The Whitchurch CE Federation

The Inquisitive Me - Mathematics

'Without mathematics, there's nothing you can do. Everything around you is mathematics. Everything around you is numbers.' *Shakuntala Devi*

Intent

The intent of the Maths Curriculum is to instil the qualities of the Inquisitive Me; developing pupil's **problem solving**, **reasoning**, **questioning** and **curiosity**, and creating a love of mathematics.

We intend to support the National Curriculum in its aims to ensure that all pupils:

- 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
- **reason** mathematically by following a line of enquiry **(curiosity)**, conjecturing relationships and generalisations **(questioning)** and developing an argument, justification or proof using mathematical language.
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Implementation

In EYFS, teachers use the White Rose scheme of learning as well as providing pupils with rich and varied opportunities to explore maths in a practical, real-life way as a part of the Curiosity Approach.

In Years 1-6, each year group's long term plans are taken from White Rose Maths. Through high quality teaching using the White Rose schemes of learning, we enable pupils to progress through the National Curriculum in small steps, whilst developing their confidence and competence in mathematics.

The White Rose Maths approach focuses on maths mastery — pupils are taught to fully grasp topics and develop a deep understanding of foundational concepts. Using a spacing and interleaving strategy, pupils are provided with the opportunities to revisit these concepts, taking their understanding deeper each time. As a result, pupils benefit from improved learning retention and they develop the qualities of the Inquisitive Me - curiosity, questioning, reasoning and problem solving - which will stay with them for life. In addition to this, pupils are given the opportunity on a fortnightly basis, to develop these qualities further by being presented with a more complex problem or investigation. This also enables pupils to consolidate their learning and apply it to real-life concepts. We recognise the importance of enjoyment on a child's journey to maths mastery. We encourage teachers to make lessons fun and engaging to make lessons memorable and to ensure key skills and understanding is retained.

The teaching of mathematics is personalised to meet the needs of all learners. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, pupils who grasp concepts rapidly are challenged through being offered rich and sophisticated problems before any acceleration through new content. Pupils who need additional support are provided with more opportunities to support their understanding using concrete and pictorial resources, as well as moving at a pace that enables them to succeed.

In EYFS, pupils are taught for three sessions lasting fifteen-twenty minutes, using White Rose Maths. This is supplemented by additional learning about mathematical concepts through the Curiosity Approach. In KS1, pupils are taught for five one-hour sessions per week White Rose Maths. In KS2, pupils are taught for four one-hour sessions per week using White Rose Maths and have an additional fluency-focused session each week.

Impact

It is the intended impact of the Maths Curriculum that children at The Whitchurch CE Federation:

- become fluent in the fundamentals of mathematics.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can solve problems by applying their mathematics to a variety of routine and non-routine problems.
- be inspired by Maths and want to learn more.

The impact of the curriculum is measured by:

- Teacher assessments, completed at the end of each lesson
- Formative assessments carried out once each term using PUMA by Rising Stars.
- Pupil Voice discussions of their learning with the subject leader
- Regular lesson observations and learning walks