



Numeracy Policy

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Name of person responsible for this policy	Mrs J Loughins
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1. Curriculum aims

Our curriculum aims/intends to:

- provide a broad and balanced curriculum for all children
- strive to give every child the opportunity to experience success in learning
- allow every child to achieve as high a standard as possible
- encourage our pupils to develop lively, enquiring minds, to think creatively and to use their own initiative to work with increasing independence.
- Promote the learning and development of our youngest children and ensure they are ready for Foundation Stage

2. Legislation and guidance

This policy reflects the requirements of the [Northern Ireland National Curriculum](#), which all controlled schools in Northern Ireland must teach.

3. Roles and responsibilities

3.1 The governing body

The governing board will monitor the effectiveness of this policy and hold the Principal to account for its implementation.

The governing board will also ensure that:

- A robust framework is in place for setting curriculum priorities and aspirational targets
- Enough teaching time is provided for pupils to cover the National Curriculum and other statutory requirements
- Proper provision is made for pupils with different abilities and needs, including children with special educational needs (SEN)
- The school implements the relevant statutory assessment arrangements
- It participates actively in decision-making about the breadth and balance of the curriculum
- It fulfils its role in processes to disapply pupils from all or part of the National Curriculum, where appropriate, and in any subsequent appeals

3.2 Principal

The Principal is responsible for ensuring that this policy is adhered to, and that:

- All required elements of the curriculum, and those subjects which the school chooses to offer, have aims and objectives which reflect the aims of the school and indicate how the needs of individual pupils will be met
- The amount of time provided for teaching the required elements of the curriculum is adequate and is reviewed by the governing body
- Where appropriate, the individual needs of some pupils are met by permanent or temporary disapplication from all or part of the National Curriculum
- They manage requests to withdraw children from curriculum subjects, where appropriate
- The school's procedures for assessment meet all legal requirements
- The governing body is fully involved in decision-making processes that relate to the breadth and balance of the curriculum
- The governing body is advised on whole-school targets in order to make informed decisions
- Proper provision is in place for pupils with different abilities and needs, including children with SEN

3.3 Other staff

Other staff will ensure that the school curriculum is implemented in accordance with this policy.

The Vice Principal, with responsibility for whole school curriculum, will work alongside the Principal and subject leaders to ensure the implementation of this policy.

4. Organisation and planning

Organisation

The children are taught in mixed ability classes and are encouraged to work independently from an early age. Every effort is made to enhance the children's personal, moral and social growth, alongside their intellectual and physical development. It is against this background that the school policy for numeracy has been planned.

The school has adopted the following aims as acceptable and appropriate to the needs of the children.

- to develop a positive attitude to numeracy as an interesting and enjoyable subject
- to encourage the effective use of mathematics;
- to foster an understanding of mathematics through a process of enquiry and experiment;
- to develop the ability to think clearly and logically;
- to develop in pupils, the personal qualities of perseverance, confidence, independence and co-operation with others;
- to enable all pupils to experience success and pleasure through practical activities;
- to enable pupils to communicate effectively through the medium of mathematics;
- to encourage mastery of basic mathematical skills and knowledge;
- to encourage quick recall in mental maths activities
- to encourage the use of ICT to support the teaching of mathematics;
- to encourage parents to become involved in their children's learning.

Classroom Management

We aim to give our pupils a variety of learning experiences in numeracy lessons. These will include:

Discussion	Pencil and paper	Mental maths
Calculator work	Games and puzzles	Multimedia
Use of ICT	Use of the environment	Problem solving
Investigations	Practical activities	Estimation

The teaching strategies used will include practical teacher demonstration, individual, paired, group and class teaching. These teaching strategies will match:

- the level of understanding of the pupil;
- the age and ability of the pupil;
- the nature of the topic;
- the available resources.

Children will be given opportunities to reflect and report upon their work, self-assess and peer assess.

Planning

Planning for numeracy is broken up into 3 areas:

Long-term:

There is an overview from P1-P7 of the various topics being covered throughout the year. This is broken down into Term 1, term 2 and term 3 for each year group.

