

## Maths at St. Paul's

Here at St. Paul's, we believe that maths is an essential part of everyday life. Our aim is to instil an enjoyment and enthusiasm for maths. We all work closely together to ensure our children achieve by providing a balanced and progressive curriculum which caters for the needs of all pupils, and entitles them to the same high-quality teaching. Our aim is to develop a positive culture of deep understanding, confidence and competence in maths that produces strong, secure learning. As a school, we recognise that the key to unlocking the potential in our children is through the development of basic mathematical skills and the understanding of mathematical concepts. We therefore place great emphasis on the use of concrete resources and pictorial representations at all ages, to enable children to fully understand the concepts and principals, when presented with abstract calculations and questions. Our maths curriculum is progressive; at KS2 it is designed to develop competencies to equip pupils for KS3 where they will build on KS2 in order to solve increasingly sophisticated problems.

### Intent:

- ✚ We aim for the children to work with confidence and competence.
- ✚ We aim to provide a progressive curriculum.
- ✚ We aim to provide a creative and engaging lessons to explore maths in depth using mathematical understanding and vocab and explain their workings.
- ✚ We aim to foster positive attitudes with a 'can do' approach.
- ✚ We aim for children to communicate, justify, argue and prove their thinking using mathematical vocabulary.
- ✚ We aim to provide challenge.
- ✚ We aim for children to be fluent in the fundamentals of mathematics so they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ✚ We aim for KS2 to develop competencies to equip pupils for KS3 where they can build on work in KS2 by making connectives and solve increasingly sophisticated problems.
- ✚ We aim to develop character, including resilience confidence and independence.

## Implementation

A detailed structured curriculum is mapped out across all phrases, ensuring continuity and supporting transition. Effective mastery curricula in mathematics are designed in relatively small careful sequenced steps which must each be mastered before pupils move to the next stage. Fundamental skills and knowledge are secured first. This often entails focusing on curriculum content in considerable depth at early stages.

### Teaching and learning

- ✚ Lessons are planned and sequenced so that new knowledge and skills build on what has been taught before. Teachers follow the White Rose Maths Hub materials. Staff also refer to the Calculation Policy when teaching formal methods, understanding that sometimes children find their own efficient methods along the way.
- ✚ Using prior knowledge as a starting point for all future planning and teaching, we plan lessons which are required for all pupils to make good progress.
- ✚ We place emphasis on concrete and pictorial representations in all year groups to help children understand more abstract questions or interpretations. We believe that manipulatives enable all children to explore and explain the abstract nature of maths. We encourage drawings, including the use of bar models.
- ✚ The majority of the children will be taught the content from their year group only. So that they become true masters of content, applying and being creative with new knowledge in multiple ways. Children will be challenged by doing more sophisticated problems rather than moving on to acquire more mathematical concepts.
- ✚ Solve problems by applying their maths to a variety of problems with increasing sophistication including unfamiliar context and real-life scenarios.
- ✚ Reason mathematically will be introduced in KS1 and will follow through to KS2.
- ✚ Procedural fluency in number and number operations will be secure before moving children on so they can be recalled and resurfaced when needed for problem solving and reasoning.
- ✚ To aid memory skills, and keep mental fluency sharp, the repetition and retrieval of known skills are also revisited daily. Each week a Times Tables focus is planned to give children the opportunity to practise and improve their rapid recall skills with facts 12x12. Children enjoy the weekly challenge and strive to improve their time and score each week. All children also have access to their own personal account of 'Times Tables Rockstar' where they can compete against other pupils in school.
- ✚ We understand that some children will require additional support. This can be seen in a lesson by the child working as a small group or through an intervention lesson ran by the teacher or teaching assistant.

## **Impact**

By the end of Year 6, we aspire that a St, Paul's mathematician moving to secondary school will have developed a bank of efficient and accurate skills that can be used to calculate effectively. They will have rapid recall of number facts and mathematical statements, due to the embedding of stem and generalisation sentences, children will have the language to be able to justify, reason and explain their answers. Children will be able to apply these calculation skills and understanding of other areas to become confident and resilient problem-solvers with the ability to reason and articulate their ideas mathematically.