

Netherleigh and Rossefield School

Maths Policy

September 2016

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 patterns in both number and space in their everyday lives.
- 1.2 The aims of Mathematics are to:
- promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion;
 - promote confidence and competence with numbers and the number system;
 - develop the ability to solve problems through decision-making and reasoning in a range of contexts;
 - develop a practical understanding of the ways in which information is gathered and presented;
 - explore features of shape and space, and develop measuring skills in a range of contexts;
 - understand the importance of mathematics in everyday life.

2 Teaching and Learning Style

- 2.1 We use a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding. We do this through a daily lesson that has a high proportion of whole class teaching, and formal written methods. During these lessons, we encourage the children to practise their mathematical skills, and to apply them to solving problems. We encourage the children to ask, as well as answer, scientific questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards, and small apparatus to support their work. Wherever possible, we encourage the children to use and apply their learning in everyday situations. We also ensure regular (weekly) sessions of mental maths.
- 2.2 In all classes, there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of

strategies: differentiated group work, differentiated text books, ability linked mental maths books, and through open ended tasks.

3 Mathematics Curriculum Planning

- 3.1** Maths is a core subject in the curriculum, and we use the Primary Curriculum as a basis for the programme of study, adapting it to recognise our emphasis on traditional methods.
- 3.2** We carry out our curriculum planning in Maths in three phases: long-term, medium-term, and short-term. The long-term plan maps the scientific topics studied in each year group during the Key Stage. The subject leader works this out in conjunction with teaching colleagues in each year group.
- 3.3** Our medium-term plans, which we have based on the Primary Curriculum, give details of each unit of work for each term. The subject leader keeps and reviews these plans. As we now have some mixed-age classes, we are reviewing the planning to ensure complete coverage of the curriculum without omitting or repeating topics.
- 3.4** The class teacher is responsible for writing the daily lesson plans for each lesson (short-term plans). These plans list the specific learning objectives of each lesson. The class teacher keeps these individual plans and reviews them after each lesson.
- 3.5** We have planned the work in Maths so that they build upon prior learning. We ensure that there are opportunities for children of all abilities to develop their skills and knowledge in each unit and we also build progression into the scheme of work, so that the children are increasingly challenged, and their knowledge deepens as they progress through the school.

4 Foundation Stage

- 4.1** We teach Maths in Reception classes as an integral part of the topic work covered during the year. As the Reception classes are part of the Foundation Stage, we relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Goals (ELG's) which underpin the curriculum planning for children aged two to five. We give all the children 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 maths.

5 The Contribution of Maths to Teaching in Other Curriculum Areas.

- 5.1** **English:** Maths contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved. The children explain their answers and present their work to others in plenary sessions. Younger children enjoy counting and sequencing rhymes.

Older children will encounter mathematical vocabulary and concepts, graphs and charts when using non-fiction texts.

- 5.2 Computing:** Opportunities to link Maths and Computing are carefully planned for. Class teachers work closely in conjunction with our specialist Computing teacher to maximise the quality of cross-curricular links between these two subjects. Children use and apply mathematics in a variety of ways when solving problems using ICT equipment. Younger children use ICT to communicate results with appropriate mathematical symbols. Older children use graphing software, or software to create, for example, tessellations. Knowledge of angles and length also plays a crucial role in children's use of programming.

6 Teaching Maths to Children with Special Educational Needs

- 6.1** At our school, we teach maths to all our 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 children to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.
- 6.2** When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors - classroom organisation, teaching materials, teaching style, differentiation –so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the children's needs.
- 6.3** Intervention may ultimately lead to the creation of a School Support Plan (SSP) for children with SEN. The SSP may include specific targets relating to maths.

7 Assessment and Recording

- 7.1** We assess children's work in Maths by making informal judgements as we observe them during lessons. On completion of a piece of work, the teacher marks the work, and comments as necessary. These judgements are used to inform and adjust planning as necessary. At the end of a unit of work, s/he makes a summary judgement about the work of each pupil in relation to the National Curriculum level of attainment. The teacher records the attainment grades on the class tracker sheet. We use these grades as the basis for assessing the progress of each child, and we pass this information on to the next teacher at the end of the year.
- 7.2** Children in Years 1-6 undertake PUMA tests on a termly basis. These generate standardised scores, which are used to monitor termly progress in Maths. The results of these are passed to parents, and used to inform mid-year and end of year reports.

8 Resources

- 8.1** There are a range of resources for teaching maths in the school. Calculators, mirrors etc are kept in individual classrooms, although we do expect older children to provide their own equipment such as protractors. There is also a central store of textbooks and workbooks in the Archive Room and Store Room. Numicon resources have recently been acquired for Key Stage 1 children.

9 Monitoring and Review

- 9.1** It is the responsibility of the Senior Management and/or staff as delegated to monitor the standards of children's work and the quality of planning and teaching in Maths. This may also involve supporting colleagues in their knowledge and understanding, keeping up to date with developments in the subject, and providing a strategic lead and direction for the subject in the school, as well as reviewing strengths and weaknesses, and indicating areas for development.