Mathematics

Curriculum Intent:

At Parish Church of England Primary school, we provide a high-quality, inclusive mathematics education utilising a mastery approach so that all children: become fluent in the fundamentals of mathematics; are able to reason mathematically with increasing articulacy; and can solve problems by applying their understanding to a variety of problems. Our mathematics curriculum, built upon strong foundations and inclusive by design, provides challenge for all pupils with teachers choosing to progress to new learning only when the majority of learners have a secure understanding. Challenge occurs through depth of understanding with an offer of rich and sophisticated problems rather than new content. Our mathematics curriculum aims to develop the five core mathematical competencies in all of our learners - therefore providing a foundation for our children to understand the world around them knowing both the beauty and power of mathematics in its own right and how it can be applied to other subjects across the curriculum including Science and Computing.

Curriculum Vision:

At Parish C.E. Primary School we want to develop curious mathematicians who can spot patterns, make connections, whilst also be able to express their justifications.

Therefore, we aim to equip all pupils with the skills and confidence to solve a range of problems through fluency with numbers and mathematical reasoning.

The three aims of the National Curriculum (fluency, reasoning and problem solving) are addressed throughout our Mathematics curriculum.

I have been Mathematics lead at Parish for the last three years. I love all things Maths and before teacher training studied Economics at University. I am passionate about the importance of Maths across the curriculum (particularly in STEM subjects including Science).

Recently, I have had the privilege of support other schools across LDST on developing their Maths curriculum and also delivering the NPQ Leading Primary Maths. As a school we love to reflect on our Mathematics curriculum and make sure it is the best it can be – this includes working with our local Maths Hub.

Mathematics Subject leader:

Mr Hardy

Curriculum Sequencing:

At Parish Church of England Primary School, our mathematics planning from Year 1 through to Year 6 is informed (not dictated) by use of Maths-No Problem! – a high-quality mastery scheme of work, setting high aspirations for all children, ensuring that all pupils can "keep up with new content", as opposed to having to "catch up." In Nursery the 'Mastering the Curriculum' scheme of work provides the building blocks of knowledge for future learning while in Reception, use of 'Mastering Number' complimented by 'Maths No Problem! Foundations' meets all of the requirements of the revised EYFS Framework 2021. Y1 through to Y2 also utilise Mastering Number to provide strong foundational knowledge.

Five Mathematics lessons are taught per week to fully maximise curriculum coverage, including 'Fluency Friday' (incorporating discrete teaching of multiplication tables) to ensure pupil automaticity. Through implementation of a spiral curriculum, each lesson sequentially builds upon the prior learning. Topics consolidate understanding, while also increasing in complexity allowing new learning to be related to previous learning aiding retrieval.

Maths – No Problem! provides a series of carefully sequenced lessons enabling new knowledge and skills to be built upon what has been previously taught and pupils can work towards clearly defined end points. However, our highly skilled teachers are then able to reflect and adapt the teaching sequence appropriately (dependent on pupil's knowledge) to provide further opportunities for practise, consolidation and an increasing depth of conceptual understanding. The sequence and speed of lesson delivery is dictated by pupil understanding with whitespace lessons and prioritisation of 'key lessons' utilised where appropriate to embed the most fundamental concepts. This ensures that all statutory National Curriculum coverage is met, with additional coverage of deeper non-statutory content if time allows. Our mathematics long-term plan clearly stipulates the order of topics taught in each age group in each term, so that new knowledge and skills can build on what has been taught before and towards our clearly defined end points - thus ensuring our long-term is taught in its entirety year-on-year. This plan loosely follows Maths - No Problem's recommended long-term plan but has been amended to meet the needs of our school community by addressing identified gaps in pupils' knowledge and skills from question level analysis (including Geometry).

Reading as the Beating Heart

Reading is embedded into our teaching of Mathematics through our day to day practice with the development of 'Articulate Learners' a key curriculum driver.

Each lesson will begin with an 'Explore' task which requires reading to understand the problem. We also explore a textbook approach to teaching, which allows the children explore methods to solve a problem.

Reading is central to our EYFS curriculum offer with picture books used throughout our teaching in addition to a progression in rhymes. This is mapped out across both Nursery and Reception.

Curriculum Progression:

The curriculum is sequenced to ensure that learning is built upon over time. Learning is revisited so that pupils are able to retain their knowledge through a spiral curriculum. Non-statutory guidance from the Department for Education and NCETM titled 'ready to progress criteria' are also utilised within planning to summarise the most important knowledge/concepts within each year group and make important connections between these mathematical topics. Again, this informs planning to ensure that pupils embed key concepts within their long-term memory and apply them fluently. Milestones have also been created from our SEND toolkit. We also focus on the differing types of mathematical knowledge including declarative knowledge (number facts), procedural knowledge (how to) and conditional knowledge (problem solving).

