



St. Joseph's P. S

Numeracy Policy

St. Joseph's Primary School

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Our Mission

Through embracing Catholic values, in an atmosphere of inclusivity and care, St. Joseph's is committed to outstanding practice in teaching and learning as the gateway to success, personal and community development.

Definition of Numeracy

Numeracy is:

'The ability to apply appropriate mathematical skills and knowledge in familiar and unfamiliar contexts and in a range of settings throughout life, including the workplace. It involves the development of:

- a. an understanding of key mathematical concepts and their inter-connectedness;
- b. appropriate reasoning and problem-solving;
- c. the proficient and appropriate use of methods and procedures (formal and informal, mental and written);
- d. active participation in the exploration of mathematical ideas and models'.

Mathematics and Numeracy Statement

1. In St. Joseph's Primary School we acknowledge that the development of mathematical skills and concepts is the determination of staff to enable the pupils to fulfil their potential.
2. It is our intention to create a positive environment in the classroom in which the efforts and contributions of pupils will be encouraged, developing within our pupils a positive attitude towards Mathematics and Numeracy, making the subject interesting, attractive and enjoyable.
3. Through positive activities and values we aim to develop independent, curious, flexible and independent learners who are open to new experiences.
4. We aim to develop an understanding of basic concepts through encouraging the pupils in logical thinking and recognition of mathematical relationships by involving the pupils in well-planned investigations and explorations.
5. Mathematical processes and concepts will be consolidated by presenting our pupils with practical experiences, which are presented in a planned curriculum.
6. We will encourage our pupils to develop and use a mathematical vocabulary and language, which reflects their experience and ability.
7. We believe that the teaching of Mathematics and Numeracy is important for 5 inter-related reasons:
 - a) Mathematics is necessary for life.
 - b) It facilitates concept and skill development in other areas of the NI Curriculum.
 - c) It is an interesting subject in its own right.
 - d) It is enjoyable in its own right.
 - e) To prepare our pupils to make informed and responsible choices and decisions throughout their lives.
8. Our aim is to maximise pupils' progression through careful, co-ordinated planning; stimulating, challenging work and exciting activities which will create a sense of enjoyment and personal achievement among the pupils.

Good School" using the four headings noted above.

At St. Joseph's PS we believe that numeracy skills are the key to future educational success and to ensuring that each child has the opportunity to develop as an individual, as a contributor to society and as a contributor to the economy and environment.

OBJECTIVES OF NUMERACY POLICY:

At St. Joseph's PS we intend that, by the end of Key Stage 2 and at a level appropriate to their ability, children will be able to:

- Choose the appropriate materials, equipment and mathematics to use in a particular situation
- Use mathematical knowledge and concepts
- Work systematically and check their work
- Use mathematics to solve problems and make decisions
- Develop methods and strategies, including mental mathematics
- Explore ideas, make and test predictions and think creatively
- Identify and collect information
- Read, interpret, organise and present information in mathematical formats
- Use mathematical understanding and language to ask and answer questions, talk about and discuss ideas and explain ways of working
- Develop financial capability
- Use ICT to solve problems and present their work

From: Requirements for Using Mathematics, NI Primary Curriculum, p.6 (CCEA 2007)

STATUTORY REQUIREMENTS:

The detailed statutory content requirements are set out in the NI Curriculum (primary) document (CCEA 2007) and together with the progression exemplified in the revised Lines of Development document (CCEA), informs our Scheme of Work for Mathematics.

The NI Curriculum (primary) document also sets out guiding principles, which we endorse and have agreed to include in our policy:

Foundation Stage (p.23), including:

- Activities should involve children in playing, exploring and investigating, doing and observing, talking and listening and asking and answering questions
- Through engaging in a wide variety of activities, children should understand mathematical language and then begin to use the language to talk about their work
- Mathematical activities should be presented through contexts that have a real meaning for children and provide opportunities for them to investigate their ideas

Key Stage One and Two (p.57 - 60), including:

