



Mathematics Policy

William Reynolds Primary School and Nursery

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Date of policy review:	June 2024
Governing body signature:	

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Rationale and Intent

We recognise the importance of Mathematics as a tool for everyday life. Our school delivers a broad and balanced progressive curriculum with a range of cross curricular links.

Our three principle aims - following the National Curriculum in England - for Mathematics are:

- For all children to be fluent in the fundamentals of mathematics
- For all children to reason and solve a range of problems
- For all children to make choices about the maths they use and be able to apply with confidence.

We are committed to enabling children to recognise the importance of mathematics in the wider world. Therefore, enabling them to use their mathematical skills and knowledge in future employment confidently.

The core of our mathematics curriculum is the National Curriculum for England, which is supplemented by White Rose and Power Maths. Subject leaders researched a variety of mathematics programmes of work and Power Maths was selected due to being recommended by the DfE, having met the NCETM's criteria for fully delivering a mastery approach. The curriculum has been specifically sequenced in a logical progression to ensure that new knowledge and skills build on what has been taught before: Early Years to Year 6. This enables our pupils to know more and remember more. End points are clearly identified for each year group; time allocation has been carefully considered to provide children with opportunities to master key concepts.

All children have access to a high-quality maths curriculum that is both challenging and enjoyable and raises pupil's aspirations. We widen their horizons through a context rich curriculum, which gives purpose to their learning, through high expectations for every child to succeed. Our children are provided with a variety of mathematical opportunities, enabling them to become more fluent and apply knowledge rapidly. Throughout school, we develop resilience that enables all children to reason and problem solve with increased confidence. A high focus on reading fluency throughout school enables our children to read, comprehend and solve mathematical problems with a clear understanding of vocabulary.

Teaching and Learning

Foundation Stage

The EYFS curriculum includes rich opportunities for children to develop a ground understanding in number and their spatial reasoning skills across all areas of mathematics. Throughout the whole of the Foundation Stage, the pupils will have opportunities to build and apply their mathematical understanding both inside and outside.

Key stage 1 and 2

Basic skills are developed in arithmetic lessons to develop mathematical fluency. Alongside mathematics sessions, an additional 15 minutes a day is spent focusing on securing skills sessions which help build fluency and precision in these areas. Times tables are taught daily through mental oral starters, with additional opportunities for pupils to access Times Tables Rockstars, in school and at home. This enables the pupils to have rapid and accurate recall to apply this knowledge to more complex problems.

Investigative tasks are designed to allow pupils to follow lines of enquiry and develop their own ideas, justifying and proving their answers. Children work both collaboratively and independently when solving problems which require them to persevere and develop resilience.

Formative assessment takes place daily, while termly summative assessment takes place in the form of NFER testing which allows analysis of gaps in learning to be quickly addressed. Half-termly 'Chance to Shine' assessments take place to identify where pupils have gained understanding.

Those pupils who require additional support are provided with opportunities to catch up through the Numicon interventions and mathematical tutoring.

Planning

Every year group has a yearly Curriculum Map that outlines the key areas of mathematics which will be taught throughout the year. This ensures that adequate amount of time and coverage is allocated to each key area.

Detailed Medium Term planning supports teachers to plan a sequence of progressive weekly lessons and over time, giving the children time to master new concepts. Within this document, key objectives and vocabulary are outlined with fluency, problem solving and reasoning suggestions for each area. Progression documents and the Calculation policy, used to support the Medium-term plan, ensure that staff are delivering a consistent and challenging curriculum.

Teachers short term planning is developed using the medium-term plan to ensure all areas are taught. Where possible, lessons are contextualised to engage the children

further with their learning. This planning includes assessment for learning opportunities, the learning objective for each lesson, linked success criteria and differentiated tasks to meet the objective. With the support of Power Maths & regular CPD, teachers have expert knowledge on how to teach key concepts. Models & images are used effectively to help pupils visualise the mathematics being taught.

Role of the Subject Leader

The subject leader will:

- Liaise with colleagues offering advice and support
- Produce and keep updated the policy and subject guidance in consultation with the staff
- Ensure the coverage of work is implemented accurately following the Calculation Policy
- Keep up to date with developments in Mathematics
- Take a leadership role demonstrating good practice
- Keep resources up to date and well organised
- Liaise with other agencies and providers
- Attend, participate in and provide appropriate CPD
- Promote parental interest and understanding
- Participate in monitoring planning, teaching and learning within Mathematics, in line with the school's monitoring procedures
- Develop and maintain a portfolio of evidence
- Keep staff informed and up to date in curriculum developments

Spiritual, Moral, Social and Cultural Education

When teaching Mathematics, we contribute to the children's spiritual development where possible. Children will recognise how logical reasoning can be used to consider the consequences of particular decisions and choices. They explore a range of Mathematical investigations where they are challenged and made aware that there may be more than one solution. On the other hand, they are also aware that some problems require one correct answer.

Problem solving skills and teamwork are fundamental to Mathematics, through creative thinking, discussion, explaining and presenting ideas. Throughout the key stages, children are provided with opportunities to work together productively on mathematical tasks and supported to see that the result is often better than any of them could achieve separately. Experimental and investigation work provides an ideal opportunity for children to work collaboratively.

Mathematics is a universal language with a wealth of cultural inputs throughout the ages. While developing their knowledge of place value, children begin to get a sense of number systems from around the world.

Resources

A variety of apparatus and resources are stored in all classrooms which the children can access regularly. Shared resources (Geometry and Measurement) are stored in the KS2 corridor for easy access.

Use of I.C.T

All children in KS1 and KS2 have access to an online subscription to Times Table Rock Stars in school and at home. Times tables are a very important part of mathematical knowledge for all children. Through knowing their times tables pupils will start to notice patterns and will then be able to apply this knowledge as they move through the school. When it comes to times tables, speed AND accuracy are important - the more facts a child remembers, the easier it is for them to do harder calculations. Times Table Rock Stars is a fun and challenging programme designed to help pupils master the times tables.

Online Safety

As part of our commitment to Safeguarding, online access during lessons is carefully planned for and monitored. Individual passwords are allocated to enable each child to access Times Table Rock Stars safely.

Impact

Our pupils know that maths is a vital life skill that they will rely on in many areas of their daily life. They have a positive view of maths which is evident throughout the high standards of work which pupils clearly take pride with.

The impact of our curriculum is that:

- Our pupils love mathematics and can explain the importance of the subject in their everyday lives. They can also explain how the subject will help them in their future careers.
- Our pupils have a sound understanding of the knowledge and skills they have been taught which prepares them for their next stage of education.
- Our teachers have high expectations for every pupil which is evident throughout the high standards of work which pupils clearly take pride with.
- Our teachers have good subject knowledge and are aware of the resources available to help them plan well-structured lessons.
- Our subject leaders have a clear understanding of the schools' strengths and areas for improvement. There is a constant drive to ensure that we can be the best we can be.