



THE HERMITAGE and THE OAKTREE SCHOOLS

Inspire, Learn, Achieve

Maths Policy

Person Responsible:	Maths Subject Leaders
Date Adopted:	Summer Term 2023
Date of last review:	Summer Term 2023
Date of next review:	Summer Term 2026

At The Oaktree School and The Hermitage School our aim for Mathematics is:

- to enable the pupils to make sense of the world around them by developing each individual's ability to calculate, to reason and to solve problems in a range of contexts;
- to build pupils' confidence and to promote the pupils' enjoyment of and enthusiasm for the subject through a variety of creative teaching styles including practical activities, exploration, discussion and fun (role-play, web-sites, programmable toys, games, outdoor activities, etc);
- to encourage resilience, passion and appreciation of the logical aesthetic aspects of mathematics, through problem solving and investigation, linking this with other areas of the curriculum and their everyday lives;
- to think for themselves, take responsibility for their own learning and achieve a good level of numeracy.
- to develop an understanding of mathematical vocabulary and notation.
- to have the confidence to apply the knowledge and experience they have gained to other mathematical tasks.

Learning Objectives:

The pupils will be able to:

- have a sense of the size of a number and where it fits into the number system confidently within the daily mathematics lesson, other curriculum areas, the outdoor environment and in their everyday lives;
- know by heart number facts such as number bonds, multiplication tables, doubles and halves.
- develop their ability to solve problems number problems (including non-routine problems) through quickly recognizing the operations needed to solve them, decision-making, reasoning and asking and answering questions using correct mathematical language;
- judge whether their answers are reasonable and have strategies for checking them where necessary.
- suggest suitable units for measuring and make sensible estimates of measurements.
- compare and classify shapes; identify, compare and order angles; identify lines of symmetry in 2-D shapes.
- use coordinates to describe positions on a 2-D grid; describe movements between positions; plot specified points and draw sides to complete a polygon.
- calculate accurately and efficiently, both mentally and with pencil and paper, and draw on a range of calculation strategies.
- recognise when it is appropriate to use a calculator or other mathematical apparatus, and be able to do so effectively.
- explain and make predictions from the numbers in graphs, diagrams, charts and tables.
- draw on a range of problem solving skills to tackle problems.
- recognise the links between tasks completed in class and real-life problems.

How teaching is organised:

Mathematics is a core subject in the National Curriculum.

The Foundation Stage Curriculum is used as a framework for planning in our Reception classes. The mathematical aspects of the pupils' work relate to the objectives set out in the Early Learning Goals which underpin the curriculum planning for this age group.

In Key Stages 1 and 2 we use the National Curriculum supported by the Mastery Curriculum as the basis for implementing the statutory requirements of the programme of study for mathematics.

Our curriculum broadly follows White Rose Maths which encourages 'a culture of deep understanding, confidence and competence in Maths – a culture that produces strong, secure learning and real progress.' Maths is taught discretely five times a week. Our plans are designed to guide the children through small steps of learning in order to ensure a good understanding of the basic concepts of Maths before children are moved on to more complicated skills. We also promote a balance between procedural and conceptual understanding so that children will know how to solve calculations but also understand the properties of and relationships between numbers in order to understand how and why the calculations work.

General approach:

- Within the daily lesson there is a balance between individual, group and whole class direct teaching.
- Pupils are encouraged to ask as well as answer mathematical questions during practical tasks and within class and group discussions. Paired and small group speaking and listening activities are undertaken on a regular basis.
- Pupils are encouraged to use a wide range of resources and visual reminders when being introduced to a new concept (concrete strategies).
- As pupil's subject knowledge and understanding develops within a Mathematical concept, they are encouraged to move from the concrete towards the abstract strategies for application. This enables them to explore more mental and written methods and apply these to a range of 'life reflecting' concepts.
- Pupils are encouraged to record their work when appropriate and explain their reasoning (this could be verbally or written).
- ICT is used in mathematics lessons where possible to enhance learning.
- The pupils have access to online services (appropriate to the age group) outside of Maths sessions to further support and develop their understanding.
- Cross-curricular links to other subjects within the curriculum are made and these links are clearly indicated on the half-termly topic webs.
- Wherever possible the challenge of the task is matched to the ability of the individual.

This is achieved through detailed planning, which ensures continuity and progression, and through a range of teaching strategies including:

- differentiated questioning;
- differentiated group work;
- 'high ceiling, low threshold' activities;

- pupils working in mixed ability pairs;
 - ability grouping allows for specific individual and small group support both from teachers and TAs;
- All children learn Maths by utilising their fluency, reasoning and problem solving skills.