Medium-term:

This is a detailed scheme of work from P1 – P7 divided into 2 month sections. Each section contains missions, teaching approaches and resources for the various topics being covered. Mathematical language is highlighted in medium-term planning in green. It is important that children develop their understanding of mathematical language from P1 and that this is built upon as they progress up through the school.

Short-term:

Weekly planning is completed by year group teachers together to ensure that all children across a year group are covering the same topics at the same time. Weekly planning provides detail of how and what is being taught and includes differentiation. The weekly planning notes will match the work in the children's books and will be based on the medium term scheme. Evaluations of lessons and teacher discussion within year groups will also inform short-term planning.

General planning

In our planning we intend to ensure that pupils have experiences across each of the five mathematical areas and through the different levels. (Number, Shape & Space, Measures, Handling data, Problem solving.) Progression is ensured by using the Inter-Board Lines of Development with the content taken from the Northern Ireland Revised Primary Curriculum – Learning area of mathematics and Numeracy. We also use the NEELB supported numeracy scheme as the core of long and medium term planning. Continuity is ensured by whole staff agreement on:

- mathematical language and conventions, remembering that each concept has its own language, concept and procedure
- compatibility of teaching approaches. Concepts will be developed through Mahesh Sharma's Six Levels of Knowing;

- **intuitive**

every new fact is introduced as an extension of something the child already knows

- **concrete**

each new fact is presented through a concrete model

- **pictorial**

the model of the new fact may be sketched or illustrated

(Before abstract recording is asked for, a lot of oral and mental arithmetic activity is necessary.

- **abstract**

the new fact is recorded in symbolic form. e.g. $3 + 4 = 7$

- **applications**

the child is able to form a number story using the fact

- **communications**

the child is able to explain the strategy.

e.g. Since $3 + 3 = 6$, I know $3 + 4$ is one more, so $3 + 4 = 7$

- development of long and medium term plans which include progression in I.C.T.
- appropriate teaching strategies;
- classroom organisation;
- resources and materials;
- assessment and recording procedures.

School Environment

The school hall can be used to allow opportunities for whole classes to work on practical investigations. We also have outdoor areas and teachers and children will have opportunities to use these grounds for numeracy outdoor learning;

- Handling data: surveys – birds, trees, traffic
 - Number: counting, place value etc
 - Measures: perimeter, area etc
 - Shape and Space: tessellating – wall patterns, pictographs, coordinates
- A number of numeracy outdoor wall charts are displayed in both playgrounds.

Mathematics/Numeracy across the Curriculum.

Mathematics contributes to many other subjects of the curriculum. Other subjects can provide the opportunity to develop and enhance mathematical thinking skills and knowledge. Mathematics also makes a significant contribution to the development of Thinking Skills and Personal Capabilities. Pupils will be involved in activities which promote the skills of managing information, problem solving and being creative, whilst developing their abilities of working with others and self-management.

Opportunities for developing Mathematics across other subjects such as WAU topics are being incorporated into year group planning.

ICT is an integral part of the planning and delivery of the Mathematics curriculum and should be used to help enhance our pupils' Numeracy learning. Details of the part it plays in supporting the teaching and learning are included in year group planners.

Homework

Homework is used to support the learning process through the school's homework policy. It should reinforce work done in school and allow pupils to further investigate a topic. Teachers should ensure that the pupils are given a variety of tasks, which should include practical, written activities and rote learning activities.

Resources to support Curriculum delivery

VPS accesses a variety of schemes and commercial material in order to give the pupil's as wide an experience as possible, including Heinemann Maths and Steps text books, Ready Set Go and a range of other resources.

Teacher generated activity sheets, games and ICT games further supplement a wide range of learning resources.

A bank of TSPC problem solving / investigative resources has been developed for each year group and kept by one teacher from each year group.

