Subject on a page:

Mathematics

At Ibstone CE Primary School, we develop numerate pupils who are confident with number and understand mathematical calculations, in order to develop problem solving skills. Developing knowledge is a key life skill. Our Mathematics curriculum is designed to prepare pupils for the next step in their learning journey.

Intent - We aim to…

- Enable pupils to be confident, courageous and resilient mathematicians
- Provide resources for practical experiences to enhance learning
- Teach a balance of fluency, reasoning and problem solving explicitly to all
- Follow WRM scheme of learning, whilst taking into account the needs of the learners
- Provide high quality, regular training for all staff to ensure teaching is robust.

Implementation – How we achieve this…

A sequenced curriculum

Here at Ibstone we are using the White Rose Maths (WRM) scheme of work from EYFS to Y6. Due to the nature of mixed aged classes, staff teach two Maths inputs in order to enable all pupils to access an ambitious curriculum. Using this scheme, staff are able to plan well-sequenced units of work, which follow a basic pathway of: fluency reasoning and problem solving. Each unit is built upon prior learning in earlier year groups, which is briefly revisited before introducing new knowledge in line with curriculum expectations. Planning is always amended to meet the needs of each individual cohort, and so staff are not bound by the objectives within a unit of work. New concepts and ideas are introduced using either a: concrete, pictorial or abstract approach as we understand that each child is unique and learn in different.

Knowledge focused

In order to leave Ibstone CE Primary School with an excellent mathematical knowledge and understanding, the teaching of mathematics is carefully considered and sequenced. By dividing key ideas into small units of work, pupils have the chance to develop a level of automaticity within the subject, enabling them to build upon existing skills throughout their school career. This approach ensures that pupils can make links between topics, apply skills to various scenarios and deepen their knowledge of the subject.

Focus on Vocabulary

Like in English, Mathematics has its own unique and exciting terminology, which we strive to ensure our pupils become familiar with. Each class has a Maths working wall, staff will display key vocabulary relating to the current unit of work being taught. Key words are introduced at an age appropriate level & links made with previous vocabulary, so that by the end of KS2, pupils leave Ibstone with a rich mathematical vocabulary.

Fluency, reasoning & problem solving

There is an emphasis on the teaching of: Fluency, Reasoning and Problem Solving throughout the curriculum. Staff sequence each new topic so that the fluency aspect of the unit is delivered first. Being fluent with a set skill is fundamental and underpins a pupil's ability to apply that knowledge to more complex reasoning and problem-solving skills later on. Pupils who struggle with the fluency aspect of the curriculum will be offered additional support to ensure they have a good understanding of the fundamentals of a topic. Once pupils show a proficiency in their fluency, they will then be challenged to apply their skills in more demanding tasks. As topics are revisited throughout the year, reasoning and problem solving become much more of a focus, as pupils will already have the necessary understanding that can be applied.

Number Fact Focus

Pupils in KS1 are given regular opportunity to practise their understanding and rapid recall of number bonds. Similarly, pupils within KS2 are able to develop their recall of multiplication facts through utilising the 'TT Rockstars' program (both within school and at home). Pupils in Years 3 –6 are also tested weekly on their multiplication and division knowledge, following a sequenced series of 3 minute quizzes, testing the pupils on various facts, in line with curriculum expectations. Both individual and class achievements are celebrated in classes and in Celebration Worship.

Implementation – continued

Place Value at the forefront
The concept of place value underpins all mathematical understanding. Being fluent with place value ensures that pupils have a good understanding of number and the number system. Each academic year starts with a unit on place value, this enables all pupils to revisit and practice key concepts and supports all pupils developing a strong foundation on which the rest of the Mathematics curriculum can be built on.

Practical Approach
A practical approach to Mathematics is important to pupils throughout the school. In EYFS & KS1, there is a particular emphasis on using concrete resources to embed understanding. Whilst the use of practical resources is encouraged throughout the school, we are aware that concepts become more abstract as the years progress and pupils need to apply their knowledge and fluency skills to an increasing number of pictorial and abstract concepts and tasks.

Assessment
Staff continually assess pupils throughout each lesson and will support / scaffold where needed. This may be through immediate support, an intervention outside of the lesson or over learning / pre teaching. Summative assessments take place at the end of each unit using the WRM end of unit papers. Assessment is used to identify gaps in learning and staff ensure these gaps are addressed in their teaching or through high quality interventions.

Wider Curriculum Opportunities
During the year, pupils have the opportunities to further develop their mathematical experiences through Forest School sessions and ad hoc focus days.

Revisiting & Retrieving
We aim for strong subject fluency. Automaticity within the subject lends itself to pupils then being able to reason and problem solve with confidence. Repetition ensures key skills are continually practised and become embedded within the long term memory.

High Quality CPD
All teaching staff have open access to continually access high quality CPD through the WRM scheme and National College training site. Staff who have accessed training will then disseminate information to all staff through staff meetings. Internal and external moderation ensures consistency and accuracy.

KS2 SATS	2022	2023	2024
School	Too small to report	53.8% (each child is 7.14%)	64% (each child is 7.14%)
National	71%	73%	73%

Impact

Pupils show an enjoyment & curiosity for Mathematics

Pupils use precise mathematical vocabulary

Pupils are confident answering fluency, reasoning & problem-solving questions

Staff are confident about teaching all aspects of the mathematics curriculum.

All pupils make excellent progress from a range of starting points.

Attainment is broadly in line with national averages.