

Maths Intent

Overview

Children's learning in maths at Pilton Infants' School, in line with the National Curriculum, has three main aims. Firstly, developing **fluency** with fundamental skills and knowledge. Secondly, using these skills and knowledge to **reason** about relationships and make generalisations. Finally, to **problem solve** by applying their maths to a range of increasingly difficult problems. Lessons involve elements of fluency, reasoning and problem solving to enable children to constantly develop these skills. These aims focus heavily on children demonstrating their understanding of concepts, ideas or techniques. We help children learn how to:

- Describe things in their own words with mathematical language
- Represent things in a variety of ways, such as using maths equipment, pictures and symbols
- Explain things to someone else
- Make up their own examples (and non-examples)
- See connections with other facts or ideas
- Recognise things in new situations and contexts
- Be able to use things in various ways

The vast majority of children are expected to move through the curriculum at the same pace. This may make it seem like learning is slower paced than previously. However, rather than accelerate too rapidly, time is taken to deepen children's understanding so that it is embedded for the next stage of their learning.

Much of our children's success in maths revolves around talk. With language and vocabulary development our biggest issues currently, these are our two key intents to tackle this.

Intent 1: Develop all pupils' fluency with numbers, number facts and associated language.

At Pilton Infants' School:

- We believe that,
'Fluency is about understanding, not just remembering things.'
- In all classes we follow our six big ideas that underpin our learning about number and support the development of fluency:
 - Numbers are made of smaller numbers
 - What we know about one number can help us work out other numbers

- Numbers can be taken apart and put with other numbers to make new numbers
- What we know about bits of smaller numbers can help us with bits of bigger numbers
- Numbers are organised into groups of tens and ones
- What we know about numbers to 10 helps us with numbers to 100 or more
- In Year 2 we teach discrete sessions of No Nonsense Number Facts each week to develop fluency of key number facts with the four operations. These involve lots of verbal reasoning.
- We support those children with gaps and misconceptions either through whole class teaching, differentiated activities or extra support.

Intent 2: Develop all pupils' language, skills and knowledge to be able to reason about their ideas.

At Pilton Infants' School:

- We focus on developing children's language skills with key prompts and questions and encourage children to speak in full sentences:
 - I notice... I think... I wonder...
 - What's the same? What's different?
 - Can you explain? Can you show me?
- We introduce stem sentences from Reception and develop the use of them throughout KS1 to promote speaking in full sentences and enable children to:
 - Make a generalisation at the end of a lesson.
 - Emphasise correct language.
 - Explore conceptual variation.
 - Draw attention to key points.
- We use consistent images, language and equipment throughout the school to help children reason and transition from one year group to the next.
- We focus heavily on understanding concepts and often work verbally, practically and through investigation to fully understand a concept before we record learning.
- We use maths resources to support our understanding. We use equipment for children to model and reason their thinking rather than 'do' the maths.

- We actively engage in action research projects with Devon maths advisors and regional maths hubs to develop our practice.