

CURRICULUM AREA: MATHS

Intent

Our curriculum is rooted in principles of Catholic Social Teaching (as per the teaching of Pope Francis); encouraging all children to have high aspirations and make positive contributions to their community and the wider global society, becoming advocates for social justice.

Supported by the National Centre for Excellence in the Teaching of Mathematics, we are currently redeveloping an innovative maths curriculum that ensures maximum engagement and enjoyment for the pupils and that allows all to access education in this area. This process will be rolled out over the next four years. As our primary goal is for every pupil to make progress, we will tailor our maths curriculum to reach individual pupils and enable each one to develop at their own pace. We intend to give our pupils the mathematical thinking and practical skills they will need in their future lives. Our intention is to create a curriculum that can be accessed by everybody and provides opportunities for pupils to identify with real-world relevance.

Our curriculum is being recreated with the needs of our pupils at its centre, but it still mirrors that of the National Curriculum, thus providing our pupils with skills and experiences that are beneficial across other areas of their studies. We aim for all pupils to enjoy and achieve in mathematics in order to become confident mathematicians. Consistency is key and all teachers will build on pupils' understanding of mathematics through a process of enquiry, reasoning and problem solving, therefore inspiring their creativity. We will also make use of a range of learning strategies and encourage independence alongside paired work and teamwork. Number sense is vital and this will be nurtured from the very beginning to ensure that all pupils can fly high in their learning and develop persistence, resilience and mastery.

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Implementation

We are being supported by the National Centre for Excellence in the Teaching of Mathematics to develop a sequence of work along with White Rose Maths resources that is reviewed regularly to take account of pupils' prior learning, and which uses small steps to embed learning and encourage mastery. All pupils are engaged in learning by using concrete, pictorial and abstract methods. Our redeveloped planning approach will use whole-class interactive teaching methods, where the focus is on all pupils working together on the same lesson content at the same time. This will ensure that all can master concepts before moving to the next part of the curriculum sequence, allowing no pupil to be left behind. If a pupil fails to grasp a concept or procedure, this will be identified quickly, and early intervention used to support the pupil and give them the confidence to be ready to move forward with the whole class in the next lesson.

Topics will be taught in blocks as continuously retrieving prior knowledge is understood by staff as essential for effective teaching in all subjects, but particularly in mathematics, where the development of a secure maths schema is necessary to learn new things in maths, as maths topics connect with one another.

At the start of each new topic, key vocabulary will be introduced and revisited regularly to develop language acquisition, embedding as the topic progresses and visible for pupils on the working wall.

Pupils will be taught through clear modelling and have the opportunity to develop their knowledge and understanding of mathematical concepts. The mastery approach uses objects, pictures, words and numbers to help pupils explore and demonstrate mathematical ideas, enrich their learning experience and deepen understanding at all levels.

Pupils will work on the objective and acquire the skill, apply the skill or deepen the skill within the lesson. Pupils will move through the different stages of their learning at their own pace. Pupils, who have shown their understanding at a deep level within the unit, will have opportunities to apply these skills in greater depth. This will be challenging and ensure that pupils are using more than just one skill to be able to answer the mathematical problems. Pupils with additional needs are always included in whole-class lessons and teachers will provide scaffolding and relevant support as necessary.

Fluency will be encouraged by a well-researched Maths Challenge approach as recommended by NCETM which has clear organisation, structure and progression for year 3 to year 6. This includes a systematic, whole class approach to learning the times tables which aims to break down the learning of the times tables into manageable chunks, learning one times table at a time. Rote learning in which children learn the number facts with a sound pattern. In KS1, pupils will be introduced to a Progression in Number Facts scheme, again provided by NCETM. This will encourage the learning of number facts confidently and securely thus freeing up space in working memory to complete more complex calculations, reason and solve problems as the pupil progresses through the curriculum.

Reasoning and problem solving are integral to the activities pupils are given to develop their mathematical thinking. Resources are readily available to assist with the demonstration of securing a conceptual understanding of the different skills. These are appropriate for each year group.

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Impact

Pupils will be able to experience immediate success and their self-confidence will grow. For many of them, maths should no longer be a source of anxiety, which it has often been in the past. In every lesson, step by step, they will realise that each problem has a solution and that they have the ability and necessary skills to work it out independently.

Each pupil will:

Show confidence and believe that they will achieve.

Achieve objectives (expected standard) for their year group.

Have the flexibility and fluidity to move between different contexts and representations of maths.

Show a high level of pride in the presentation and understanding of the work.

Mathematical concepts or skills are mastered when a pupil can use mathematical language to explain their ideas or when they have the ability to independently apply the concept to new problems in

unfamiliar situations. We aim to inspire pupils and develop enjoyment. We hope to develop pupils understanding of mathematics and to deepen pupils understanding, application and knowledge.

We are clear about the end points the curriculum is building towards – and what pupils need to know and be able to do to reach those end points. Our maths curriculum will be planned and sequenced so that new knowledge and skills build on what has been taught previously. A well constructed, well-taught curriculum will lead to pupils learning more and – and therefore achieving positive results.