

Warren Wood Primary Academy and The Evergreen Centre Maths Policy

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Document Change History

Date:	Version:	Description of Changes:
November 2023	1.2	Added to Trust template and updated

Mission Statement

“To nurture and develop all people in our Trust so that they reach their full potential academically, vocationally, and personally, including being positive role models for future generations in the community. We will achieve this by providing high quality values-based education that cultivates employability and life skills making our schools the first choice for young people, parents, carers, staff and employers.”

Values

The values of Respect, Excellence, Collaboration, Independence, Perseverance, Enjoyment, Leadership, Integrity and Care are central to everything we do at the Skills for Life Trust.

Statement of Equality

We have carefully considered and analysed the impact of this policy on equality and the possible implications for pupils with protected characteristics, as part of our commitment to meet the Public Sector Equality Duty (PSED) requirement to have due regard to the need to eliminate discrimination, advance equality of opportunity and foster good relations.

Purpose

At Warren Wood, we believe in providing a high-quality mathematics education that enables all pupils to develop essential mathematical knowledge, skills and understanding. This Mathematics Policy outlines our approach to teaching and learning mathematics, ensuring inclusivity, fostering a growth mindset and promoting the enjoyment of mathematics among our pupils.

Aims and Objectives:

1. To develop a deep understanding of mathematical concepts, procedures and reasoning skills.
2. To foster a positive attitude towards mathematics, promoting confidence and enjoyment in the subject.
3. To ensure that all pupils have equal access to mathematical learning, regardless of their abilities, backgrounds or learning style.

4. To encourage problem-solving, critical thinking and the application of mathematics in real-life contexts.
5. To support pupils in becoming independent learners, capable of using mathematics in everyday situations and future endeavours.

Teaching and Learning strategies:

1. Adaptive Teaching: Our teachers employ a range of strategies to meet the diverse needs of our pupils. Adaptive teaching allows for personalised learning experiences, ensuring that every pupil is challenged and supported appropriately.
2. Inclusive practices: We promote an inclusive classroom environment where every pupil feels valued and support. We use inclusive language, provide multi-sensory resources and implement teaching strategies that address different learning styles and abilities.
3. Hands-on Learning: We believe in providing concrete, visual and manipulative experience to help pupils develop a deep understanding of mathematical concepts. Practical activities, group work and the use of educational technology to enrich the learning process.
4. Problem-solving Approach: Pupils are encouraged to apply mathematical skills to solve real-world problems, fostering critical thinking, logical reasoning and creativity. Problem-solving tasks are designed to challenge and engage learners at all levels.
5. Mathematical Language and Communication: Pupils are supported in developing mathematical vocabulary and effective communication skills. Opportunities for mathematical discussions; presentations and collaborative tasks to enhance their understanding and reasoning abilities.
6. Assessment for Learning: Assessment is an integral part of the learning process. We use a variety of formative and summative assessment methods to monitor pupil progress, identify areas for improvement and provide timely feedback to pupils and parents/carers.

EYFS Mathematics:

Within the EYFS is developed through purposeful, play based experiences and will be represented throughout the indoor and outdoor provision. The learning will be based on pupil's interests and current themes and will focus on the expectations from Development Matters / Early Years Outcomes. Mathematical understanding can be developed through stories, songs, games, imaginative play, child-initiated learning and structured teaching. As pupils progress, they will be encouraged to record their mathematical thinking in a more formal way.

Key Stage 1 Mathematics:

The primary focus of mathematics education in key stage 1 is to foster confidence and develop mental fluency in pupils. The underlying principle of the mastery approach is to ensure that all children possess a profound understanding of mathematical concepts, enabling future learning to be built upon solid foundations. By employing concrete materials, pictorial representations and abstract symbols, the subject can be presented in diverse ways, enabling children to visualise mathematics, establish connections and independently explore and investigate various topics. Practical activities and resources provide children with a deeper comprehension and more complex mathematical concepts. The provision of visual representations also acts as a scaffold in cultivating a robust understanding of mathematics.

Throughout Key Stage 1, it is crucial for children to acquire a secure knowledge of numbers and place value and to gain confidence in utilising the four fundamental operations, both through formal methods and problem solving, where the approach is often not immediately apparent. In addition to working with whole numbers, pupils begin to recognise fractions using shapes, objects and quantities, establishing connections to concepts of equal sharing and grouping. They learn to count to ten in fractions, identify equivalent fractions and develop their understanding of fractions on a number line. During this stage, pupils also enhance their ability to recognise, describe, draw, compare and categorise different shapes. They are provided with opportunities to use a variety of measures to describe and compare quantities such as length, mass, capacity/volume, time, and money, and are expected to employ relevant vocabulary across all these topics.

Furthermore, there exist strong links between mathematics and other subjects, enabling cross-curricular teaching. For example, art or computing can be utilised to explore geometric shapes, science can incorporate measures, and geography can incorporate coordinates. This approach ensures that we consistently maximise learning opportunities for all pupils across a comprehensive curriculum.

