



Mathematics Policy

Rationale

Mathematics is an essential element of communication which is important to analyse and communicate information and ideas. Numeracy teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It enables children to understand relationships and patterns in both number and space in their everyday lives.

Numeracy is not a subject in its own right. It is a skill which is acquired through being taught mathematics effectively. In order for this to occur, mathematics is taught in ways that engage children's interest and allow them to understand through doing and experiencing.

Aims

- ❖ To develop a consistent approach to the teaching of mathematics throughout the school.
- ❖ To raise attainment in mathematics.
- ❖ To promote enjoyment of 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 understand the importance of mathematics in everyday life.

Teaching and Learning

At Horizon School it is recognised that a variety of teaching and learning styles enrich and enhance children's knowledge, attitudes and understanding. Children recognise their own particular learning styles and are catered for accordingly. Before numeracy lessons, children will carry out brain gym exercises such as the owl, cross crawl sit ups and the gravity glider. Children will do cross crawls to a variety of music and rhythms and count, say number bonds, times tables etc while doing their cross crawls.

All teachers should:

- ❖ Set high standards for pupils work
- ❖ Have a clear objective for each lesson that is shared with the children
- ❖ Provide opportunities for children to develop skills in oral and mental calculations
- ❖ Provide opportunities for children to apply mathematical skills in context



- ❖ Encourage pupils to think and reason for themselves
- ❖ Use ICT effectively to support mathematics
- ❖ Give pupils time to think before providing an answer
- ❖ Support children according to their needs
- ❖ Provide Opportunities for individual, pair and group work

Guidance for Early Years

At the early stages, work is mainly oral and practical with the focus on developing pupils' understanding of mathematical ideas. Group activities are set up to encourage children to count, order, sort, name, measure and investigate in an interactive way. Tasks which demand little of pupils, such as colouring-in shapes should be avoided. Number fans (with numeral and visual representation) and digit cards are used with groups of children to introduce them to number names, ordering numbers and key vocabulary such as more than/less than, before and after.

Guidance for KS1

Lessons should follow the structure recommended by HMIE (see time allocation). Teachers use follow-me cards, digit cards and number fans regularly in oral mental starter sessions. Lessons should be based on practical work and children should be encouraged to ask questions and discuss their thinking. Children are given 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. Teachers provide opportunities for children to record work in their books and use differentiated worksheets on occasion to use for assessment purposes. All children in Year 2 work from mental maths homework booklets. By the end of Key Stage 1, the performance of a great majority of pupils should be within the range of levels 1-3. Most pupils are expected to achieve level 2.

Guidance for KS2

Lessons should follow the structure recommended by HMIE (see time allocation). Interactive oral mental maths begin each lesson. Teachers regularly use follow-me cards, number fans, dice and digit cards for this. Direct, interactive teaching allows the teacher to share the objective and provide opportunities for children to fulfil it. Children are given ample opportunity to develop their understanding of number, measurement, pattern, shape and space, through varied activities that allow them to enjoy, explore, practice and talk confidently about mathematics. Interactive whiteboards are used regularly. A variety of ways are used for recording information E.g. in books, on whiteboards, on large paper, on place value charts etc. All children work from mental maths booklets for homework. By the end of Key Stage 2, the performance of the great majority of the pupils should be within the range of levels 3-5. Most pupils are expected to achieve a level 4.



Progression and Planning

Teachers will use long term, medium-term and short-term plans to plan effectively and ensure children are progressing at an appropriate pace.

Differentiation and Assessment

Children are set in ability groups from Term 2 in Year 2. This is monitored regularly through continuous assessment and children can move from set 1 to set 2 depending on their ability level. In the early years children requiring support should work with the teacher/assistant in small groups and an extension group of children should be identified and stretched appropriately.

Teachers will assess children's work in numeracy 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 teaching objectives.
- ❖ We make termly formal assessments to measure progress against the key objectives, and to help us plan our next steps.
- ❖ NFER tests are completed by all children in Year 2-6. These results are recorded in detail on the shared server and are used to report to parents.
- ❖ We use national tests for children in Year 2 and Year 6, plus the optional national tests for children at the end of Years 3, 4 and 5.

Special Educational Needs

Children with Special Educational Needs may work directly with a member of the Enhancement Team. See SEN Policy.

Resources

All classrooms have a number line, digit cards, number fans and a wide range of appropriate small interactive apparatus. Calculators, money, measuring equipment, clocks and shapes are available from the central storage area. Mental Maths homework booklets for Years 2-6 are available in the resource room. Appropriate sections should be copied and allocated for homework and these should be monitored by the teacher and re-used at every opportunity.

Time Allocation

The lesson structure recommended by HMIE:

Interactive Oral Mental Maths - 10/15 minutes

Direct Interactive Teaching - 35/40

Plenary/Review (including setting homework) - 10 minutes

At Horizon this format should be followed at least four times a week. Free Flow, topic and ICT lessons allow the children to gain further mathematical skills in context.



In-Service Training and Professional Development

- ❖ Ensure all staff have are aware of resources available to use for Maths.
- ❖ Ensure staff are up to date with new initiatives from the UK.
- ❖ Observations of Maths sessions by Head, Deputy and coordinators and of experienced teachers.

Equal Opportunities

Equality of opportunity is a high priority and reference to the schools Equal Opportunity Policy will provide examples of how this is achieved.

This Policy was agreed by staff in March 2007.
It was reviewed in June 2008 and should be reviewed again in September 2008 by Head, Deputy, maths coordinator and coordinators.