GILNAHIRK PRIMARY SCHOOL

NUMERACY POLICY

DEFINITION OF MATHEMATICS/NUMERACY

We believe that mathematics provides a way of viewing and making sense of the world. It is a creative, dynamic subject where children are challenged to think mathematically. It is concerned with the organisation, manipulation and communication of information according to well defined rules and processes. Mathematics is broader than the mastery of computational skills and incorporates number/algebra, measures, shape and space, handling data and mathematical thinking as in processes. These elements of mathematics are essential for, and can be enhanced by, other areas of the curriculum. Mathematics will therefore be promoted in a cross curricular fashion.

AIMS

1. MATHEMATICS FOR ENJOYMENT

- To encourage a positive approach to maths as an interesting, enjoyable subject in which all children can experience success.
- To develop the following qualities: enjoyment, confidence, interest, curiosity, independence of thought, enthusiasm, creativity, co-operation, open-mindedness, perseverance, awareness of safety, exploration, focus, being systematic and open to self evaluation.

2. MATHEMATICS AS A SUBJECT IN ITS OWN RIGHT

- To develop within the children, mathematical skills, attitudes, knowledge, understanding and language.
- To develop an appreciation of the relationships and patterns in maths, the following skills will be developed: calculating, classifying, communicating, comparing, constructing, counting, generalising, making hypotheses, measuring, ordering, recording and sorting.
- To develop the knowledge content of our Numeracy programme, the four areas specified by the "Using Mathematics" Curriculum will be covered: number, measures, shape and space and handling data.
- The fifth element, processes in maths, will be developed through the application of the other areas - children will be encouraged to think mathematically, to talk about their work and to select appropriate mathematical tools and resources to undertake tasks set.

3. THE VALUE OF MATHEMATICS IN EVERYDAY LIFE

To develop the mathematical skills, attitudes, knowledge, understanding and language useful and necessary throughout their life.

4. THE APPLICATION OF MATHEMATICAL SKILLS, UNDERSTANDING AND KNOWLEDGE TO OTHER SUBJECTS

To encourage the pupils to see the links between maths and other curricular areas, especially those where maths is a tool to understanding other subjects. A range of other subjects provide relevant contexts to teach maths: -

- Shape and space in the World Around Us.
- Measurement in the World Around Us.
- Collection and presentation of data in the World around Us.
- Use of a range of educational technologies to enhance numeracy and other subjects e.g. computer,
- Probots, Beebots, calculators, logo, educational broadcasts, Matheletics, Sumdog, CD-ROM and the Internet.
- Processes across the curriculum, especially literacy where pupils can use appropriate maths language to express themselves.

5. THINKING SKILLS AND PERSONAL CAPABILITIES

In line with the Northern Ireland curriculum the teaching of maths will focus on developing the following strands:

- Managing information
- Thinking, problem solving and decision making
- Being creative
- Working with others
- Self management

LEARNING/TEACHING STYLES

A variety of learning and teaching styles inclusive of assessment for learning strategies will be utilised so as to achieve the stated aims of the policy. These styles will include:

1. DEVELOPING A POSITIVE ATTITUDE TO MATHS

- Pupils will be involved in a range of mathematical activities, appropriate to their level of understanding and attainment, where all can experience success and develop an interest in maths.
- Maths concepts will be introduced and developed in a stimulating and interesting manner. The classroom environment will enhance the development and stimulation of maths topics. Fun mental maths activities will be used to reinforce learning in an interesting way, e.g. quizzes, rhymes, songs and chants.
- Pupils will be involved in whole class, group or one to one teaching. They will work as individuals, in pairs or in small groups/teams, thereby developing the ability to collaborate whilst also emphasising the importance of being able to work independently.