Equipment

- Mathematical equipment is ordered and stored by individual teachers.
- The principal and curriculum leader will monitor the needs of the school in relation to resources and, budget permitting, will regularly renew and build on existing resources.
- All staff will be aware of the equipment in each room and can borrow from other classes, when appropriate.
- A central resource area is also available (located in room 17) where items of equipment can be borrowed from. An inventory of equipment is currently being produced.

Equipment in classes includes:

- Teacher designed worksheets
- A wide range of games and practical resources
- Single copies of staff reference books
- IWB and a wide range of internet resources
- KS2 Text books – NHM / Steps
- Schofield & Sims Mental Maths workbooks – (P3 –P7)

ICT Resources

ICT is a key skill that can be used effectively to support the teaching and learning of numeracy. ICT in numeracy will include the use of computers, interactive whiteboards, C2K software, internet resources, electronic devices such as Bee Bot, calculators and iPads.

- An interactive whiteboard in every classroom
- Teacher supervised access to the internet in every room
- Bee Bots KS1
- iPads

5. Inclusion

Teachers set high expectations for all pupils. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils from disadvantaged backgrounds
- Pupils with SEN
- Pupils with English as an additional language (EAL)

Teachers will plan lessons so that pupils with SEN and/or disabilities can study every National Curriculum subject, wherever possible, and ensure that there are no barriers to every pupil achieving.

Teachers will also take account of the needs of pupils whose first language is not English. Lessons will be planned so that teaching opportunities help pupils to develop their English, and to support pupils to take part in all subjects.

6. Monitoring arrangements

Governors monitor coverage of National Curriculum subjects and compliance with other statutory requirements through:

- Link governor visits
- Lead Teacher reports to Governing Body
- Curriculum Lead report to Governing Body
- Governor Post Boxes (examples of work presented at full board meetings)

➤ Principal's Report to Governing Body

Lead teachers monitor the way their subject is taught throughout the school by:

Monitoring and Evaluating

Monitoring and evaluating are integral parts of the teaching and learning in our school and are the responsibility of all members of staff. The principal and curriculum leader will oversee the progress we are making towards fulfilling our aims. This will be achieved through:

- review by the vice principal and curriculum leader of year group planning.
- the curriculum leader offering support or team teaching in a classroom, when appropriate
- the curriculum leader visiting classes throughout the school in line with SDD;
- evaluation of pieces of work (internal standardization);
- curriculum leader monitoring progress through regular collection of a cross-section of workbooks (book scoops twice a year)
- tracking individual pupils alongside class teachers, Principal and Head of Key Stage – looking at scores from CAT, PTM
- displays of work in a particular area of Mathematics, in classrooms and corridors;
- informal discussions with staff;
- discussions with pupils through 'Pupil Voice'
- leading curriculum development meetings in line with SDP;
- annual reviews of the Numeracy Action Plan;

The evidence, which we gather through these monitoring procedures, will be evaluated regularly in order to inform future planning. We will ensure that the pupils' work is of a high standard and that these standards are evaluated, maintained and improved. We intend to do this through:

- The sharing of missions
- Formative assessment
- Class/topic/end of term tests;
- PTM, CAT results
- IEP reviews
- End of Key Stage Assessment results;
- Internal standardization procedures;
- Formal and informal assessment undertaken as part of normal classroom teaching;
- Observation of practical activities;
- Discussion with pupils including pupils' self-evaluation and assessment;
- Quizzes and puzzles;
- Quality marking of pupils' work including discussion on areas for improvement. Time will be allocated for pupils to reflect and to respond to teachers' comments. (Marking policy to be followed)
- Use of the procedures as outlined in the school's Assessment Policy.
- Regular, detailed and comprehensive information given to parents about a pupil's achievement and progress.

Lead teachers also have responsibility for monitoring the way in which resources are stored and managed.

This policy will be reviewed every 3 years by the lead teacher. At every review, the policy will be shared with the full governing board.

7. Links with other policies

This policy links to the following policies and procedures:

- Assessment policy
- Special Educational Needs Policy
- Curriculum Policy
- Homework Policy
- Marking and Feedback Policy
- Monitoring and Evaluating Policy
- Equality and Inclusion Policy