

LAVANT C.E. PRIMARY SCHOOL



MATHEMATICS POLICY

Written **Spring 2020**
Review **Spring 2023**

Mathematics Policy

This policy should be read in conjunction with:

- Lavant CE Primary Curriculum Intent & Implementation Statement
- White Rose Maths (WRM) Calculation Policy and Guidance, and Schemes of Learning

1 Aims and objectives

1.1 Mathematics teaches us how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many cultures to the development and application of mathematics.

Our core aims reflect those of the 2014 National Curriculum for maths, which are that children:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Within these core aims, we also endeavour to:

- to promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to develop confidence in applying mathematical knowledge to practical, everyday situations;
- to develop the ability to hypothesise and test theories;
- to develop a firm understanding of mathematical language

2 Teaching and learning style

2.1 Lessons are based around, but not limited to, the White Rose Maths scheme of learning and resources, which offer a high quality blend of fluency, reasoning and problem solving questions, a clear mathematical "small-steps" progression, and a focus on conceptual understanding through concrete, pictorial and abstract learning. These resources are adapted to suit the needs of individual cohorts, and planning ensures that children engage in a range of different types of learning, including regular investigative, open-ended (low-threshold high-ceiling) tasks and real-life learning.

2.2 The school uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily lesson that has a high

proportion of whole-class and group teaching. During these lessons we encourage children to ask as well as answer mathematical questions, and to think deeply about mathematical concepts. Children have the opportunity and are encouraged to use a wide range of manipulatives to enhance understanding. Children use computing in mathematics lessons where it will enhance their learning, improving fluency or modelling ideas and methods. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

2.3 In all classes there are children of differing mathematical attainment. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the level of understanding of the child, or through appropriate scaffolding. We achieve this through a range of strategies – in some lessons through differentiated group work, and in other lessons by organising the children to work in pairs on open-ended problems or games. We regularly provide opportunities for children to engage with “Low Threshold, High Ceiling” activities in which children are able to access their learning at a level which appropriately challenges each individual. We also enable children to take more responsibility in their learning by allowing them to select a task to best match their own needs. We use Teaching Assistants to support children and to ensure that work is matched to the needs of individuals. We have a clear progression when teaching the four rules of number, and encourage parents and carers to use this same progression when helping their children at home. This details the key methods used in each year group and ensures a clear progression of number skills throughout the school.

3 Mathematics curriculum planning

3.1 Mathematics is a core subject in the National Curriculum, and we use the National Curriculum (2014) as the basis for implementing the statutory requirements of the programme of study for mathematics. Our programme of study is based upon, but not limited to, the White Rose Maths Hub schemes for learning.

3.2 We carry out the curriculum planning in mathematics in three phases, long-term, medium-term (unit progressions) and short-term, using the National Curriculum and the WRM progressions to outline our key objectives.

3.3 Long-term planning is based upon the WRM schemes of learning and progressions ensure coverage of all curriculum areas and an appropriate balance and distribution of work across each term. We follow the general timings of the WRM scheme of learning to ensure coverage and that new learning builds upon previous, but adapt it where applicable to enhance practice and get the best out of individual cohorts.

3.4 Our medium-term mathematics plans are created and shared at the beginning of each unit with the Maths lead. They are based upon baseline assessments of children’s current understanding and developed alongside the WRM small steps of learning for each maths area. Teachers plan the key concepts, language and non-negotiable learning outcomes for each progression.

3.5 With regards to short-term planning, weekly plans list the specific learning objectives for each lesson, and general timings of lessons as per the weekly timetable. The class teacher shares weekly planning with the class TA and displays a copy in the classroom, and the staffroom to enable the subject leader and senior staff to monitor. No individual lesson planning proforma is required to be provided to SLT or displayed, as we believe that teachers plan effective lessons in different ways. Where planning or teaching is deemed to require support, teachers are required to provide lesson planning as appropriate.

4 The Foundation Stage

4.1 Foundation Stage children work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied activities that allow them to enjoy, explore, practise and talk confidently about mathematics.

5 Teaching mathematics to children with special needs

5.1. We teach mathematics to all children, whatever their ability. It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Work in mathematics takes into account the targets set for individual children in their Individual Learning Plans (ILPs).

6 Assessment and recording

6.1 Teachers assess children's work in mathematics from three aspects (long-term, short-term and medium-term). They make short-term assessments which are used to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives. Children are expected to take an active part in this process through self-evaluation and assessment.

6.2 Teachers, in relation to this, set targets or next steps which are shared with the children through marking and feedback with the children for them to work towards. Time will be set aside at regular intervals to evaluate the progress.

6.3 Teachers also make regular assessments based on Key Objectives from the National Curriculum, which then informs planning directly and makes a summary of each child's progress before it is discussed with parents. This data is used to inform of any trends and gaps in individual / cohort and whole school progress and attainment and is passed on to the next teacher at the end of the year, so that s/he can plan for the new school year.

6.4 Teacher assessments in maths are regularly moderated both internally and externally through staff and locality school meetings.

6.5 Children's books are kept as a record of their work and each year group's pitch and expectation. This demonstrates what the expected level of achievement is in mathematics in each year of the school. Teachers meet regularly to review individual examples of work.

7 Staff Development

7.1 Staff are encouraged to develop their understanding of pedagogy in maths and given opportunity to do so through:

- regular staff meetings and discussion
- locality meetings and moderations
- external CPD opportunities

8 Resources

8.1 There is a range of resources to support the teaching of mathematics across the school. All classrooms have a wide range of appropriate small apparatus. All other mathematical resources are stored centrally. All children are encouraged to use appropriate manipulatives to enhance learning wherever appropriate.

9 Monitoring and review

9.1 Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the headteacher and the

mathematics subject leader. This is carried out through observations, work scrutinies and other monitoring. The work of the mathematics subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The mathematics subject leader gives the headteacher an annual summary in which they evaluates strengths and weaknesses in the subject and indicates areas for further improvement.

Signed:

Date: Spring 2020