



St. Ambrose Barlow Catholic Primary School

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The National Curriculum for mathematics aims to ensure that all pupils become fluent, can reason effectively and are able to problem solve. We know that a high quality Mathematics education provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject. At St Ambrose Barlow Catholic Primary School we intend to provide such a high quality Mathematics education.

Intent

At St Ambrose Barlow our Maths curriculum uses a problem solving approach that promotes both fluency skills and reasoning abilities. We use Maths No Problem and a variety of other resources to ensure that every child develops an understanding and enthusiasm for Maths. During each lesson we prioritise the mastery of conceptual Maths understanding, through the use of real life/ everyday problems as children explore and investigate. Communication is key as they work alongside peers to reason, explain and justify their thinking using mathematical vocabulary.

Mathematics is a vital part of everyday life, helping children to understand and function effectively in the world. It is vital that children are aware of the importance of mathematics beyond the classroom and can use and apply the knowledge, skills and understanding they acquire. It is necessary to provide firm foundations for subsequent mathematical learning and for everyday life in general. At St Ambrose Barlow every child has an equal entitlement to a broad and balanced Maths curriculum. Individual needs are continuously assessed and catered for so that every child can work in an environment where they feel valued and understood and where they can truly know that they are all capable Mathematicians. We intend to foster a love of Maths and a confidence in each child that will give them the enthusiasm, resilience and skills to extend their learning beyond the classroom and into later life

Implementation

We use Maths No Problem and a variety of other resources to ensure that every child develops an understanding and enthusiasm for Maths. Teachers carefully plan open ended, challenging questions which enable our children to make connections, identify patterns and draw conclusions about Mathematical concepts and problem solving. Misconceptions are addressed as they arise and teachers actively engage children in proving their ideas. We are confident that this Mastery based approach enthuses children about Maths and ensures they can master Mathematical skills and concepts which enable them to continue learning as they progress through school and beyond.

Maths is studied daily. The main maths lesson will usually consist of a mental or oral starter activity. This may take the form of a fluency activity, such as times tables or a starter reasoning problem. The structure of the lesson will then depend on the activity. If, for example the children are working on a Maths No Problem lesson, they will start with the group or class

In Focus activity. This will generally lead to a class or group discussion. Children will then work on a Guided Practice activity, where they will work either individually or with an adult. At this point the children will work at their own pace.

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Once the Guided practice task is completely the children will move on to the Maths No Problem workbook activity. When this is completed, the children will work on a suitable, often differentiated journal activity, with extension work also available. At all points in the lesson all children will be working on the same topic. The teacher will be offering individual support as necessary and there will be regular plenaries throughout the lesson. All lessons will be conducted in an environment of challenge, pace and a sense that all can and will achieve to be their best. Lessons that do not follow the Math No Problem format will generally follow a similar structure. Through careful assessment and planning, teachers ensure that not only are all topics covered, but that the topics are revisited strategically to embed understanding and long-term retention. The structure of specific lessons may be adapted where necessary, to suit the topic and to vary the approach to aid understanding.

Opportunities are also taken for pre and post learning. Children are taken in groups to review topic or prepare for lessons to come. Through continued assessment and discussions with all adults and children concerned, misunderstanding or gaps in learning are regularly addressed on an individual, group or class basis as necessary

Termly and weekly planning in the subject ensures complete coverage of the Maths Programmes of Study for each year. Topics are revisited several times over the year to ensure that the knowledge becomes embedded. All children are catered for within the maths lessons. Teachers offer the necessary support and challenge for each individual to make progress. We ensure that maths is taught in creative and engaging lessons using a wide array of maths manipulatives to aid and support our children in their learning.

The three key aspects of fluency, reasoning and problem solving are integral to all planning and practise in maths. The children are given the opportunity for varied and frequent practice of their maths skills, with the focus on recalling and applying their knowledge rapidly and accurately. Reasoning is incorporated in our lessons as our children need to be able to describe, explain, convince, justify and prove their thinking, to be successful in this subject. Challenging and targeted questioning and modelled thinking by teachers is used to create an atmosphere of challenge and high expectation. Over the course of study, teaching is designed to help learners to remember in the long term the content they have been taught and to integrate new knowledge into larger concepts.

Correct mathematical vocabulary is an essential part of each lesson and the children need to understand this within the area they are studying and be able to make rich connections across other areas within this subject. Each lesson provides children with the opportunity to reason through their ideas, use their mathematical language to explore a line of enquiry and problem solve routine and non-routine problems.

Through our math's curriculum we aim to develop problem-solvers of the future and build resilience in our children, embedding essential skills that they can use in all aspects of their learning. We also offer a wealth of enrichment activities to promote maths within our children's lives including extra-curricular maths activities and dedicated maths days in school.

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We aim to encourage the deepest of learning for our children so that their knowledge can be transferred and applied in many contexts including other subjects e.g. science and art and their everyday lives. Maths is widely promoted across the school and our classrooms have working walls that the children can utilise to support their learning and provide extra challenge.

Book trawls, teacher observations, pupil interviews, learning walks, focussed marking and continued assessment in class of every child ensures that teaching is responsive, targeted and effective - at all times, for all children, including those with special educational, physical or emotional needs

A framework of continued professional development and support exists for all teaching staff, so that they possess the confidence and subject knowledge to deliver their lessons effectively. A wide variety of resources and equipment to support learning in Maths is available. Interactive Whiteboards in all teaching areas ensures that electronic teaching materials and visual aids are always available to enhance understanding in the subject. Physical and practical resources are also available in all teaching areas.

We have a big focus on a positive mindset throughout the subject. Cross curricular links, home-school partnerships and parent workshops foster an appreciation for Maths beyond the Maths lesson.

Impact

The impact of the high quality Maths education that we provide can be evidenced in a number of ways. The enthusiasm, confidence, understanding and ability of our children, in Maths is reflected in their positive assessment and test results. EYFS, KS1 and KS2 are broadly in line or above local and national averages. Each year data is analysed and any areas for improvement identified and addressed. Children talk enthusiastically about the subject and can show resilience and tenacity in dealing with more complex problems. They have a greater ability to reason mathematically and they have a wider understanding of concepts and methods to draw upon, when solving problems.

Finally, they carry with them the knowledge that they are Mathematicians. The skills and enthusiasm they have acquired at St Ambrose Barlow Catholic Primary School, will be carried into further education and beyond and will give them an appreciation and confidence in Maths that will stay with them in adulthood.

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