Medium-term planning is produced in half-termly blocks to ensure an appropriate balance and distribution of work across each term. The half-termly topic webs are sent to parents.

- Long term plans are available for each year group. As noted previously, these largely follow the White Rose Maths plans and show which area of Number or SSM is being covered each week. We plan for a linear curriculum meaning that the same area does not necessarily appear twice but is regularly revisited throughout the remainder of the year through links to the other areas.
- The class teachers prepare short-term, weekly plans and daily lesson plans during Year Group Planning Meetings. These plans detail the specific learning objectives and how each lesson will be taught.
- Each Year Group Leader and the Subject Leader keeps a copy of the long and medium term plans. The class teachers keep the short-term plans as working documents to ensure on-going assessment and progression. These plans are informally reviewed with the Subject Leader periodically.
- In KS1, whole class targets are displayed in the classrooms and differentiated and shared with the children.
- In KS2, children are encouraged to 'journal' using a purple pen, to show key teaching points or mathematical connections.
- When children are identified as working at greater depth or higher than expected we provide further opportunities for higher level thinking within the curriculum of their year group rather than accelerating to the year group above. This means using further problems and puzzles to create opportunities for the full application of their knowledge and the chance to further explain and explore their understanding of key concepts.
- Children from vulnerable groups have access to additional Maths provisions and/or interventions which are highlighted on their ISPs or SEND Arrangements.
- In KS2, homework is used to consolidate fluency. In Year 3, 15 minutes a week is spent on homework, which increases to 30 minutes by Year 6.

Assessment, recording and reporting:

Assessment in mathematics is mainly formative and informs planning. Summative assessments are carried out termly for Key Stages 1 and 2.

Formative Assessment

In EYFS Maths is continuously assessed by classroom adults. Some of these assessments are evidenced on Tiny Tracker. In KS1 children are encouraged to self-assess each lesson against the Good Learner/ Super Learner. This is a 'skills and knowledge' based success criteria and this provides a time for reflection and an opportunity to discover next steps in learning.

The teacher then provides feedback as to whether they agree that the child has met or not met the objectives. Teachers use these objectives to judge whether a child needs further support or extension before or during the following lesson. In KS2 children create 'Success Criteria' or 'Steps for Success' for each learning point to understand how to achieve during the lesson or series of lessons. The teachers use a series of Assessment for Learning strategies during lessons to progress learning. Feedback is immediate where possible and most commonly verbal. Teachers review learning in the books to provide the best support and challenge during or before the subsequent sessions. In this way the teacher is able to quickly and effectively address the needs of individual children to ensure that they make progress and don't develop learning gaps which will negatively affect their progress in later years.

Summative Assessment

Teachers collect and analyse Maths data three times a year (before the end of each term). In EYFS and Year 1 this assessment is largely based on teacher judgement whilst Year 2 use 'End of Key Stage' style tests alongside teacher assessment. In KS2, Year 3, 4 and 5 use White Rose assessments during the data collection periods during Autumn, Spring and Summer terms. Year 6 assess against previous End of Key Stage assessments, before the SATS tests in Summer Term (May).

This assessment is uploaded to Educater which is a tool that is used to analyse and evaluate the data. Teachers provide summaries of their data and plan actions based on these analyses which are intended to support further progress for individual children. This data and these actions are shared with the SLT who can then look for trends and plan a whole school approach to moving the curriculum and our provision forward and improving efficiency and effectiveness.

Monitoring:

The staff meet regularly to level and moderate Mathematics levels across all Year groups.

The Maths Lead and headteacher monitor the standards of the pupils work and the quality of teaching in mathematics. Monitoring involves regular (termly) planning scrutinies, book scrutinies, learning walks and pupil questionnaires.

The Maths Leads evaluate the End of Key Stage Assessments results and report any strengths and areas for further development to the headteacher.

The headteacher allocates regular management time to the Maths Lead so that they can review samples of work, monitor teaching and learning and attend courses and conferences to ensure they are informed about current developments in mathematics and thus support colleagues.

A named member of the school's governing body is briefed to oversee the teaching of mathematics and this governor, the headteacher and the subject team meet regularly to review progress.

Equal Opportunities:

We are committed to offer a mathematics curriculum to all pupils regardless of ability, cultural diversity, disability or gender. (See Equal Opportunites Policy.)

Parental Involvement:

Parents support children practicing skills learned in class through home learning. They also support the children in school by helping the run a stall during the annual Spring Fair. Annual Reports inform the parents of their child's progress in Mathematics, as do the Parent Consultation Evenings.