Across the school we opportunities to learn multiplication tables are progressively planned across our mathematics long-term plan to be learnt with increasing fluency using our Times Table Strategy (incorporating our micro-teaching approach). By the end of Year 4, pupils should be able to recall all of their times tables accurately, supporting development in children's working memory.

Our Rainbow Promises in Mathematics:

Resilience and Perseverance:

Use of Explore task to begin lesson with child-initiated learning and use of methods to articulate ideas.

Reasoning opportunities woven throughout the curriculum.
Problem solving, pattern seeking and prove the answer to problems.

Maths sent as Home Study.

Articulate Learner:

Focus on progressive Mathematical Vocabulary and encouraging mathematical discussion throughout a central to exploration.

Verbal reasoning skills incorporating progressive sentence stems with staff CPD for implementation.

Reading as the Beating Heart of our Curriculum.

Influence Aspirations

Annual celebration of World Maths Day, NSPCC number day and Number Ninjas (our Pupil Leaders).

Events, such as our annual STEM week, illustrate how Mathematics is threaded through all aspects of life throughout differing occupations.

Nurture Curiosity

Maths No Problem approach to lesson delivery with 5 part lesson centered around exploration.

Problem solving at the heart.

Maths in Nature across Forest Schools.

Problem solving, pattern seeking and prove the answer to problems.

British and Christian Values

Christian Values
Courage
Endurance.

British Value:
Rule of Law.
Mutual Respect.
SMSC woven throughout.

Opportunities to Build on Knowledge and Skills

Subject planning and delivery sequenced and includes:

- Built around Rainbow Promises.
- Schema within and across units through a carefully designed spiral curriculum.
- Retrieval opportunities daily with Whitespace lessons to ensure children are ready to progress.
- Delivered through the context of problems.
- Development of Maths across other subjects including Science.

Wellbeing and Health

Curriculum Content:
Money Mentors.
Application of Mathematics to real life contexts.
Promote Personal Development and Wellbeing by:
Use of Maths in the wider world.

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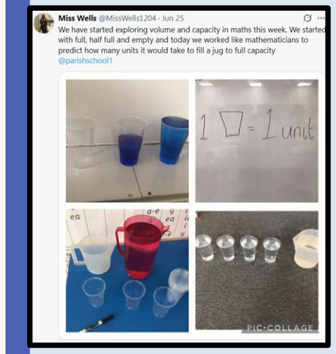
Inclusive Practice in Mathematics:

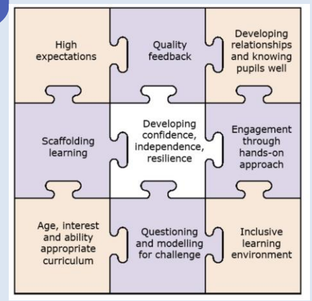
Meeting the Needs of all Learners:

Our Mathematics curriculum is inclusive by design and supports all learners. Adaptive teaching takes place throughout all lessons with Quality First Teaching at the heart (supplemented by a small number of evidence informed interventions).

Any children who then need additional support within the less are supported using the 3Cs—coherence, context or concrete. Early interventions help pupils to catch-up and perform better across the curriculum. High performing learners are extended in the form of challenge through the 3 Ps—pattern, prove it or problem.

For those children with an identified SEND, teachers use appropriate assessment to set targets which are deliberately ambitious for pupils identified as having a SEND and ensure needs are met as identified through their pupil passport. These are identified through our SEND toolkit ensuring lessons our planned to address potential areas of difficulty and to attempt to remove barriers to pupil achievement.





Strong Foundations:

Strong foundations are promoted throughout our Mathematics curriculum. Supported by work with the Local Maths Hub, this includes through:

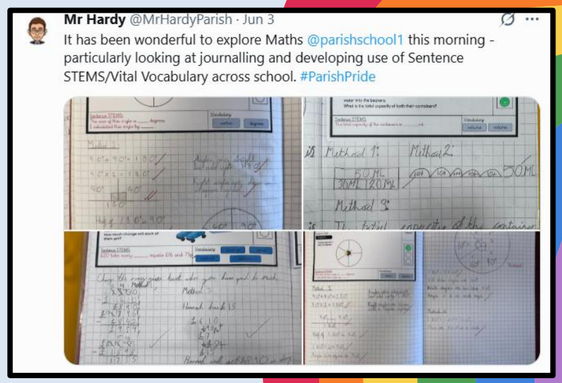
- **Oracy woven throughout the curriculum with use of Sentence Stems and progressive vocabulary in all year groups.**
- **Use of 'Mastering Number' across EYFS and KS1 to ensure secure number sense.**
- **Use of 'First Class Number' intervention for children in Y2 needing further support to develop their number sense.**
- **LDST Times Table teaching strategy consistently taught from Y1-Y6.**

