WELBECK PRIMARY SCHOOL

Maths Policy

Approved	July 2025
Next Review	July 2026

Aims and objectives

Our aims in teaching mathematics are that all children will:

- Develop a lifelong enjoyment and appreciation for learning maths and study it with a sense of confidence and achievement.
- Gain a secure foundation in the key foundational knowledge, skills and concepts of mathematics.
- Have high expectations for themselves and achieve their full potential.
- Become fluent mathematicians who can confidently reason and problem-solve, using and applying skills with confidence and understanding in real life problems as well as lessons.
- Develop an ability to think logically and to use mathematical language with confidence and understanding.
- Have an appreciation of mathematical pattern and relationships and make rich connections across mathematical ideas.
- Have a positive attitude towards mathematics as a creative subject and engaging in outdoor learning opportunities.
- Experience rich problem solving and reasoning challenges with increasing sophistication.
- Gain experience of working independently, investigating their own ideas and developing their own mental and efficient written methods.

Planning with White Rose

EYFS, Key Stage 1 and Key Stage 2 use the White Rose schemes of learning to support medium term and short-term planning.

Planning in every key stage is adapted to the learning needs and context of pupils with clearly structured lessons taught across the whole school. All pupils have the same opportunities to learn and the necessary support to fully grasp key mathematical concepts. When pupils are secure in their understanding of their current learning they move onto a more advanced concept. Pupils who are not yet secure receive targeted individual support and intervention through personalised scaffolding, pre-teaching and additional 1:1 support.

Planning

- Medium term planning is created termly by teachers, supported by White Rose Schemes of Learning. Planning is saved to the school's staff share files. Every year group plans in a consistent way and planning is sequential – building progressively on prior learning. Coverage allows returns to different mathematical concepts throughout the year, with revisiting and interweaving topics deepening pupil understanding.
- Weekly plans are created by teachers from the medium-term plan, and outline targeted adult support, key learning objectives and outcomes, key vocabulary, activities, challenge and differentiation.
- Planning is flexible, allowing for effective use of AfL in response to the context and attainment levels of each class and individual pupils. High expectations of progress ensure pupils are always challenged and pushed to apply their learning to a variety of contexts.
- Planning for pupils to progress onto efficient written calculation methods allowing them to be confident and fluent mathematicians who enjoy problem solving and reasoning.
- In Foundation Stage, mathematical understanding is supported by stories, rhymes, sand, water, construction imaginative play, cooking, 2D/3D creative work using different media; and by observing numbers and patterns in the environment. Practical equipment including computing is used to support the teaching and learning of number calculation. Messy Maths, a play-based approach to maths outdoors, is used, with the outdoor environment used as a stimulus for mathematical investigations, using maths-rich and natural resources to facilitate mathematical thinking and problem-solving.

Teaching and learning in KS1 and KS2:

Every pupil from EYFS to Year 6 participates in a daily maths lesson. During the reception year children will become ready for a dedicated 45-minute maths lesson. The same learning objective is taught to the whole class, with appropriate scaffolding, differentiation and challenge for all attainment groups. Lessons are structured as: mental/oral starter, main teaching activity and plenary.

Mental starter: rehearse, revise and develop facts and skills to develop recall and knowledge of key mathematical facts involving multiplication and division and to recall them quickly and accurately, becoming fluent. Starters will be interactive, full of pace and use a wide variety of resources and responses.

Introduction of main learning objective: introduce new or more complex learning objectives, progressively building on prior learning. Objectives, weekly focuses, success criteria and mathematical vocabulary are clearly displayed on working walls in every lesson, which support and scaffold teaching and learning. Use of mathematical language and vocabulary is a cornerstone of Welbeck's teaching and learning, with the school context necessitating effective and clear teaching of key mathematical vocabulary to support learning and ensure all pupils make progress.

Teaching methods (pedagogy):

- High-quality teacher modelling and explanation. Staff receive CPD to ensure a consistent,whole school approach is used when modelling methods and calculations. Pupils are encouraged and shown through modelling how to model and talk aloud their strategies and methods.
- Modelling of written calculations and strategies ('My turn, your Turn' in EYFS).
- Effective teacher talk, call and response, repetition and talk partners to allow opportunities for deeper understanding and consolidation along with whole class/group/paired discussions.
- Teacher questioning is used to facilitate opportunities for pupils to explain and articulate their mathematical reasoning and thinking.
- Whole school approach to using grided whiteboards across the whole school to develop asecure understanding of place value from Key Stage 1 onwards, laying a secure foundation for strong number sense and developing written calculation methods.
- Resources (representations) and manipulatives are used to support and scaffold learning in the early stages of new concepts. Concrete materials support pupils to learn new concepts, relate them to what they have previously learnt and to tackle unfamiliar problems.