- Mathematical ideas should be introduced to children in meaningful contexts
- Activities should be balanced between tasks which develop knowledge, skills and understanding, and those which develop the ability to apply mathematical learning and solve problems
- Children should use their knowledge of mathematical language to talk about their work and explain their findings
- Children should be given regular opportunities to develop their skills in mental mathematics, to estimate and approximate and to investigate and make predictions and decisions:
 - Within mathematics
 - Across the curriculum
 - In real-life situations

HIGH QUALITY TEACHING AND LEARNING:

The following ESaGS indicators will be reflected in our provision for Mathematics and Numeracy:

- A broad and relevant curriculum is provided for the pupils.
- An emphasis on numeracy exists across the curriculum.
- Teachers are committed and enthusiastic, enjoying a positive relationship with their pupils and with other school-based staff and dedicated to improving learning.
- Teachers provide opportunities for children to apply mathematical knowledge and understanding across the curriculum and in real life situations.
- Teachers use adaptable, flexible teaching strategies that respond to the diversity within the classroom.
- Assessment and other data is used to effectively inform teaching and learning across the school and in the classroom and to promote improvement. Whole school, class and individual pupil targets are set in relation to PTM data analysed each academic year.
- Self-evaluation is carried out by teachers, year groups and the whole school, using objective data and leading to sustained self-improvement.
- Teachers reflect on their own work and the outcomes of individual pupils which is used to inform future planning.
- Levels of attainment are recorded annually for each pupil and passed on to next teacher.

Culture of Improvement:

St. Joseph's P.S. is proud of the achievements of our pupils and celebrates this with our pupils, parents, teachers and the school community. We believe that a school culture of achievement, improvement and ambition exists with clear expectations that all pupils can and will achieve to the very best of their ability.

Differentiation

- In order to help pupils achieve their potential St. Joseph's is committed to providing a differentiated Maths Curriculum which challenges all pupils at an appropriate level;
- Homework activities are differentiated to help all pupils revise and consolidate their Maths learning.

Marking Policy

- Marking is in line with the school's 'Marking Policy'. All children are given verbal and written feedback so that each pupil knows how to improve their work;
- Pupils' books are monitored by Numeracy Co-ordinators throughout the year.

Celebrating Achievement

- Classroom displays celebrate the work of children and success in Numeracy;
- Classroom displays will model the importance of Numeracy for all pupils;

Early Intervention

St. Joseph's will seek to provide early intervention for those pupils with 'Special Educational Needs'; those pupils who we have identified as 'under achieving'.

Special Needs:

- Using teacher recommendation and/or analysis of standardised results the SENCO will place the child's name on the Special Needs register in accordance with the Code of Practice. Parents/Carers are informed;
- Teacher will draw up an Individual Education Plan using SMART targets; these are reviewed by the SENCO and shared by the pupils.
- Appropriate support is put in place;

Shared Learning Intentions

'Learning Intentions' and 'Success Criteria' are shared with the pupils at the outset of lessons through the use of 'WALT' and 'WILF' so that pupils have the opportunity to understand what (and why) they are learning and how they can succeed in their work.

High Quality Teaching and Learning

Numeracy Provision

St. Joseph's Primary School is committed to providing a broad, balanced and relevant curriculum for all our pupils. Teachers, and all school-based staff, are committed and enthusiastic and wish to see our children achieve the highest standards and develop positive attitudes towards Mathematics and Numeracy. Pupils are provided with a range of opportunities to develop and extend their mathematical skills. We believe it is important to build on pupils' previous experiences. This helps to build pupils' confidence and ensures there are no gaps in pupil knowledge.

Approaches to Teaching and Learning

- We have a designated team of teachers with specific responsibility for co-ordinating, developing, supporting, monitoring and evaluating the teaching and learning of Mathematics and Numeracy across the curriculum.
- A variety of classroom organisational strategies will be employed in the teaching of Mathematics and Numeracy: whole class teaching; individual work; group work and collaborative group work. Grouping of pupils is flexible. Pupils may be placed in ability groups or mixed ability groups according to the topic and the demands placed on the pupil. Pupils will be given, where possible, the opportunity to enhance communication and co-operation skills in group work situations.
- Each pupil will have a formal Mathematics lesson each day.
- Classrooms will have Mathematics displays which reflect work in class and everyday situations where Mathematics is necessary.
- In line with the Homework Policy pupils will be required to complete Maths homework in order to consolidate and extend work covered in class.
- Parental involvement in the development of mathematical concepts and skills is actively encouraged.
- Children's Mathematics work will be marked regularly and marking will include, where possible, positive, written and verbal comments relating to their work.

