Roe Valley Integrated Primary School

Numeracy Policy

Rationale

At Roe Valley Integrated Primary School we aim to educate all pupils by ensuring access to a broad and balanced curriculum.

We aim to provide a variety of teaching approaches and strategies to meet the learning needs and styles of pupils so that all children may achieve their potential and become confident achievers for the world community.

Definition

Numeracy is a key skill both within school and as a life skill to be utilised throughout every person's day to day experiences.

Numeracy is broader than computational skills and incorporates mental maths, number/algebra, measures, shape and space, handling data and mathematical thinking. Numeracy is an integral part of the learning experience crossing all subject boundaries and is a life long learning process.

Principles

The development of numeracy is a basic human right, an entitlement for all pupils and therefore the responsibility of all teachers, the whole school working in partnership with parents, Boards of Governors, ELBs and other support agencies.

Our understanding of numeracy is broader than the mastery of computational skills and incorporates number/algebra, measures, shape and space, handling data and mathematical thinking. These elements of numeracy are essential for other areas of the curriculum and can be enhanced by them. Numeracy should therefore be promoted in a cross-curricular fashion.

Numeracy involves the application of knowledge, skills and understanding fundamental to personal and social development and to life long learning.

Effective numeracy development should promote a positive e attitude to mathematical learning through experiences which are creative, enriching, enjoyable and challenging.

Purposes

Within Roe Valley the purposes of teaching and learning numeracy are:

1 To encourage a positive attitude to mathematics among children and ensure that enjoyment will always be most important.

2 To cater for children's individual needs. This will necessitate the provision of differentiated activities for individuals or groups of children.

3 To have an awareness of numeracy as a life skill – beyond the classroom – and create clear logical thinkers who can adapt, transfer skills, investigate and solve problems.

4 To promote the development of mathematical language and the ability to communicate, analyse and explain mathematical thinking.

5 To have quick recall of basic facts, appreciate relationships and patterns within numeracy.

6 To ensure Mathematics is taught, throughout the school, in line with the Attainment Targets laid down by the NI Curriculum.

7 To raise numeracy standards throughout the school by enhancing the quality of learning and teaching.

8 To share an agreed view of numeracy and numeracy development with staff, B.O.G., CCMS, WELB and other interested agencies.

9 To incorporate the appropriate use of ICT in the teaching of numeracy.

10 To provide staff development which will ensure a shared understanding, common approach and consistency across the school.

11 To promote leadership and management of numeracy at all levels in the school.

Practices

Each member of staff is responsible for planning and teaching mathematics /numeracy in his/her class and allocated 20% of the total teaching time to mathematics/numeracy withy regular lessons every day.

Teachers plan termly from numeracy schemes and from these devise 4 week plans with clear learning outcomes.

The development of good work habits is essential. Pupils are encouraged to work in a methodical and systematic way to present their work clearly. They use pencil for all calculations in their squared exercise books.

The Teaching Approaches

High quality teaching to clear objectives is the focus in the school. The teaching approaches involve a balance of various alpproaches:

- whole class - exposition
- demonstration – whole class and group work

- group work
- pair work
- individual work
- ICT / Computer work
- 10 minute oral mental maths session will begin each maths lesson and pupils will use a range of mental maths resources.

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 – in some lessons through differentiated group work, thinking time, effective questioning and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.

Pupils are given opportunities to develop and apply their mathematical skills in other curricular areas:-

- Measuring and collection and interpretation of Data in The World Around Us
- Shape and space in The Arts
- Number through the development of mental skills and its application in all areas.

English

Mathematics contributes significantly to the teaching of English in Roe Valley 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 and present their work to others during plenary sessions. Younger children enjoy stories and rhyme that rely on counting and sequencing. Older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

Resources

The school uses the Heinmann Mathematics scheme as the main scheme and this is supplemented by the Collins Numeracy Scheme

Foundation stage use a variety of resources and often compile their own topic scheme using internet resources, practical activities and self made worksheets.

These commercial schemes are used to *support* teachers and pupils in the teaching and learning of mathematics/numeracy and their use is referred to the whole school scheme of work which relates closely to the CCEA Lines of Development document.

The school is well resourced at foundation and KS1/KS2 with a range of practical materials. Most resources for number and shape/space are stored in classrooms.
Each teacher has their own resources for mental maths which consist of large number cards, number fans, counting stick, number generators, flip flops and washing lines etc.

Each class has also been resourced with a variety of Numeracy games.

ICT

With the provision of Interactive Whiteboards throughout Foundation/ KS1/KS2 the children are provided with daily opportunities to develop and apply mathematical concepts. These opportunities are planned for and integrated into mathematics/numeracy teaching through

- ActivPrimary resources
- A range of numeracy websites
- the use of ICT peripherals - PRO-Bot, Bee-Bot and Roamer
- appropriate use of calculators
- various C2K software programmes.

Homework

Homework is set on a regular basis to support work done in class at both key stages as follows:

KS2: Monday -> Thursday
Written homework [2] times a week

KS1: Monday -> Thursday
Written homework [2] times a week

Foundation: Variety of games, practical activities and written tasks when appropriate

(One Homework per week in KS1/2 is process based)

Involvement of Parents

Parents are encouraged to support their children's mathematical learning at home through:

- homework
- an annual four week paired maths (games) programme
- workshops to inform parents of new initiatives.

Principal / SMT

1. Monitoring teachers' planners on an monthly basis to ensure:

- learning outcomes are clearly defined
- there is a balance of oral/mental, written computation and investigational/problem solving work
- relevant mathematical vocabulary is identified

- there is appropriate differentiation
- assessment opportunities are identified
- cross-curricular work is identified.

2. Target groups and individuals are identified through the use of standardised tests (NFER).
3. Monitoring end of KS outcomes and setting appropriate targets to promote school's progress.
4. Leading discussion and providing support at staff meetings on a regular basis.
5. Providing ongoing informal support for teachers and pupils.
6. Classroom observation of teaching and learning.

Teachers

- Marking (See Also RVIPS positive marking policy)

  Marking is a diagnostic and supportive and as far as possible done through conversation with the child. Wrong solutions are marked with a dot or c and the incorrect digit(s) in a computation exercise are underlined to encourage pupils to reason/seek the correct solution.

  Correct solutions are marked with a √ and written comments are constructive and supportive.

- Ongoing formative assessment procedures inform teachers' monitoring and evaluating of pupils' achievements and inform differentiated groupings and forward planning.
- End of term teacher assessment, INCAS and end of year NFER tests (mental and written).

- Termly target setting with individuals or small groups through IEP's.

Target Setting

(in terms of statutory assessment outcomes)

- The school monitors the outcomes of end of Key Stage statutory assessment in accordance with Benchmarking Data and sets targets to monitor progress.
- In addition individual target levels are set and reviewed annually for each child in numeracy.
- PIM group data is used to identify individuals with specific needs in numeracy as well as to inform planning for whole groups through identification of weaknesses/strengths in specific attainment targets