Maths at St Just Primary School

Truro and Penwith Academy Trust

Intent

At St Just Primary School our aims in the teaching of mathematics are:

- to promote enjoyment of learning through practical activity, exploration and discussion;
- to develop confidence and competence with numbers and the number system;
- to develop the ability to ***solve problems*** through decision-making and ***reasoning*** in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented; to explore features of shape and space, and developing measuring skills in a range of contexts;
- to help children understand the importance of mathematics in everyday life.
- to 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.
- to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.

Impact

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Assessment in mathematics takes place daily using a range of strategies such as marking and feedback of work and verbal discussions with children.
Assessment of learning is formally completed termly through a pre and post assessment created by the White Rose Maths Hub. At the end of the year an assessment will be completed which reviews the whole academic years' objectives. Teachers use assessment information to inform their planning by using pre assessments.

This data is used by the Assessment Subject Leader, Senior Leadership team and Headteacher to review children against Age Related Expectations based on their Key Stage starting points. Children who are not on track are identified for intervention/target teaching on teachers' Provision Maps.

Implementation

At our school, we teach mathematics to all children, whatever their ability or individual need. Through our quality first mathematics teaching, we provide learning opportunities that enable all pupils to make good progress. Every child has an equal right to be taught mathematics, in daily lessons of approximately 1 hour. There may be times when it is more appropriate for Foundation Stage to be a short session; Key Stage 1 sessions to be approximately 45 minutes in length and for Key Stage 2 sessions to be over an hour.
We aim for children to master the key areas and domains in Mathematics, narrowing the gap between the most and least able learners. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly will be challenged to deepen their understanding by being offered rich and sophisticated problems and not accelerate through to new content.

Mathematics is a symbolic, abstract language. To decode this language, symbols need to come alive and speak so clearly to children that it becomes as easy to understand as reading a story. We believe that all students, when introduced to a key new concept, should have the opportunity to build competency in this topic by taking the concrete-pictorial-abstract approach.

Concrete – students should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.
Pictorial – students should then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.
Abstract – with the foundations firmly laid, students should be able to move to an abstract approach using numbers and key concepts with confidence.

All classrooms have some concrete resources that can be used in the teaching of mathematics. Some more topic specific resources are located in the central store.
During our daily lessons we encourage children to count aloud, practice fluency, problem solving and reasoning skills and ask mathematical questions. We develop their ability to independently select and use appropriate concrete apparatus to support their conceptual understanding and build procedural fluency. They have the opportunity to independently access and use a wide range of resources to support their work. We develop the children's ability to represent problems using visualisation skills, including jottings and pictorial representations. ICT is used in mathematics lessons for modelling ideas and methods. Wherever possible, we provide meaningful contexts and encourage the children to apply their learning to everyday situations.

Morning number bonds and times tables are implemented throughout the school to embed the children's declarative knowledge. Club 99 also takes place weekly – focusing on times tables.

Why is it important to teach Mathematics?

Mathematics teaches children not only to be **fluent** in calculations; but also how to **reason** and **problem solve** with number.
At St Just Primary school, we aim for every child to have a love for learning and a 'can do' attitude. We want to promote enjoyment and independence of learning, using practical activity, exploration and discussion. As their confidence grows with number, their competency grows and they see how useful maths can be in everyday life.

What our children say…

Children at St Just were very articulate when they were talking about Maths. They used vocabulary well, and show good knowledge of expectations for their year group. They are keen to discuss maths; with teachers and peers.
'Maths is fun'
'I like Maths because I like to improve my work'
'My teacher explains Maths well'
'I use the displays on the wall to help me'
'The teachers are there ready to support you'

What does Maths look like at St Just Primary school?

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