Teaching Strategies

- We are aware that children learn in different ways and therefore our teaching strategies must take account of our visual, auditory and kinaesthetic learners.
- Mathematics and Numeracy tasks must be matched to the child's ability and be sufficiently challenging to encourage progression.
- Strategies for teaching Maths will include: clarification by the teacher; observation; discussion between teacher and pupil and between pupils themselves; effective questioning: including open-ended questions designed to encourage pupils' thinking skills; appropriate practical work; consolidation and practice of fundamental skills and routines; problem-solving, including the application of Mathematics and Numeracy to everyday situations; exploring and investigating and using mathematical language.
- Practical activities and play based learning are well-structured to ensure clear stages of progression and further consolidated by thorough questioning and discussion. They should lead to pupils' ability to move on to more abstract work.
- Pupils should be exposed to various methods of calculation which should include mental, pencil and paper and using calculators.
- The practice of estimation will be developed at an early stage of Key Stage One to encourage pupils to be able to check their calculations in problem solving.
- Develop appropriate techniques of real life problem solving which include the ability to classify, think logically, make intellectual judgements, interpret, reflect and decode the written word. Pupils will be encouraged to articulate their views/methods/approaches and are encouraged to think of alternative ways to solve a problem.
- Provide for our pupils more challenging open-ended activities which employ a wide range of strategies as well as those that provide a clear-cut result.

Mental Maths

- Interconnections between developing a bank of known number facts, an increasing range of calculations and an increasing range of mental calculation strategies
- Time allocation for mental mathematics
- Use of games
- Use of ICT
- Assessment of mental mathematics
- Progression for mental mathematics within and across year groups

Mental Maths will be promoted through daily development of the strategies. There is clear progression for the development of pupils' mental maths skills and knowledge. These strategies will include: Counting on/back; Re-ordering; Inverse operations; Partitioning; Rounding and Adjusting; Factors; Equivalence and Quick Recall.

Digital Technology and Information and Communication Technology

- Children will be given opportunities to use ICT to support and enhance their Mathematics. They use ICT to investigate, analyse, present and interpret information, to discover patterns and relationships, and to solve problems. A range of ICT is used to support and enhance the Mathematics scheme, including databases and programmable devices.
- There is an ever increasing range of opportunities being afforded to pupils and teachers from new technology, in particular the internet and iPads. Teachers are actively encouraged to research and make themselves au fait with such changes and, where appropriate, share with colleagues. These will complement the teaching and learning experiences of pupils in Numeracy.
- Teachers will have opportunities for professional development to enhance their ICT skills.
- Cameras and digital photographs are used to record evidence of learning in Numeracy.

Mathematics and Numeracy across the Curriculum

Mathematics and Numeracy is an integral part of the school curriculum and contributes significantly to the whole school curriculum.

Mathematics should be developed and applied across the curriculum:

- **Language and Literacy:** By reading and interpreting statistical data and by discussing Mathematical issues; planning work, explaining thinking, presenting outcomes and evaluating work.
- **The Arts** By seeing and hearing patterns and by observing and making shapes; by developing musical notation skills; through creating pictures and models.
- **The World Around Us** By interpreting statistical data and using it to solve problems using measurement, shape, space and estimation in the world around them.
- **Personal Development and Mutual Understanding** By using statistical data to inform personal and social decisions; by knowing what they can do in mathematics and persevere and work with confidence.
- **Physical Education** By using number, shape and space, measures and data to enhance the quality and variety of movements, to measure and record performance and to collect, analyse and interpret data, for example, pulse rates.

Through practical activities pupils develop their ability to co-operate and increase respect for their peers.

