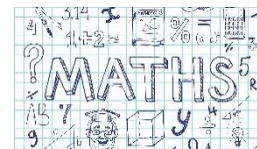




Maths

Maths at St Paul's enables children to solve problems, reason and understand the role of Maths in every day, helping them to flourish in their journey to the fullness of life.



Our Vision for Maths

Inspired by God's love for us, we illuminate the goodness in others, we care for and protect His children and reach out to help others flourish in their journey to the fullness of life.

Mathematics is important in everyday life and, with this in mind, the purpose of Mathematics at St Paul's Primary School is to develop an ability to solve problems, to reason, to think logically and to work systematically and accurately. All children are challenged and encouraged to excel in Maths. New mathematical concepts are introduced using a 'Concrete, Pictorial and Abstract' approach; enabling all children to experience hands-on learning when discovering new mathematical topics, and allows them to have clear models and images to aid their understanding. Arithmetic and basic Math skills are practised daily to ensure key mathematical concepts are embedded and children can recall this information to see the links between topics in Maths.

Rationale – Why we do what we do... Over the past few years, St Paul's have found like nationally, that there has been a difference in the language skills of children as they enter in Reception. We have also noted a marked difference in the children's levels of independence, resilience, ambition (skills for life), this along with a need to promote a more deep rooted love of reading, has prompted us to shape our curriculum with greater emphasis in these areas.

After completing a Maths audit with pupils and staff, we found that children's mathematical fluency is strong but children's confidence to reason with their understanding of mathematical concepts is lower. As a result, teaching of mathematics focuses on strategies to strengthen the children's reasoning and problem solving skills.

We use the Power Maths scheme from Years 1-6 and supplement the lessons with a range of resources from White Rose and the NCETM. Power Maths is a UK curriculum mastery programme designed to spark curiosity and excitement and nurture confidence in maths.

How do we enable children to learn more and retain more?

Timings and timetable:

Across the school, Maths is taught daily. In addition to Maths lessons, which focus on allowing children to reason and problem solve with their understanding, children experience Basic Skills Maths- focussing on developing key Mathematical skills and confidence with arithmetic. Mathematical links are also introduced and reviewed in Topic and cross curricular lessons.

Maths- An Overview:

We want children to enjoy being challenged and to feel confident to 'have a go', discuss their learning and understand the connections between mathematical concepts and the real world. To enable this, teachers use a range of reasoning resources to develop children's deeper understanding of topics. Children are taught in whole class and small differentiated groups to ensure they receive targeted learning and opportunity to share ideas. Topics are revisited through 'Revise and Review tasks' to ensure the children's learning is committed to long-term memory and a Concrete, Pictorial and Abstract (CPA) approach is used to guide children through concepts.

Progression:

Each child's mathematical learning journey begins in Reception where the aim is to nurture all children to become confident mathematicians. This is done by carefully planning learning opportunities which allow children to understand number using real life resources and a 'hands on' approach. In Year 1 the children work to achieve the aims of the national curriculum with emphasis placed on our 10 'Steps to Success'. Each year group's Steps to Success builds on the previous year's prioritising areas such as Place Value, The four operations and Fractions and Ratio.

We regularly review and monitor each child's progress and adapt and vary our teaching to cater for individuals. Maths meetings (pre-teach and post-teach interventions) allow children to access area they may find challenging. Our use of both differentiated teaching and a whole class methods allows children to both access Maths learning whilst being challenged. The CPA approach allows children to find and access methods to support them through their learning journey.

Enrichment is an important part our Mathematics curriculum. We aim to provide children with fun and interesting opportunities to experience Maths in real life scenarios. These are Maths days and lessons which focus on applying the skills learnt in the classroom to tasks such as calculating a budget for a weekly shop and understanding measurement and how a triangle can be used to measure the height of the school building. The role of these enrichment activities is to allow children to understand the purpose of their Mathematical learning and the power it has in everyday life.

The impact of this planned progression is engaged, confident children who can clearly discuss their mathematical understanding and reason with mathematical topics.

Assessing Outcomes in Maths

Assessing outcomes in Mathematics is rigorous and focused.

