

St. Mary's Maghery



Numeracy Policy

APRIL 2022

Mission Statement

In St. Mary's Primary School we strive to create a secure, stimulating and happy learning environment where all pupils are of equal importance.

We work in close partnership with our parents, promoting catholic values and providing the best education for our pupils, so that the children are given important life skills to use in their role as future adults.

What is Numeracy?

Numeracy is the confidence and competence to apply mathematical skills in routine and unfamiliar contexts. It involves having the mathematical skills necessary to be a full contributor to society and the economy, including those central to personal financial literacy, and having the disposition to think mathematically in everyday situations, including those arising in future employment. It involves the development of an understanding of key mathematical concepts and inter-connectedness, the systematic development of reasoning and problem-solving skills, the proficient and appropriate use of methods and procedures, and active participation in the exploration of mathematical ideas and models.

In the early development of numeracy, children should develop the concepts of number, shape, measurement and data while exploring and manipulating their immediate environments, acquire mental maths strategies in a variety of rich contexts and progress towards being able to problem solve, choosing from a wide variety of strategies, communicating their ideas mathematically and with confidence, and seeing the relevance of what they are doing in everyday life.

(Every School a Good School, June 2008)

Rationale

Numeracy is an integral part of everything in St. Mary's P.S. We recognise the need for our children to be both competent and confident at maths so that they will develop both educationally and as effective members of society, ready for the workplace. We recognise that number, shape and space, measures, data handling and processes are individual components within mathematics, but we strive to ensure that we offer, in structured activities, in familiar and accessible contexts, the opportunity for them to apply this knowledge and use these skills in cross curricular/real life contexts. We also integrate ICT links throughout. Our staff are fully committed to ensuring effective teaching and learning through good classroom practice. We strive at all times to develop children who are numerically able and confident, ready for the challenges that life may hold for them. We realise the importance of making the children's maths experiences relevant to their real lives.

Aims

These are the aims which staff agree are realistic and appropriate for our pupils. They represent the benefits which our pupils can expect to gain as a result of learning mathematics in St. Mary's. They form a set of basic principles upon which the teaching of mathematics in our school is based:

- To foster a positive attitude to mathematics as an interesting and attractive part of the curriculum
- To develop the ability to think clearly and logically, with confidence, flexibility and independence of thought
- To develop a deeper understanding of mathematics through a process of enquiry and investigation
- To develop an understanding of the connectivity of patterns and relationships within mathematics
- To develop the ability to apply knowledge, skills and ideas in real life contexts outside the classroom, and become aware of the uses of mathematics in the wider world
- To develop the ability to use mathematics as a means of communicating ideas
- To develop an ability and inclination to work both alone and cooperatively to solve mathematical problems
- To develop personal qualities such as perseverance, independent thinking, cooperation and self confidence through a sense of achievement and success
- To develop an appreciation of the creative aspects of mathematics and an awareness of its aesthetic appeal

Teaching and Learning

The content of the mathematics curriculum taught at St. Mary's is guided by our statutory requirement to deliver the Mathematics Programme of Study for Northern Ireland. It divides the mathematics curriculum into 5 Attainment Targets: Processes, Number, Measures, Shape & Space and Handling Data.

Although the content of this is largely already specified by the NI Programme of Study, the staff of St. Mary's has agreed a set of principles which will inform and guide the nature of the learning experiences of our children.

In mathematics teachers should make the teaching of mathematical concepts as interesting and as relevant as possible and ensure the learning occurs through interactive and collaborative activities.

Opportunities for teaching and learning will include as appropriate:

- Challenging the pupils understanding, through skilful questioning and requiring the pupils to draw conclusions and justify their thinking;
- Using a variety of activities, including ICT and practical equipment, that entails pupils working individually, in pairs, in groups and whole class;
- Encouraging the children to make inter-connections within mathematics and relating their work to other areas of the curriculum;

- Providing clear, and when appropriate multiple, explanations;
- Providing opportunities for pupils to solve problems;
- Integrating, when appropriate, mental mathematical strategies;
- Encouraging pupils to think and talk about how they learn and what they have learnt, using plenary sessions as appropriate;
- A greater focus on mathematics in the workplace and identification of real world examples;
- Investigations across the 5 Attainment Targets.

