Ballysillan

Primary School



Numeracy Policy

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Numeracy Policy

1. INTRODUCTTON

The following pages comprise of a policy for Numeracy, which has been placed

before the staff and principal of Ballysillan Primary school, for their agreement. lt is

a reflection of the policy, ethos and on-going practice in the school and it mirrors the

central place held by Numeracy at the core of the primary school curriculum, and in life in general.

Numeracy is a tool for everyday life, which equips us to make sense of the world

around us, by developing the ability to reason logically, calculate and to think in abstract ways. lt enables us to analyse and communicate information and ideas and to tackle a range of practical tasks and rear life problems.

Numeracy is a creative discipline. lt can simulate moments of pleasure and wonder when a pupil solves a problem for the first time, discovers a more elegant solution to that problem, or suddenly sees hidden connections.

**2. NUMERACY POLICY**

Why do we teach Numeracy at all?

(a) lt is useful, in addressing practical tasks and real-life problems, from the simplest

aspects of everyday living, i.e. receiving correct change, to the complicated links

with other subjects such as the physical sciences and business management.

(b) lt provides a way of viewing and making sense of the world, forming an

undeniable part of our culture. Maths may help people to better understand the jobs they may later do, or the creative achievements of mathematicians and

scientists of the past, or the behaviour of the natural world.

(c) lt is used to analyse and communicate information and ideas.

(d) As well as having strong links with other subjects, it is valuable, as a subject in its own right, providing many children with a sense of balance and order. Many

people find it enjoyable, exploring new ideas and concepts and providing

opportunities for prediction, as well as more routine, "learned” skills and tasks.

(e) It can provide children with challenges that they can attempt independently or in

co-operation with others.

**3. PLACING MATHS IN CONTEXT**

Maths should be seen, and generally taught as a subject in its own right: if there is

no obvious cross-curricular links it is clearly inappropriate to manufacture one.

On the other hand, Maths is also an integral part of the learning process in other

areas of the curriculum and can be generally reinforced and given wider interest

through other subjects. (see "Cross-Curricular Links")

The use of Maths in everyday life should be emphasised wherever possible: sports,

pastimes, shopping activities, analysis of interesting data and so on.

**4. AIMS**

The Numeracy teaching is geared towards enabling each pupil to develop within his or her capabilities; not only the Numeracy skills and understanding for later life, but also an enthusiasm and fascination about maths itself.

Our general aims are:

* To develop in teachers and children a confident and positive attitude to Maths as an enjoyable, useful and powerful subject.
* To develop confidence and competence in mathematical knowledge, skills and understanding through the processes of teaching, learning, enquiry and

experimentation

* To develop the ability to think clearly, logically and independently to problem solve, reason with confidence and flexibility of mind and work systematically with accuracy.
* To create a stimulating mathematical environment which will motivate the child and arouse their interests.
* To develop an ability to communicate, use and apply maths across the curriculum, beyond the classroom and in real life and in relation to other subjects
* To explore the concept of measurement, acquiring skills and gradually becoming aware of links within maths.
* To acquire spatial concepts, exploring shapes, both in everyday life and in

mathematical contexts.

* To acquire the skills of handling data: reading charts, tables of information, graphs and also being able to generate information to create them.
* To promote an understanding of Numeracy through a process of enquiry and experiment and to attempt to introduce the child to the pleasure of discovery.
* To provide an understanding of Numeracy as an interesting and attractive subject.
* To encourage children to talk about their mathematical discoveries and articulate their own personal methods or difficulties.

**Leading to:**

* Greater understanding, confidence and competence with number systems and measurement
* Greater spatial awareness and understanding of the properties of 2D and 3D shapes
* Ability to explain and communicate methods and reasoning in problem solving
* Acquisition of a variety of computation skills (written and mental)
* The ability to solve problems in and out of context
* An understanding of the various ways of gathering, presenting and interpreting data
* Correct and consistent use of mathematical language and notation
* An appreciation of the nature of number and of space, leading to an awareness of the basic structure of Numeracy and to use this awareness to appreciate mathematical patterns and relationships
* Greater number skills and knowledge, accompanied by the quick recall of basic facts.
* Confidence in computation by mental, pencil and paper and calculator methods should be fostered.

**5. PROGRESSION AND CONTINUITY**

This can be best achieved by close adherence to schemes of work, drawn up by the staff and the co-coordinator with careful reference to programme of study and statements of attainment

There should be regular teacher meetings at each key stage to ensure broad agreement on topics to be covered, their approximate timing and resources to be included.

Whilst encouraging children to think for themselves and develop their own methods of working, it is vital that there is consistency on teaching of basic computation skills from one year group to another.

Good liaison between year groups, coordinator, year/Special Needs teacher and the passing on of information is vital.

Where appropriate, contact should be made with other schools (nursery, primary or

Secondary from which children have come, or to which they may go.

**6. THE PUPILS**

It is essential that all pupils be encouraged to make acceptable progress according to their level of understanding of Numeracy.

Children should be at the centre of this policy, their requirements for continued progress being fulfilled, their needs met and where possible, their interests being followed. Maths cannot exist in a vacuum, without relevance to the child and his perception of the world.

Pupils should have a wide and balanced range of learning experiences: investigations problem solving, modelling problems with apparatus, observation, recording, discussion, games, drill and practice.

**7. EQUAL OPPORTUNITIES**

Within each year group we will ensure that each child experience equal exposure to all areas of the Math’s curriculum, always keeping in mind individual ability levels.

Boys and girls will be given equal experience in all areas of Maths. Staff should be conscious of the need to overcome traditional stereotyping and the differing expectations of the two sexes.

**8. CHILDREN WITH SPECIAL EDUCATIONAL NEEDS**

Teachers will aim to involve all pupils fully through differentiation in the daily lesson.

