

Maths Mission Statement



Intent

The National Curriculum for Maths aims to ensure that all children:

- Become fluent in the fundamentals of Mathematics.
- Are able to reason mathematically.
- Can solve problems by applying their Mathematics.

At Townhill Junior School, these skills are embedded within Maths lessons and developed consistently over time. We are committed to ensuring that children are able to recognise the importance of Maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts. We want all children to enjoy Mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of Mathematics.

Implementation

The content and principles underpinning the Mathematics Curriculum and the Maths Curriculum at Townhill Junior School reflect those found in high-performing education systems internationally, particularly those of east and south-east Asian countries such as Singapore, Japan, South Korea and China. These principles and features characterise this approach and convey how our curriculum is implemented:

- Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics.
- The large majority of children progress through the curriculum content at the same pace.

Differentiation is achieved by emphasising deep knowledge and through individual support and intervention.

- Teaching is underpinned by methodical curriculum design and supported by carefully crafted lessons and resources to foster deep conceptual and procedural knowledge.
- Practice and consolidation play a central role. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts.
- Teachers use precise questioning in class to test conceptual and procedural knowledge and assess children regularly to identify those requiring intervention, so that all children keep up.

The school's ongoing engagement with the DfE funded Maths Hub continues to ensure that staff at all levels understand the pedagogy of the approach. To ensure whole consistency and progression, the school uses the DfE approved 'Maths No Problem' scheme. New concepts are shared within the context of an initial related problem. This initial problem-solving activity prompts discussion and

reasoning, as well as promoting an awareness of maths in relatable real-life contexts that link to other areas of learning. Being based on a concrete, Pictorial, abstract approach, children are encouraged to use manipulatives throughout KS2 to promote understanding of the concepts or to explore the structure of the mathematical concept.

In a popular reality television competition, there were 3437 female contestants and 2016 male contestants.

How many more female contestants than male contestants were there?

Teachers use careful questions to draw out children's discussions and their reasoning. The class teacher then leads children through strategies for solving the problem, including those already discussed. During this teacher-led session teachers model the use of manipulatives to solve the problem and how these relate to a pictorial representation and an abstract idea.

1. females 3437 *What is this?*

males 2016 *What part of the number sentence is this?*

Difference

$$3437 - 2016 = \square$$

3437

subtract 2016

$$\begin{array}{r} 3437 \\ - 2016 \\ \hline 1421 \end{array}$$

Independent work provides the means for all children to develop their fluency further, before progressing to more complex related problems. Mathematical topics are taught in blocks, to enable the achievement of 'mastery' over time. Each lesson phase provides the means to achieve greater depth, with more able children being offered rich and sophisticated problems, as well as exploratory, investigative tasks, within the lesson as appropriate.

Impact

The school has a supportive ethos and our approaches support the children in developing their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others. Children can underperform in Mathematics because they think they can't do it or are not naturally good at it. Maths No Problem programme addresses these preconceptions by ensuring that all children experience challenge and success in Mathematics by developing a growth mindset. Regular and ongoing assessment informs teaching, as well as intervention, to support and enable the success of each child. These factors ensure that we are able to maintain high standards of teaching and learning.