Forward Planning

Long term planners will identify:

Learning intentions, learning experiences and state explicit links with the curriculum. Shorter term plans may be daily or weekly and identify specific learning intentions and differentiation.

Plans are evaluated by individual teachers and influence future planning.

A typical Lesson

Usually the class will be working on the same unit, allowing the teacher to work with the whole class, with groups of pupils and, at times, with individual pupils. Mostly pupils will work in differentiated groups, but at times teachers will have mixed-ability groups in order to enable different pupils to work together.

Each week every pupil will receive some whole-class or group teaching. We lay great stress on pupils talking about their mathematics to learn by articulating their thoughts and listening to the views of others. They also learn from the teacher by discussing their thinking.

A typical lesson in Year 1 to 7 will be structured like this:

- **Oral work and mental calculation** (about 5 to 10 minutes)
This will involve whole-class work to rehearse, sharpen and develop mental and oral skills.
- **The main teaching activity** (about 30 to 45 minutes)
This will include both teaching input and pupil activities and a balance between whole class, grouped, paired and individual work.
- **A plenary** (about 10 to 15 minutes)
This will involve work with the whole class to sort out misconceptions, identify progress and to summarise key facts and ideas. This may also take place after a set of lessons, not necessarily after every single lesson (agreed by staff and Principal).

Out-of-class work and homework

The daily mathematics lessons will provide opportunities for children to practice and consolidate their skills and knowledge, to develop and extend their techniques and strategies, and to prepare for their future learning. These will be extended through out-of-class activities or homework. These activities will be short and focused and will be referred to and valued in future lessons.

Using Mathematics

Mathematics contributes to many subjects within the N.I. curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

Continuity and Progression

As a staff at St Mary's we want to ensure that our children have experiences, both across each of the five broad Numeracy areas and along the different levels throughout their time at school.

Numeracy should be regarded as a core element of the School Curriculum. Within the subject itself, it should be seen that all of the Attainment Targets are inter-related and are not in isolation.

Continuity of experiences will take place by considering the following points:-

- Children's learning experiences follow well planned progression, at a pace suitable for the child
- There is coherence and compatibility of approach used by all teachers the child encounters as they progress through the school

In order to achieve these conditions, staff agree that:

- The curriculum the children follow is defined by the School Scheme of Work, which is based upon the progression in each of the 5 Attainment Targets for Mathematics contained within the NI Programme of Study
- The School Scheme of Work is planned collaboratively to ensure there are no gaps or unnecessary overlaps in that progression as the children move through the school
- The School Scheme of Work details agreed teaching approaches and methodologies in all areas of maths
- Yearly overviews of the content to be taught in each class are used, which allow content from each Attainment Target to be taught within each half term
- All new ideas and concepts which the children encounter will be introduced from a starting point within the child's knowledge and understanding
- Assessment is designed to allow the teacher to accurately gauge the child's present level of understanding so as to allow appropriate further work to be planned
- Activities in mathematics will be differentiated so that children are always working at a pace and level of challenge which matches their ability
- Planning will be regularly monitored by the Numeracy Coordinator to evaluate the levels of continuity and progression achieved. There will be clear evidence of differentiation across the 5 attainment targets in the respective classes.

Inclusion

In St. Mary's we endeavour to ensure that each child is challenged in Numeracy and their talents stretched. Likewise, we determine to give support and guidance to children who find Numeracy more challenging.

Teaching strategies will include as follows:-

- Extended teacher (and classroom assistant, where available) support
- Prolonged use of concrete resource materials and games until such times as the child is ready to move on to the abstract
- Variation in the level of questioning to suit all abilities
- Use of extension, interactive and investigative activities to challenge the more able and those who find a particular topic of interest to them
- Use of a good selection of ICT Programmes, at varying levels and used consistently with progression

In addition, those children found to have specific learning difficulties in Numeracy will have Numeracy targets set for them in their education plan. Some children will be offered extra assistance.