2. DEVELOPING MATHS SKILLS, UNDERSTANDING AND KNOWLEDGE

- Each mathematical attainment target will be developed so that pupils experience and acquire the full range of mathematical skills required to support their knowledge and understanding of a variety of maths topics.
- Pupils will be involved in a variety of well planned mental, practical and written activities in which they can experience success.
- Emphasis will be placed upon the development of maths activities appropriate to each child's stage of development. Work of an increasing depth will be presented throughout a school year to the various maths groups within class, and also work of increasing depth and difficulty will be planned to ensure progression from Primary 1 to Primary 7.

3. USING MATHS LANGUAGE

- From Primary 1 to Primary 7, pupils will progressively become familiar with the correct mathematical terms, definitions, signs, symbols and formulae appropriate to their level of understanding. New topics covered may be recorded in personal Maths Information Books and/or permanent classroom displays to be used both as a reference and an aid to learning.
- Emphasis will be placed upon the progressive development of a maths language appropriate to each child's stage of development in maths. Different levels of discussion will be encouraged to enable pupils to clarify and articulate their mathematical thinking eg. pupil-to-pupil, pupil-to-teacher, pupil-group, pupil-to-whole class.
- Pupils will be encouraged to use conventional mathematical terms and to express their answers and their methods of solving problems in mathematical language.

4. DEVELOPING PUPILS' ABILITY TO THINK MATHEMATICALLY

Maths will be presented in a well-planned, structured and consistent manner in which work is progressively developed from Primary 1 to Primary 7. Each year, pupils' knowledge, understanding and skills will be further developed in a structured, stepped manner. As their level of understanding increases, pupils will be encouraged to see that maths is a logical subject where facts can be manipulated according to certain rules/formulae, where standardised measurements can be universally applied and where information can be collated, classified, recorded and communicated clearly. This logical, procedural component of maths needs to be balanced by a creative, imaginative dimension where children's own methods and procedures are valued and encouraged.

RESOURCES

A central bank of resources is available in the Maths store. This will include practical maths resources for each area in maths e.g. scales, dominoes and shapes.
New Heinemann maths is the main commercial scheme utilised to support the teaching of mathematics but this can be supplemented by other schemes when appropriate.

CONTINUITY AND PROGRESSION

Teachers will follow the year group scheme and six-weekly planners for the majority of pupils in their class. Those requiring special provision, both reinforcement and extension, will be taught at a level appropriate to their ability to ensure that they progress and experience success. Teachers own skill and knowledge will be updated through INSET and other in-service training.

RECORD KEEPING/ASSESSMENT

Teachers will continue to monitor progress using a variety of formal and informal methods.

Formal methods will include:

- End of Key Stage 1 and 2 assessment units.
- PTM papers
- Update of pupil profile annually.
- This data is retained during a child's time in Gilnahirk Primary School and for 3 years after they leave. This information is accessed by the individual class teachers, Numeracy Co-ordinator, the SENCO co-ordinator and the Assessment co-ordinator who can then identify children with specific difficulties. Where relevant, this information will be forwarded to appropriate external agencies e.g. child psychologist.

The diagnostic use of statistics gathered will ensure that underachievers can be identified and appropriate steps will be put in place to ensure that their needs are addressed.

Informal methods will include:

- Ongoing teacher monitoring of class work, homework and mental maths participation.
- Regrouping pupils when success is achieved or when difficulties are encountered.
- Records of class tests e.g. tables, mental maths.

SPECIAL EDUCATIONAL NEEDS

Responsibility for the identification of pupils requiring additional provision rests with the class teacher. Following identification, differentiated provision should be delivered for the pupils concerned. Advice and guidance are available from the maths co-ordinator and the SENCO.

DYSLEXIA

The SENCO will ensure that all information relevant to children with dyslexia is available to the class teacher.

MATHS RECOVERY

Maths recovery is an intervention that children with significant gaps in their understanding and learning can access. Children are assessed and a 10-week programme is tailored to meet the needs of that child or small group of children. The children are given 3 sessions each week. Maths recovery is offered to children from P3 onwards. Recognised Maths recovery strategies are used by our special educational needs support teacher during small group sessions.

