



Mathematics Policy

Our vision:

At Vine Tree, our aim is to provide a maths curriculum which enables children to:

- Experience enjoyment in the teaching and learning of mathematics;
- Experience maths which is relevant and purposeful to 'real life';
- Engage with meaningful, well-resourced tasks;
- Feel challenged and unafraid to make mistakes;
- Articulate their thought process when solving problems;
- To feel confident in their own mathematical ability.

Implementation

In EYFS Pupils are given daily exposure to mathematics, through direct teaching, real life experiences, play and independent activities. In KS1 and KS2 planning sequences ensure a consistent approach to Maths teaching throughout the school, allowing for a focus on the sequence of learning, opportunity for open ended investigational type questions and continued development of pedagogy.

Every child is given time to think deeply about maths and we strive to develop a positive attitude which builds pupil confidence and resilience.

In all classes there are children of differing mathematical ability. Work is differentiated through depth, rather than acceleration. Children have unique starting points based upon their prior knowledge and understanding and work through the content at varying depth, with the expectation that all pupils will eventually reach a mastery level of understanding. 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 use teaching assistants to support targeted groups and to provide in situ feedback to ensure that work is matched to the needs of individuals.

Reasoning and Problem-Solving tasks are integral to the Maths curriculum and the activities that children are given to develop their mathematical thinking. Our calculation policy ensures that there is a consistent approach to the methods and vocabulary of calculations throughout the school. Resources are readily available to support the development of conceptual understanding in all year groups.

The Mastery approach at Vine Tree ensures that there is a greater expectation of all children with little chance for passive learning as there is a greater emphasis on talking maths, collaborating, exploring and investigating. Children are constantly challenged in their learning.

1 Curriculum Planning

- 1.1 Mathematics is a core subject in the National Curriculum and we use the objectives set out in this as the basis for our long-term maths planning, supported by the DfE and NCETM Ready to Progress and NCETM Teaching for Mastery documentation.
- 1.2 We carry out the curriculum planning in mathematics in three phases (long-term (National Curriculum), medium-term (First 4 Maths) and short-term (Weekly/ daily flipcharts). The National Curriculum gives a detailed outline of what is taught within each year group every year.
- 1.3 Medium Term Planning is constructed by teachers in collaboration with the Maths lead and Mathematics consultants from First 4 Maths. Objectives are organised in blocks of weeks based upon the same topic, allowing the teacher to plan for progression. A variety of opportunities for reasoning and problem solving should be given to all children.
- 1.4 It is the class teacher who completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives in the form of a question and differentiated success criteria for each lesson, and give details of how the lessons are to be taught. The class teacher keeps these individual plans, and the subject leader monitors these plans termly and discusses them on an informal basis.

- 1.5 We plan the activities in mathematics so that they build on the children's prior learning. While we give children of all abilities the opportunity to develop their conceptual understanding, fluency, problem solving and reasoning, we also plan progression into the scheme of work, so that there is an increasing challenge for the children as they move through each topic/ subject block.
- 1.6 Pre-learning tasks can be used within mathematics to support the planning of mathematics. These tasks identify children's prior learning and support planning for adaptive teaching within each lesson/ unit.
- 1.7 Post-learning tasks are used to assess learning after a unit has been taught. Any gaps should be addressed through intervention.

2 The Foundation Stage

- 2.1 We teach mathematics in our reception class. As the class is part of the Foundation Stage of the National Curriculum, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals, which underpin the curriculum planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number and numerical patterns through varied activities that allow them to enjoy, explore, practice and talk confidently about mathematics.

3 Assessment for learning

- 3.1 Teachers will assess children's work in mathematics from three aspects (long-term, medium-term and short-term). We use short-term assessments to help us adjust our daily plans. These short-term assessments are closely matched to the learning objectives and should include pre/post learning tasks.
- 9.2 We make medium-term assessments to measure progress against the key objectives, and to help us plan the next unit of work. This includes end of unit assessments and NTS assessments which are carried out at the end of each term. The outcomes of these medium-term assessments are reviewed in termly progress meetings.
- 3.3 Outcomes of medium-term assessments are used to inform intervention and individual target setting.
- 3.4 We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school year and make a summary of each child's progress before discussing it with parents and carers. We pass this information on to the next teacher at the end of the year, so that they can plan for the new school year. We make the long-term assessments with the help of end-of-year tests and teacher assessments. Data collected includes standardised scores, maths ages and performance indicators. We use the national tests for children in Year 2 and Year 6.
- 3.5 Older children are encouraged to make judgements about how they can improve their own and each other's work.