In Reception, all children have a personalised 'Learning Journey' using Tapestry which is used to record learning from all areas of learning across the year. Teachers use this evidence to ensure that all children are making progress and attaining well. Where children are not meeting expected standards, teachers provide additional support where appropriate.

On entry to Year 1, practical activities play a key part of the mathematical learning. As a result, children's learning is recorded using both Tapestry and children's books. As the children's independence grows all activities are recorded in the children's maths books and folders.

Formative assessment takes place daily and teachers adjust planning accordingly to meet the needs of their class. Teachers place a strong emphasis on the power of questioning: this enables us both to explore topics together as a class as well as verbally develop reasoning skills during our lessons. Summative assessment takes place termly and children's progress and attainment are discussed by Teachers and Assistant Head Teachers in pupil progress meetings held every half term.

The Mathematics subject leader completes regular monitoring of attainment and progress through a combination of pupil voice, book monitoring and matching actual outcomes to intended outcomes as identified in the National curriculum and Year groups' 'Steps to Success'. From this monitoring, key actions are given to the teacher and are re-visited frequently. The Mathematics subject leader then has a formal meeting with senior leaders to discuss outcomes and next steps. The Curriculum Senior Leader uses the information given to them to hold Governor sub-committee 'Curriculum and Achievement Meetings' each half term. These are in addition to the Pupil Progress Meetings that identify and celebrate pupil progress and set agreed targets for narrowing any gaps in knowledge and skills.

Children not working at the National Curriculum level for their age are monitored and reviewed to ensure each child progresses through their Maths learning journey. Their learning journey may require the child to be working on an amended Steps to Success. Each individual's attainment is regularly reviewed through formative and summative assessment and in pupil progress with the SENCO, class teacher and fed back to the Maths subject leader.

Enrichment

Enrichment opportunities within and across all areas of the curriculum are important to St Paul's to help develop the children's skills for life. We aim to provide opportunities or children to explore and understand Math through practical activities regular within timetabled Maths lessons. In addition to these lessons, we provide further enrichment with our 'Maths Days' where the whole school explores a topic linked to real life Maths.

Year Groups	Enrichment Opportunity	Term of Enrichment	Topic
Rec	Opportunity: Maths Day Purpose: To allow children to explore the use of Money.	Autumn Term	Money
1	Opportunity: Maths Day Purpose: Shopping. Role play shopping with real money. Children to learn the value of coins, addition and subtraction with focus on number bonds.	Autumn Term	Money
2	Opportunity: Maths Day Purpose: Shopping. Role play shopping with real money. Children to calculate cost of different items. Focus on number bonds to 20 and beyond.	Autumn Term	Money
3	Opportunity: Maths Day Purpose: Shopping. Understanding offers calculate savings on products in multi buy offers. Buy one get one free and 3 for 2. Addition and subtraction opportunities.	Autumn Term	Money
4	Opportunity: Maths Day Purpose: Research how much people pay for good and conduct a price comparison. Calculate savings.	Autumn Term	Money
5	Opportunity: Maths Day Purpose:	Autumn Term	Money
6	Opportunity: Maths Day Purpose: Understanding advertisements and discounts. Children to calculate savings and value for money.	Autumn Term	Money

Environmental Link

Maths– Opportunities for children to make a positive difference to the environment.

Year Groups	Topic	Making A Positive Difference
Rec	Mini Beasts	Count Mini Beasts on a mini beast hunt.
1	The School Grounds	Units of measurements. What unit of measurement should we use to measure areas of the playground.
2	Waste and Materials	Understanding the impact of waste and how different materials can be recycled.
3	Water	Children to understand the water cycle and ways to save water. Maths link: (Capacity) Measure the amount of rainfall in a week.
4	Transport and Trade	Carry out a survey on how children travel to school. What options are kinder to the environment. Produce charts and graphs to show data collected.
5	Healthy Living	Understanding how to have a healthy lifestyle. Carry out an investigation on exercise, estimate the time taken to carry out different exercises across different distances.
6	Healthy Living	Design healthy recipes. Learn how ratio is essential when using recipes and scaling up or down.