ICT, Calculators and other resources

It is the vision of St. Mary's Primary School for all teachers and learners in our school to become confident users of ICT so that they can develop the skills, knowledge and understanding which enables them to use appropriate ICT resources effectively as powerful tools for teaching and learning. Therefore ICT is an integral part of our Numeracy Policy. The role of ICT is as follows:

- To consolidate the children's learning
- To further develop and expand the children's numeracy skills
- To provide the children with a range of stimuli, therefore developing their use of numerical processes.
- To provide the children with a variety of challenging learning situations.

Pupils use calculators from Primary 5 onwards, where it is appropriate to do so. We teach the pupils how to use them, and set tasks that enable them to learn to choose when to use them.

Most resources are kept in classrooms, accessible to pupils in Foundation and Key Stage One. We teach pupils how to use them and recognise that we need to teach them to make appropriate choices of equipment.

St. Mary's use a range of schemes to facilitate the planning and teaching of mathematics alongside our own Scheme of Work.

Parental Involvement

At St. Mary's Primary School we place a very high value on parents as a resource and we endeavour to nurture this. Parents will be involved and updated at all stages of their child's Numeracy progression. Curriculum pamphlets at the beginning of the year, give parents an outline of what will be taught in the coming school year. They also explain how parents can best support their children in their learning, for example, through encouraging the use of Sumdog.

Parent/teacher meetings are also held once per year and, where appropriate, maths targets are agreed. Maths Targets, where appropriate, are agreed with SEN children, three times per year.

Progress tests are completed every term for P.1 and P.2 pupils and are sent home for parents to see and return signed to school. Progress tests are sent home in terms 1 and 2 for pupils in P.3 - P.7 and parents also receive the results of the PTM test at the end of the year.

Parents are encouraged to get involved in homework activities.

A range of useful Numeracy Websites and Apps are used in each class. These are shared with parents at meetings throughout the year, as appropriate and also on the school website.

Evaluation and Assessment

EVALUATION

It is every teacher's duty to continually evaluate and reflect upon their own classroom teaching on a daily basis, evaluating teaching strategies, styles and classroom management. Teacher evaluations are completed at the end of planners and must be reflected in new planners. This is monitored by the numeracy coordinator.

ASSESSMENT FOR LEARNING

Assessment will take place at three connected levels: short-term, medium-term and long-term. These assessments will be used to inform teaching in a continuous cycle of planning, teaching and assessment.

Short-term assessments will be an informal part of every lesson to check their understanding and give the teacher information, which will help to adjust day-to-day lesson plans.

Medium-term assessments will take place at the end of each medium term planner and will assess some of the ideas linked to the agreed success criteria which have been covered during that period.

Long-term assessments will take place towards the end of the school year to assess and review pupils' progress and attainment. These will be made through End of year mathematics tests (PTM) for pupils in Years 3-7. We use the PTM results to inform future planning.

Monitoring and Review

This is carried out through:

- Teacher observation
- Classroom visits
- Teacher questioning, group and individual discussion
- PTM Testing from Year 3-7
- Test Analysis
- Review of short term plans and evaluations

Role of Co-Ordinator

This job description is intended as a guideline to the main aspects of the post. It may be amended from time to time by the Principal in consultation with the Board of Governors, to reflect the changing needs and circumstances of the school.

In addition to carrying out his professional duties as assigned by the Principal, the co-ordinator will:

- Review and update with the staff, when necessary, the school policy for Numeracy
- Review schemes of work with teaching staff in line with new developments in the curriculum
- Attend in-service meetings or courses related to Numeracy and relay relevant information to Principal and staff
- Advise on and coordinate the ordering of resources for Numeracy throughout the school
- Assist with the compiling and updating of a school inventory of Numeracy resources
- Keep up to date with innovations in Numeracy and keep colleagues informed of these changes as appropriate
- Undertake any such reasonable tasks as may be assigned by the Principal
- At the end of the school year make a written report for the Principal and Board of Governors on the various aspects mentioned in the job description
- Provide active leadership as a member of the Senior Leadership team (SLT)

Policy Review:

This policy will reviewed every two years.

Policy formulated and discussed with staff 12th March 2022
Policy ratified by the BOG on March 31st 2022

Chairperson of BOG: Mr Jimmy McKee

Jimmy McKee 30/3/2022

Principal: Miss Rita Robinson

Rita Robinson 30/3/2022