4. Parental Involvement

- 4.1 At Vine Tree Primary School we recognise that parental involvement is an important factor in helping children achieve their best and actively encourage parents to become involved with their children's development in Mathematics through:
- Parents' meetings twice a year, along with opportunities to look at children's work
 - The school's 'open' attitude to visits from parents/carers, where teachers make themselves available whenever a discussion need is identified.
 - Maths Weeks/ Days.
 - Use of the Homework Materials, maths games and subscription to Mymaths, Times Table Rockstars, Numbots and Maths Shed online learning for use at home.
 - Class newsletters informing them of curriculum information.
 - Class assemblies for parents sharing curriculum successes and achievements.

5. Display

- 5.1 At Vine Tree Primary School we recognise the important role display has in the teaching and learning of mathematics by having maths work displayed in the school. Every class has a 'Maths Working Wall' which is a visual aid to support children with their work. Maths working walls should include:
- Examples of current work
 - Representations used for the current topic

- Relevant vocabulary
- Stem sentences
- Suitcase of strategies

5.2 Maths working walls will be reviewed and updated regularly in accordance with current teaching.

6 Inclusion

- 6.1 At our school, we teach maths to all children, whatever their ability. Maths forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our maths teaching, we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs.
- 6.2 We enable pupils to have access to the full range of activities involved in learning maths. Where children are to participate in activities outside the classroom (e.g. measuring the perimeter of the playground), we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.

7 Marking and Feedback

7.1 Refer to Marking and Feedback Policy

8 Resources

- 8.1 All classrooms have access to a wide range of appropriate small apparatus appropriate to the curriculum for that year group. Resources such as place value counters, base 10, tens frames and hundred squares should be available in a 'maths caddy' for children to independently access to support their learning. The 'maths caddy' will be easy to access for all children in every maths lesson.
- 8.2 Some resources are stored centrally such as scales, balances and measuring equipment. Teachers and pupils can access these resources for topic specific work.

9 Flashback 4

9.1 In every maths lesson, children will work on 4 questions. These give opportunity for pupils to revisit previous learning as well as apply their knowledge to problem solving. The 4 questions will include:

- a number fluency question from last term's learning
- a number fluency question from last week's learning
- a fluency question about measurement
- a fluency question about geometry

9.2 Children will mark their own work each day and strategies and methods will be discussed as a class.

9.3 Daily fluency sessions can be used to support the teaching of learning objectives that are not explicitly referred to in the NCETM Ready to Progress documentation.

10 Fluency/ Daily Ten/ Mastering Number

- 10.1 To support the development of pupil's arithmetical proficiency and fluency with number facts children spend 10 minutes, four days a week, outside of the maths lesson practicing their conceptual fluency.
- 10.2 Daily Ten can take the form of online games, practical paired games, or whole class practice. The focus of these activities is on the strategies that are used to speed up the recall of arithmetical knowledge. In Reception and Key Stage 1 this is in the form of NCETM Mastering Number.

11 Times Tables

11.1 Refer to Times Tables policy

12. Monitoring and review

12.1 We monitor teaching and learning in the same way as we do all the other subjects that we teach in the school.

The coordination and planning of the Maths curriculum are the responsibility of the subject leader, who also:

- supports colleagues in their teaching, by keeping informed about current developments in maths, and providing a strategic lead and direction for this subject;

- gives the headteacher an annual summary report in which s/he evaluates the strengths and weaknesses in maths, and indicates areas for further improvement;
- uses specially allocated regular management time to review evidence of the children's work and lesson planning.

- 12.2 The quality of teaching and learning in maths is monitored and evaluated by the headteacher as part of the school's monitoring policy.
- 12.3 The headteacher reports to the governing body on the progress of children in maths, in the same way as for progress in any other subject. The governors' have the responsibility of monitoring the success of our maths teaching.
- 12.4 This policy will be reviewed at least every two years.

Signed: Naomi Thomas

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