MARKING

- Marking is diagnostic and supportive and as far as possible done through conversation with the child. Correct solutions are marked with a √ and written comments are constructive and supportive.
- Wrong solutions are marked with a dot and the incorrect digits in a computation exercise are identified to encourage pupils to reason/seek the correct solution.

All marking and written comments should be in line with the current whole school marking policy. The various strategies outlined in assessment for learning will be utilised appropriately to support the various marking and assessment approaches implemented.
It is anticipated that mathematic skills, knowledge and understanding will be developed both within mathematics and across many cross curricular areas throughout the school.

CO-ORDINATION

Our maths co-ordinator will have overall responsibility for the development of maths in Gilnahirk Primary School. This responsibility includes leading staff/curriculum development, attending external in-service training and providing in-house staff training. The co-ordinator is also responsible for the acquisition and management of appropriate and relevant books and materials. The development of maths also involves a collective responsibility by all teachers so that all children from P1 to P7 will have been exposed to an enriching experience and the development of mathematical language, knowledge, understanding and skills. Teachers will plan maths topics/areas through daily, half-termly and full year schemes of work in year groups, ensuring that all classes receive the same maths content.

CROSS CURRICULAR THEMES

Maths is not an isolated subject. The children will be encouraged to use maths across the curriculum and to see the relevance of maths in the different areas in which it pervades. Maths will be seen as a means of communicating in Literacy, World Around Us, P.E., Art, Religion, Music, I.C.T., Health Education and PDMU. During problem solving and investigative work/structured play pupils will be encouraged to develop Critical and Creative Thinking Skills. They will develop interpersonal skills through paired, small group and whole class work.
Maths will be specifically developed through I.C.T. in the following ways:

- Computers: graphs, pie charts, databases, modelling activities encompassing a range of mathematical tools, logo., interactive whiteboard, websites eg www.woodlandsjuniorschoolkent, Sumdog
- Beebot/Probot programme using a sequence of commands/forwards backwards, left, right,
  angles of movement (any angle from 1° to 360°, ¼ turn, ½ turn, ¾ turn, clockwise,
  anti-clockwise.
- Electronic Media, educational broadcasts, My School and all C2K maths provision
- Calculators: use of calculators, when appropriately introduced, can extend classwork when pupils computational skills do not match the level of work they wish to explore.

HOMEWORK

In line with school policy on homework, children will receive a range of mathematical tasks to carry out at home. These will include reinforcement of number work, rote learning of tables etc. and a variety of topic based tasks e.g. finding out..., measuring, timing, etc. Teachers will ensure all homeworks are corrected in line with the school marking policy.

ROLE OF PARENTS

Parents are encouraged to participate in the development of their child's maths. Parents are informed of the maths curriculum through regularly set maths homework and through the use of KS2 Maths Facts books/files explaining the content and methods taught in different year groups. In addition, parents receive the opportunity to discuss maths progress at twice annually parents' meetings, as well as receiving the annual report. Our support for parents is also developed through the after school Homework Club.

CURRENT STANDARDS AND TARGETS

It is the responsibility of all staff to secure appropriate outcomes for all pupils. In order to achieve this, staff, numeracy co-ordinator and school management will continually monitor the achievement of such standards. The specific targets and associated activities will be outlined in the school development.

MONITORING AND EVALUATION

The co-ordinator will monitor and evaluate the use of Maths in the schemes and 6 weekly planners to ensure progression and breadth. Excellence in Maths use is celebrated in displays around the school.

The Principal, Vice-Principal, Maths Co-ordinator and S.L.T. will be responsible for the overall monitoring and evaluation of Mathematics throughout the school. Evidence used to inform such evaluations will include:

a. Children's work.
b. Teachers' planners.
c. Pupil performance in Standardised tests, end of Key Stage Assessments etc.
d. Diagnostic use of pupil performance in standardised tests and other assessments
e. Effective analysis of performance data
f. Teacher assessments of pupils' work

REVIEW OF POLICY

The policy will be reviewed on a regular basis by the co-ordinator in collaboration with the whole staff.