Maths at St James CE Primary School

Intent

Albert Einstein, 'Pure mathematics is, in its way, the poetry of logical ideas. '

At St James, we understand the importance of secure mathematical understanding in supporting our children to thrive in the real world. We strive to enable all pupils to develop a deep understanding of the mathematics they are learning and we are committed to spending a longer time exploring key concepts, especially number, to develop fluency, promote mathematical reasoning and problem solving and encourage pupils to make connections in their learning.

Curriculum

Knowledge/Skill development:

Reasoning and problem solving

Fluency

Concept development:

Children will know the workings behind the answer. They will understand why they got the answer they did or made the error they made.

Sequencing of content:

Units of work are carefully timetabled so prior knowledge and concepts are built upon from previous year groups and units. Rapid recall, 5 in 5 and lessons all support progression across the year. Progression maps are in place for vocabulary, rapid recall and core content to ensure knowledge is built upon.

Implementation

How is it taught?

2. **Discover -** the entire class spends time on a question. The children are encouraged during this time to think of as many ways as possible to solve the question - use explain it, prove it, show it, convince me - ensure it pulls on previous learning so the children can access it. Encourage children to use key vocabulary when answering the discover.
3. **Key vocabulary -** for this journey shared and displayed. **Sentence stems** used for 'discover' and remain on show for the rest of the lesson for children to refer to.
5. **Share -** pull in children's strategies but lead them clearly down the one you want to teach this session running CPA alongside each other.
6. **Think together -** model the strategy you used to get your answer for the discover for different variations of questions— running CPA alongside each other.
7. **Independent practice -** children should show their understanding of the strategy by showing it in different variations through fluency, reasoning and problem solving.

Choral chanting should happen throughout the lesson.
TTRockstars - Daily for year 3 and 4, 3 times a week for 5 and 6, Summer term in Year 2

5 in 5 - Daily for Year 2 - 6 (Summer in Year 1). This encompasses five questions that retrieves previously taught content.

Daily rapid recall - key facts are recalled to develop automaticity.
Mental maths strategies are taught throughout the journeys or explicitly as a lesson.

Impact

How do we know our children have learnt more and remembered more?

Ongoing assessment within lessons.

Responses to key questions within lessons.

Application of skills across lessons.

Retrieval practice with rapid recall tests, TT Rockstars and 5 in 5.

Standardised tests.

End of unit assessments.

What are we aiming for?

We aim for pupils to:

- Become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Be able to solve problems by applying their mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios
- Reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- Have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be success-