Key Stage 2 Mathematics:

Lower Key Stage 2 – Years 3-4 - The principal focus of mathematics teaching in lower Key Stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of Year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Upper Key Stage 2 - Years 5-6 - The principal focus of mathematics teaching in upper Key Stage 2 is to expand pupils' understanding of the number system and place value, encompassing larger integers. This progression aims to deepen the connections that pupils make between multiplication and division, involving fractions, decimals, percentages, and ratios. At this stage, pupils should enhance their problem-solving abilities by tackling a broader range of problems, including complex number properties, arithmetic, and problems that require efficient written and mental calculation methods. Building upon this foundation in arithmetic, pupils are introduced to algebraic language as a tool for solving various problems. Geometry and measurement teaching should consolidate and extend the knowledge developed in number work. Furthermore, teaching should ensure that pupils can classify shapes based on increasingly complex geometric properties and that they acquire the necessary vocabulary to describe them. By the culmination of Year 6, pupils should be proficient in written methods for all four operations, including long multiplication and division, as well as proficient in working with fractions, decimals, and percentages.

Parental involvement:

We recognise the importance of parental involvement in supporting pupils' mathematical development. We encourage parents/ carers to engage in home-based mathematical activities, communicate with teachers and attend parent workshops to enhance their understanding of the mathematics curriculum and how they can support their child's learning.

Professional Development:

We are committed to providing ongoing professional development opportunities for our mathematics teachers. They have access to trainings, workshops and recourses that ensure they stay up-to-date with best practice, teaching methodologies and the latest educational technologies in mathematics.

Inclusion

Teaching mathematics for mastery adopts a distinct approach that ensures every pupil has access to the complete mathematics curriculum. This inclusive method focuses on fostering self-confidence and resilience in pupils by promoting diverse problem-solving strategies. While the entire class progresses through the curriculum at the same pace, ample opportunities for adaption still exist. In the context of mastery teaching, Adaptive Teaching primarily occurs in the form of personalised support and interventions provided to individual pupils, rather than variations in the

topics taught, especially in the earlier stages.

Content differentiation is minimised, but the questioning techniques and scaffolding employed for each pupil during problem-solving activities may vary. Higher-attaining or quick-grasping pupils are challenged with more demanding problems that deepen their understanding of the same content. On the other hand, pupils who require additional support in developing fluency are given extra assistance to consolidate their understanding before moving forward. Immediate formative assessments are used to identify pupils' difficulties and misconceptions, which are then addressed through timely interventions, typically in the form of individual or small-group support on the same day whenever possible.

In cases where pupils are not making the expected progress, proactive measures are taken to ensure they receive appropriate support. However, this support does not entail depriving them of the full curriculum. Instead, concepts are revisited throughout the year, particularly during intervention periods, to facilitate long-term understanding and growth. The goal is to provide relevant support and assistance while ensuring that every child can engage with and benefit from a comprehensive mathematics education.

We adapt the curriculum and learning environment for pupils with SEND: Warren Wood Primary Academy & Evergreen Centre prides itself in being inclusive and will endeavour to support every child regardless of their level of need. All pupils follow the National Curriculum at a level and a pace that is appropriate to their abilities. At times and when it is felt appropriate, modifications to the curriculum may be implemented.

To successfully match pupil ability to the curriculum there are some actions we may take to achieve this:

1. Ensure that all pupils have access to the school curriculum and all school activities.
2. Help all pupils achieve to the best of their abilities, despite any difficulty or disability they may have.
3. Ensure that teaching staff are aware of and sensitive to the needs of all pupils, teaching pupils in a way that is more appropriate to their needs.
4. Assess arrangements are considered and monitored by the SEND Team.
5. Pupils to gain confidence and improve their self-esteem.
6. To work in partnership with parents/ carers, pupils, and relevant external agencies in order to provide for children's special educational needs and disabilities.
7. To identify at the earliest opportunity, all children that need special consideration to support their needs (whether these are educational, social, physical, or emotional)
8. To make suitable provision for children with SEND to fully develop their abilities, interests, and aptitudes and gain maximum access to the curriculum.
9. Ensure that all children with SEND are fully included in all activities of the school in order to promote the highest levels of achievement.
10. To promote self-worth and enthusiasm by encouraging independence at all age and ability levels.
11. To give every child the entitlement to a sense of achievement.

12. To regularly review the policy and practice in order to achieve best practice.
13. To ensure that we provide a language-rich environment and use resources such as Widgit to create communication boards for some pupils.

Organisational Approach:

- All pupils participate in a daily mathematics lesson, although mathematical skills are integrated into various other areas of the curriculum.
- Each lesson centres around a specific learning objective that all pupils are expected to master. Extension activities are provided to allow those pupils who grasp the objective quickly to explore it in greater depth.
- Each lesson incorporates elements of fluency to practice skills, reasoning to deepen understanding, and problem-solving to apply skills, depending on the specific objective and the pupil's comprehension.
- Teachers utilise the White Rose Mastery planning and resources to support mathematics teaching within the school. They follow the scheme of work provided by the Maths Hub to ensure comprehensive coverage of the curriculum, encompassing fluency, reasoning, and problem-solving opportunities in lessons.
- Whole-class teaching is implemented, and pupils work in mixed-ability groups. We believe that all pupils deserve the same level of teaching. However, we acknowledge that there may be occasions when grouping based on ability is necessary. Therefore, we strive to differentiate based on outcomes rather than assigned tasks.
- Every classroom is equipped with a variety of practical apparatus to support pupil learning, with additional resources stored centrally. We regularly review and enhance these resources each year.

Monitoring and Review:

Monitoring the quality of mathematics teaching and tracking pupil progress is a collaborative effort involving teachers, the subject leader, and the senior leadership team. The subject leader's role encompasses supporting colleagues in their mathematics teaching, staying abreast of current developments in the field, and providing strategic leadership and direction for the subject. Regular updates are provided to the school's governing body to keep them informed about the vision and ongoing efforts to advance teaching for mastery.