Children with special educational needs and difficulties may require to be supported with their own individual teaching plan (lEP) for part or all of a lesson depending on their individual areas of concern. This might involve withdrawing the child or a small group from the main lesson and working in a less demanding environment, with a view to promoting greater progress.

Additionally, Gifted and Talented children - identified by the class teacher –will be given opportunities to develop laterally and with independence. This will be achieved through challenging activities, tasks and games, which allow them to broaden their understanding of Maths.

**Strategies to support EAL pupils in maths lessons:-**

* Display key vocabulary and mathematical terminology, relative to the particular topic that is being covered
* Using visual stimulus and concrete objects to assist in the delivery of teaching

and learning

* Repetitive maths language games
* Lessons paced at an appropriate rate to enable EAL pupils to understand and

process information accordingly.

* Simplify method of presenting learning intentions.
* When planning, teachers will use simplified or modified tasks (where

appropriate) in order to accommodate individual areas of concern.

**9. CLASSROOM ORGANISATION**

Every attempt should be made to create an environment which will deepen children's

interest in the subject by displays, problem solving pursuits, access to calculators and computers etc.

Within each class, certain resources are continually needed and the class teacher should be careful to provide a range of mathematical papers as required (squared paper of varying dimensions, isometric paper, "dotty" paper etc.) as well as papers (squared notebooks are ideal) or worksheets on which pupils write. Each classroom should also contain its own stock of apparatus which is frequently used i.e. sorting materials, rulers, counters, cubes and games etc.

ln order to fulfil the requirements of the N.l. Curriculum most teachers find that

Numeracy teaching will take up at least one hour per day. Maths should be taught on a daily basis and lessons should include mental work as well as written.

The Cockcroft report (paragraph 243) states that Maths teaching should include

opportunities for:

* Exposition by the teacher.
* Discussion between teacher and pupil and between pupils themselves.
* Appropriate practical work.
* Consolidation and practice of fundamental skills and routines.
* Problem solving, including the application of maths to everyday situations.
* lnvestigational work.

With the Curriculum encompassing so many differing topics and concepts, teaching

approach and individual teaching style will of necessity vary depending on what is being taught.

**10. Teaching Methods and Approaches**

The teaching of maths at Ballysillan Primary School provides opportunities for:

* Group work
* Paired work
* Whole class teaching
* lndividual work

Pupils engage in:

* Written methods
* Practical work
* Teaching strategies i.e. pictorial or oral instruction for less able – written instructions and questioning for more able.
* Recording can range from simple pictures to detailed written explanations.
* Using same activities but have different expectations.
* Teachers/assistants can support a child engaged in independent learning.
* Extension activities will be provided for each activity for all abilities.

- SEN activities can be provided for less able.

**13. CROSS CURRICULAR LINKS**

Numeracy contributes to numerous other subjects across the curriculum, often in

practical ways. At Ballysillan Primary School we aim to deliver Numeracy as a direct link with the whole Curriculum, therefore making the subject relevant to the children in many ways

**14. PRACTICAL EQUIPMENT**

The term "practical equipment" can be applied in the sense of using everyday situations and materials - bus timetables, catalogues, programmes of events etc which should be used as appropriate.

It has already been stated that each classroom should hold a stock of most commonly used equipment i.e. rulers, tape measures, counters, number fans, counting sticks and cubes etc.

Damaged or lost equipment should be reported to the coordinator who will also be glad to hear of suggestions for the purchase of equipment.

**15. ADVICE AND ASSISTANCE**

The Maths coordinator is always pleased to advise and acquire resources as necessary.

ln the event of not solving a difficulty within a school situation the Maths Support Team based at the EA headquarters are always approachable and helpful and will advise by telephone, by letter or in person at school.

**16. CATCULATORS**

Calculators can be used throughout the school for play and for formal work.

The correct use of a calculator can enhance a pupils computational ability as it encourages them to estimate, to check answers by the use of pattern, decide how to reverse an operation for checking and so on.

A quote from the BELB's "Mathematical Education" booklet.

"The use of calculators"

* Enables pupils to explore numbers and their properties.
* Allow pupils to concentrate on process and not be side tracked by difficult

computations.

* Allows the use of real data.
* should be supplemented by mental calculations and estimation.
* Should be efficient with a growing awareness of their strengths and

weaknesses."

It is desirable that the same type of calculator be used throughout the school.

The children should be taught how to compute using a calculated, appreciate

the order of operations possible and interpret the results.

The use of calculators should be an integral part of Maths activities rather than a separate part using real life situations where practicable.

The BELB has produced a work pack of calculator sheets for Nl schools featuring local places and incorporating essential elements of the Nl curriculum.

**17. HOMEWORK**

Numeracy homework is given

* To reinforce learning
* To encourage and promote good study habits
* To encourage independent work
* As a way of communicating with parents
* To highlight their understanding

Numeracy will be given as homework on two nights a week and depending upon the age of the pupil should comprise a learning element and written work which the child should be able to complete within 30/45 minutes, this will include tables Monday - Wednesday.

**18. REPORTING TO PARENTS**

Parents receive a concise written report of the child's progress in January and a detailed report in June.

ln addition, parental consultations (by appointment) are held annually in October and

February.

Parents are able at any time to make an appointment to discuss child's work

Teachers should feel free to communicate with parents about any aspect which is giving concern or which is especially pleasing or of particular interest.

Channels of communication as detailed above should always be kept open.

**19. CONCLUSION**

This policy will be regularly reviewed to take account of new advice from statutory

bodies to reflect any change in the thinking of those who draw up programmes of study for schools or to include any change of circumstances within the school. Regular reviews will also be held to keep the aims of our teaching in the forefront of our minds, thus leading to ever improved and more stimulating teaching for our children.