



Whole School Curriculum Intent

Our intent is to create active learners who can reflect, question, wonder, think, connect, be self-aware and be resilient. We intend to provide opportunities for our children to build knowledge, make meaning and apply understanding across a range of learning experiences. As an increasingly diverse school, the promotion of acceptance and inclusion underpins our curriculum, whilst maintaining our strong Christian values and ethos.

Mathematics Intent

We intend to provide the children with a tool kit of mathematical strategies, underpinned by a secure and appropriate knowledge of number facts. The children will be exposed to a wide range of both mental and written strategies, that will empower them to make secure and accurate judgements; have a deeper understanding of maths, and be confident mathematicians.

The children of St Philip's will be provided with opportunities to use logic, reasoning and to build resilience when solving problems. They will be provided with a maths curriculum that is fun, exciting, challenging and relevant. The children at St Philip's will develop an appreciation of how maths is interconnected to other subject areas, and how it will support them in all aspects of their lives, now and in the future.

Aims

The national curriculum for mathematics aims to ensure that all pupils:

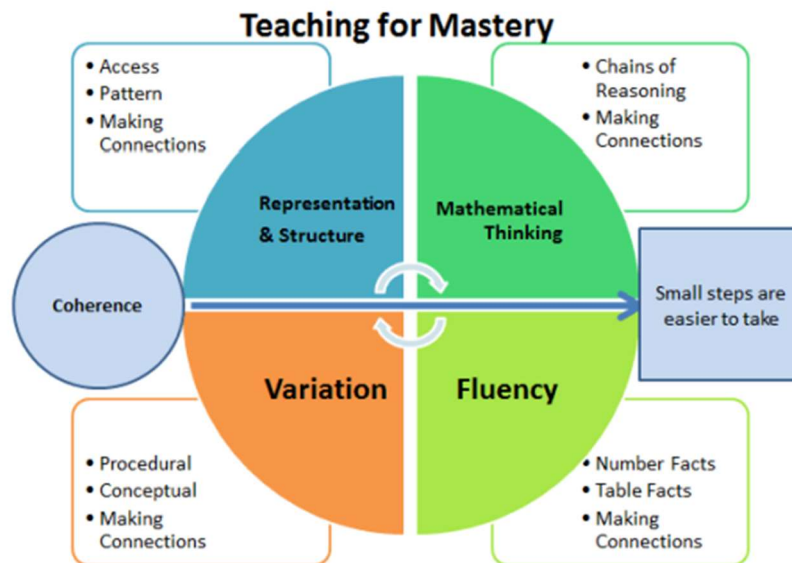
- become **fluent** in the fundamentals of mathematics, including through **varied and frequent** practice with increasingly complex problems over time, so that pupils develop **conceptual understanding** and the ability to **recall and apply** knowledge **rapidly and accurately**.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using **mathematical language**
- can **solve problems** by **applying** their mathematics to a **variety of routine and non-routine problems** with increasing sophistication, including breaking down problems into a series of simpler steps and **persevering** in seeking solutions.

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 to develop **fluency, mathematical reasoning** and competence in **solving increasingly sophisticated problems**. They should also **apply** their mathematical knowledge to science and other subjects.

Mathematics Implementation

Central to our teaching at St Philip's are the **5 Big Ideas** which underpin mastery in mathematics. Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject.

Children working at mastery can: recall rapidly and accurately mathematical facts; make connections between concepts; use a variety of representations to demonstrate understanding and articulate in discussion 'how' they have calculated problems using mathematical language.