Practice, consolidation, differentiation and challenge

- To practice and consolidate skills they learn, pupils work independently or in a group with targeted support and scaffolding from the teacher and support staff.
- Pupils not yet secure use manipulatives and representations to deepen understanding. In EYFS, teachers work with a targeted group to consolidate learning while rest of class engage in continuous provision.
- After achieving the learning objective and consolidating learning, pupils apply their learning in a problem solving and reasoning context, identified as an 'apply'. Every pupil, of all attainment levels, is expected to progress to an 'apply'. Pupils progress onto rich reasoning and problem-solving activities and investigations ensuring challenge and good progress.
- Differentiation and appropriate challenge are in every part of a lesson (starter, main, plenary) for all range of levels of attainment. Every pupil, especially SEN and lower attaining pupils, is able to access and succeed in their learning.
- Differentiation and challenge through adult support, appropriate challenge ensuring progress, enabling and extending questions, and providing/asking for different representations using

appropriate manipulatives. Differentiation is achieved by emphasising deep knowledge and challenge, and through individual support and intervention.

Plenary: allows teachers' to summarise what the children have learnt, address misconceptions, possibly mark work with children and indicate what the next step of learning will. It offers an opportunity for the children to peer or self-assess their work and understanding.

Resources

Opportunities to learn outside the classroom, in outdoor settings and in cross-curricular contexts are planned for as much as possible. These engage pupils and provide relevant, contextualised and enjoyable learning opportunities. Each classroom also has a maths area with resources available for children to access independently. An annual Maths budget enables new resources to be bought or replaced.

Teaching and learning is supported by a range of additional, rich learning resources:

- White Rose Primary Scheme of Learning
- NRICH investigations and problem-solving activities
- NCETM investigations and problem-solving activities
- Times Tables Rockstars
- White Rose mastery activities
- Talk it, Solve it reasoning problems
- ATM 'We can work it out!' collaborative problem-solving activities
- Enrichment Day resources on staff share
- Computing – Times Table rockstars, interactive ITPS

Adult support

Teaching assistants give focussed support to individuals and target groups in lessons and through pre-teaching, delivering intervention programmes, supporting differentiation, preparing and managing resources and supporting assessment.

Foundational knowledge and Fluency practice

Pupils complete weekly foundational knowledge tests in yellow books: KS1: number bonds to 10, 20, counting on and times tables tests, LKS2 (and Y5): times table tests and inverse.

Every pupil also completes a weekly arithmetic test to linked to their current scheme of learning and evidenced in their Arithmetic folder. Every pupil has access to Times Table Rockstars, and teachers track pupil progress on a class chart. LKS2 pupils are closely tracked in preparation for the Year 4 Multiplication Tables Check (MTC).

Marking and Targets

Targets are set and reviewed termly. All maths work is marked, with immediate marking in lessons facilitating high-quality AfL and addressing misconceptions. Some work will show a next step target to help children address misconceptions. Year 1-6 teachers use the traffic light system to mark the LO of each child's work, demonstrating whether the pupil has fully understood (green) needs more practice (orange) or needs 1:1 feedback and intervention to achieve LO (red). In KS2, the children will use self-assessment, highlighting the colour that they believe they are – green, orange or red. In KS1 children will use a smiley face self assessment system.

Maths across the curriculum

Mathematics has many cross-curricular activities. Making links between areas of learning deepens children's understanding by providing opportunities to reinforce and enhance learning.

- Further opportunities to practice taught skills through purposeful use in other curriculum areas, such as Science, Computing, Art, Design Technology, Geography, History and PE.
- Enrichment Day Maths lessons which provide contextualized opportunities for pupils to apply their learning (e.g. Titanic Cargo Challenge, BeeHive Initiative Challenge).
- Providing real experiences, context and meaning for the development of core mathematical skills (e.g., measuring of new school building area, perimeter and costing charges).
- Providing opportunities for the application of knowledge in new contexts, to involve children in higher order thinking skills, such as reasoning and problem solving.
- Opportunities for learners to recognise and develop key aspects of learning, e.g., looking for patterns and relationships, problem solving and reasoning.
- Use of practical activities, games and puzzles.

Monitoring and Evaluation

The purpose of monitoring and evaluating activities is to raise the overall quality of teaching and track levels of pupil attainment. The mathematics leader, senior and phase leaders will monitor the quality of teaching and learning and outcomes for learners. This will include:

- Planning scrutiny
- Book scrutiny and book looks
- Lesson observations to observe quality of teaching and learning and developmental feedback
- Moderation of standards in children's work (across phases and across schools)
- Evaluation of children's attainment against targets
- Data analysis of classes, groups and individual pupils

Assessment opportunities

Formative assessment enables the teacher to identify a child's understanding and progress, to inform their immediate teaching and to plan for their coming lessons. This can take the form of:

- Discussing mathematics in the context of a practical task
- Short tests given in oral or written form
- Weekly times table/fluency
- Weekly efficient written calculation tests
- Observations
- Individual discussions with children to evaluate progress.
- All pupils complete a weekly written calculation test.

Summative assessments consist of

- Foundation Stage Profile
- Baseline Assessment (Foundation Teacher assessment)
- Half - Termly assessments
- Key Stage One SATs (Teacher assessment)
- Optional SATs in Year 3-5
- Key Stage Two SATs

Self-assessment enables the children to assess their own learning and understanding – this may be done verbally or written (e.g. traffic light system, smiley face or a comment)
Peer-assessment enables the children to assess each others learning and understanding, either verbally or written.