implemented effectively, off

In addition, we have a fully stocked Maths resource cupboard in additional to the standard class resources provided, so teachers are able to carry our practical lessons with the children and ensure then engage in hands on experiences.

We pride ourselves on offering support to all staff - in turn staff know they have on hand support whenever needed.

8. Additional Information

Times Table Rockstars

To aid with quick times tables recall and to help prepare Year 4 for the Official Multiplication Timestables Check, each child is given a Timestables Rockstar login. We set competitions between different years groups at intervals throughout the year.