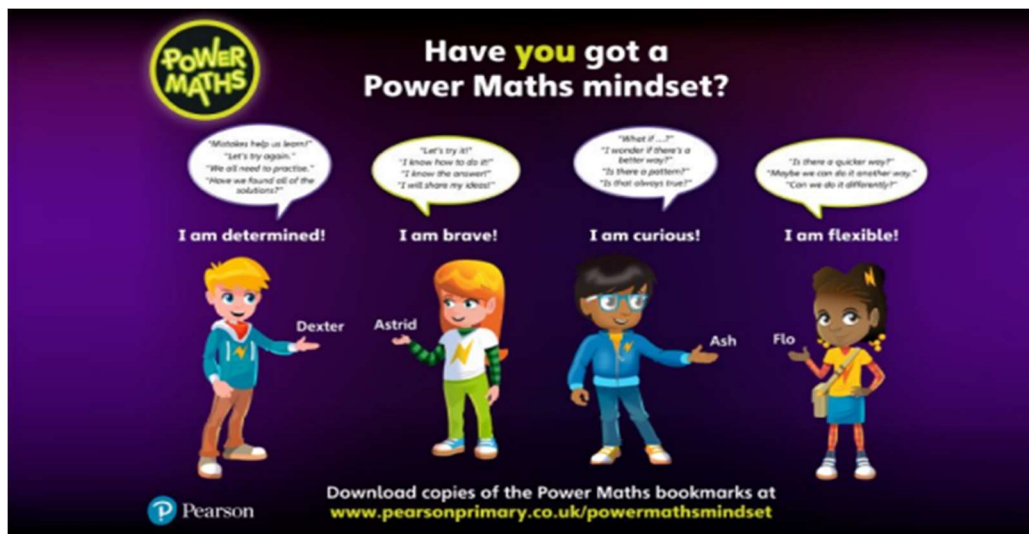


The Mastery approach has been implemented across all year groups, from Reception to year 6, and is underpinned by the Power Maths resource which emphasise the 5 Big Ideas of maths of maths mastery. **Concrete, Pictorial and Abstract Learning** is a feature of maths lessons across school.



At St Philip's CE Primary school we study mathematics daily and have adopted the Department of Education recommended maths scheme **Power Maths**. Power Maths is scheme designed to support the NECTM definition of mastery and is designed to spark curiosity whilst focusing on supporting children's understanding of core concepts and building mathematical confidence. The learning is blocked to ensure depth and breadth of knowledge within each strand of mathematics.

We believe knowledge is not fixed and embed a **growth-mindset** approach into all our children- through hard work, practice and a willingness to explore mistakes all children can succeed.



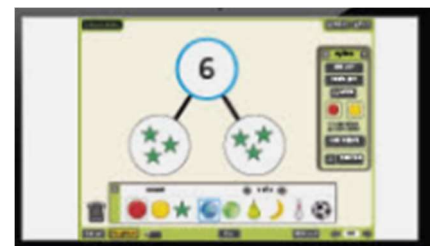
Fluency is a key part of learning at St Philip's, there is a focus on counting to ensure children have a secure understanding of the number system. An importance is placed upon knowledge of number bonds and rapid recall of times tables and their related facts. This fluency supports children's ability to think flexibly and make connections to extend their knowledge.

We are committed to ensuring that pupils secure their knowledge of Times Tables and the Related Division Facts by the end of year 4. We encourage pupils to engage at home practising their fluent recall using Times Tables Rockstars.



EYFS

At St Philip's we understand the importance of early experiences of mathematics, and use the Development Matters guidance material within our Early Years setting. Power Maths and Mastering Number are used in Reception to develop a strong grounding in number. This is an essential building block to ensure children are able to access the Key Stage 1 curriculum.



The key ELG's for mathematics are:

- To understand numbers to ten, including number bonds to 5
- To recognise patterns and shapes
- To compare quantities

Practitioners provide creative and engaging opportunities for children to ignite their curiosity and enthusiasm for the subject, while focusing on the prime areas of: Communication and Language, Physical Development and personal, social and emotional development.

Activities and experiences are frequent, varied, and built into daily routines to allow children to build on and apply understanding of basic number. Concrete manipulatives are a key focus within sessions, as is the use of pictorial representations including Tens Frames and Part-Part-Whole model

Key Stage 1 and 2

At St Philips we understand the necessity for our children to develop solid number sense, including fluency and flexibility with number facts which will have a lasting impact on future learning for all children. Maths sessions follow a consistent structure each session begins with a focus on number and fluency activities; in key stage 1 we use mastering number and in Key stage 2 there is a daily focus on times tables and 3 in 3 to develop arithmetic and **procedural** fluency. This is followed by a power maths lesson where sessions include references to vital **mathematical vocabulary**, using stem sentences and discussion to encourage all children to communicate their ideas with mathematical clarity.