EYFS as the Bedrock of Learning:

In the Early Years Foundation Stage, our focus is on building strong foundations for future study. Using high-quality curriculum resources that align perfectly with the EYFS statutory framework and working towards the early learning goals, our curriculum aims to instil positive attitudes to maths at an early age with maths resources that help children learn in fun, hands-on, practical ways. Songs, stories and rhymes are an inherent strategy of teaching key concepts while short, yet purposeful sessions match the shorter attention spans of children in this age group.

In Nursery, Master the Curriculum provides a framework, including a nursery rhyme each week and hands on practical maths lessons, that provide the building blocks for further study in Reception. Our curriculum is designed so that adult led learning complements continuous provision, laying the foundations for mathematical thinking and talk.

In Reception, use of 'Mastering Number' complemented by 'Maths No Problem! Foundations' meets all of the requirements of the revised EYFS Framework 2021 and helps children in the Early Years begin to develop a deep and long-lasting understanding of the world of mathematics. Building on the work from Mastering the curriculum, this research-based approach encourages learning through play and helps children in the Early Years begin to develop a deep understanding of the world of mathematics. The planned mathematical activities are purposeful and carefully designed. Staff then also then consider how children access maths resources in the wider provision ensuring how children are unable to simply 'opt out.'. Links to Maths can be found throughout all areas of our provision.



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Wider Curriculum Considerations in Mathematics:

Teaching Pedagogy:

Each of our maths lessons follows the same structure including:

Anchor Task	Exploration
Anchor Task	Structured Discussion
Anchor Task	Journaling
Let's Learn	Reflection Time
Workbook	Practice (Guided & Independent)

MATHS NO PROBLEM!

Developing Cultural Capital:

With our firm belief that knowledge is transferable, our pupils are given every opportunity to participate in a wide range of learning experiences beyond their classroom. This includes our annual celebration of World Maths Day, NSPCC number day and Number Ninjas(incorporated into our Mathematics engagement plan).

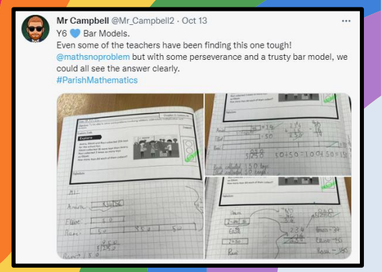
Events, such as our annual STEM week, illustrate how Mathematics is threaded through all aspects of life throughout differing occupations. We also work closely with Money Mentors (working with Y4/Y5/Y6) to ensure that children are financially aware and supporting a growing economic understanding. This is also inbuilt into our Parish Spirit Curriculum. We also encourage opportunities to practice Maths Skills learnt across the curriculum.

North West Maths Hub:

For the last 18 months, we have been part of our local Maths Hub working within our TRG.

This has been hugely impactful and has allowed us to develop our principles of teaching for Mastery. In 24/25, our focus was on Oracy and ensuring these enhanced exploration through high-quality talk. This was supported by our previous work with Voice21.

MATHSHUBS NORTH WEST THREE



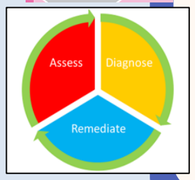
Staff CPD:

All staff have attended accredited Maths – No Problem! Training (including our 25/26 Inset) highlighting our commitment to a mastery approach across the school

As part of LDST, extensive trust wide networking takes place through School Improvement Liverpool and curriculum networking teams, ensuring the latest curriculum updates are disseminated and implemented. This includes our Maths Hub work as part of LDST and Teaching Mastery Development Group

Internal to school, coaching cycles also regularly take place to show how to model an aspect of maths or establishing best practice across year groups. We have at least a termly Maths CPD session (with the Maths Leader facilitating NPQ Leading Primary Maths).

Assessment:



Maths is assessed continually throughout all lessons. Pupils understanding is evaluated during each lesson to establish if any additional support or challenge is required.

Prior knowledge is assessed at the start of each new area of mathematics and used to inform planning and relevant white space teaching.

Maths is also assessed termly through NFER assessments (Y1-Y6) which are analysed through the Trust Data system which shows whole class priorities moving forward. In depth QLA regularly takes place and provides a framework for learning moving forward.

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