Mathematics Impact

Power Maths has the belief that all children can achieve at St Philip's we aim for each child to be confident and to develop their ability, their confidence and mathematical skills. Pupils who grasp concepts rapidly are challenged through rich and sophisticated challenge problems before acceleration through new content. Children who are not sufficiently fluent with material secure their understanding with additional practice. Where necessary earlier material is used to consolidate understanding of prerequisite skills before moving on.

Formative Assessment: Teachers carry out Assessment for Learning in each mathematics session and feedback is provided verbally, through peer/self-assessment and through marking. This assessment is used to inform teachers planning.

Timely Interventions: Where the prerequisite skills are not secure Pre-teaching and same day interventions are used to support pupils to make stage appropriate progress. As a school we use the Ready-to-progress documents and targeted therapies to develop knowledge using PixL. The Ready-to Progress documents support in identifying the stage a child is working at and what their next steps are. The guidance and assessment questions can be followed where necessary to support the child in making progress in the key mathematical skills.

Ready-to-progress criteria: year 1 to year 6

The table below is a summary of the ready-to-progress criteria for all year groups.

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
MPV	<p>MPV-1 Count within 100, forwards and backwards, starting with any number.</p>		<p>MPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.</p>	<p>MPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.</p>	<p>MPV-1 Know that 10 tens are equivalent to 1 one, and that 1 is 10 times the size of 0.1; know that 10 hundreds are equivalent to 1 one, and that 1 is 100 times the size of 0.01; know that 10 hundreds are equivalent to 1 ten, and that 1 is 10 times the size of 0.1.</p>	<p>MPV-1 Know that 10 tens are equivalent to 1 one, and that 1 is 10 times the size of 0.1; know that 10 hundreds are equivalent to 1 one, and that 1 is 100 times the size of 0.01; know that 10 hundreds are equivalent to 1 ten, and that 1 is 10 times the size of 0.1.</p>	<p>MPV-1 Understand the relationship between powers of 10 from 1 hundred to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 thousandth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).</p>
		<p>MPV-2 Recognise the place value of each digit in two-digit numbers, and compare and decompose two-digit numbers using standard and non-standard partitioning.</p>	<p>MPV-2 Recognise the place value of each digit in three-digit numbers, and compare and decompose three-digit numbers using standard and non-standard partitioning.</p>	<p>MPV-2 Recognise the place value of each digit in four-digit numbers, and compare and decompose four-digit numbers using standard and non-standard partitioning.</p>	<p>MPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compare and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.</p>	<p>MPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compare and decompose numbers up to 10 million using standard and non-standard partitioning.</p>	
	<p>MPV-2 Reason about the location of numbers to 10 within the base-10 number system, including comparing using $>$, $=$ and $<$.</p>	<p>MPV-2 Reason about the location of any two-digit number in the base-10 number system, including identifying the previous and next multiple of 10.</p>	<p>MPV-2 Reason about the location of any three-digit number in the base-10 number system, including identifying the previous and next multiple of 100 and 10.</p>	<p>MPV-2 Reason about the location of any four-digit number in the base-10 number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.</p>	<p>MPV-2 Reason about the location of any number with up to 2 decimal places in the base-10 number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.</p>	<p>MPV-2 Reason about the location of any number up to 10 million, including decimal fractions, in the base-10 number system, and round numbers, as appropriate, including in context.</p>	

Low Stakes Quizzing and Fluent Recall: We use a range of low stakes assessments throughout the teaching cycle to assess attainment and progress. From year 2 to year 6 children complete regular arithmetic and times tables tests.

Summative Assessments: Children complete the Power Maths end of Block assessments for each phase of learning. School also uses PixL assessments, the data from these clearly diagnoses areas of strength and areas of learning that may need re-visiting for the class and individuals. In Reception, Development Matters is used as check points for key concepts of learning.

Subject Monitoring: We regularly monitor the quality and impact of our mathematics curriculum through targeted book scrutinies, pupil interviews and Mastery Self-Evaluations. Staff are then supported with targeted CPD and with regular updates.