Self-Evaluation

In order to promote effective Numeracy lessons it is vital that teachers continually evaluate and reflect upon their own classroom teaching on a daily basis, evaluating teaching strategies, styles and classroom management. Teachers evaluate the effectiveness of their teaching and learning strategies through a review of assessment available, conversations with pupils and feedback from other teachers to improve their own practice and to bring about improvement in teaching and learning. They also reflect on the effectiveness of their teaching in their half term notes and use this information to inform future plans.

Assessment

Assessment is an integral part of teaching and learning the Numeracy curriculum. It is a continuous process and is first and foremost the responsibility of the class teacher as well as the responsibility of the Numeracy Co-ordinator and the Principal. Information gained from teacher observation and data will inform differentiated teaching plans to ensure all pupils are challenged at their level. It also helps teachers 'target set' for their pupils, class and year group.

Information for Assessment is gathered in a variety of ways:

- Teacher observation

- The marking of class work
- Discussions between pupil and teacher
- Baseline testing (P1)
- Termly testing
- PIM/PIE (P3-P6)
- NRIT (P4 and P6)
- End of Key Stage Levels

Professional Development of Staff

The Numeracy Co-ordinator organises professional development opportunities on School Development Days. The Numeracy Co-ordinators attend all relevant courses and disseminate information to the rest of the staff. Aspects of Numeracy are used regularly as part of PRSD targets for teachers.

Monitoring and Evaluation

Self-Evaluation

Each class teacher takes responsibility for monitoring and evaluating their own teaching on an on-going basis. Teachers assess how well pupils have achieved the intended learning outcomes by using a range of 'Assessment for Learning' strategies. Teachers will write their own 'diagnostic' tests to assess pupil progress and make plans for the future.

Role of Numeracy Co-ordinators

To lead the development of Numeracy throughout the school, in conjunction with the Principal and Senior Management Team, reporting to the Principal and/or Board of Governors.

Responsibilities:

The Numeracy Co-Ordinator will:

- Demonstrate expertise, enthusiasm and vision.
- Promote self-evaluation in order to enhance the monitoring, evaluation and review processes.
- Monitor, evaluate and record progress on the numeracy action plan.
- Ensure a regular review and update of the policy with all staff.
- Encourage staff to use a range of learning and teaching strategies to best meet the needs of pupils.
- Assist staff avail of numeracy courses to enhance their understanding and teaching of Numeracy.

- To organise school-based INSET as required.
- Provide guidance in the effective use of comparative performance data, including benchmarking.
- Encourage management to offer support for identification, dissemination and implementation of good practice in the learning and teaching of numeracy.
- Undertake on-going monitoring and evaluation at individual, class and whole school level.

Action Plans

Action Plans which are written by the Numeracy Co-ordinators are kept under constant review and a report written with regard to their implementation at the end of the year.

The evaluation of the implementation of these plans is shared with the leadership team and the Board of Governors and is used to set new targets for the following year.

Open Door Policy:

Parents are encouraged to contact the school any time they want to talk about their child's progress. The staff of St. Joseph's are more than happy to discuss any issues, we are a nurturing school and understand the importance of ensuring that every child feels happy and safe.

Curriculum Meetings:

Curriculum meetings are held for each year group early in September which gives parents the opportunity to meet their child's new teacher and get an overview of the year's curriculum for all subjects. It is also the opportunity for the Principal to celebrate recent achievements with parents and reaffirm our commitments to achieving the highest standards. Guidance is also given on how parents/carers can best support their children's learning. Reference will also be made to the nature and purpose of homework in developing a child's mathematical ability and that parents are asked to sign all homework.

P1 Induction Meetings:

To aid transition for pupils into Primary 1 an induction meeting is held in June where parents find out which class their child will be in and who their new teacher is.

Parents'/Guardians' Interviews:

These meetings are held in January. Teachers will use pupils' books and a range of data to inform parents/carers of pupil progress and areas which have been identified for development.

Individual Education Plans:

Parents are invited to discuss their pupil's I.E.P. and to discuss how they can support their child.

Annual Report:

Teachers prepare an end of year 'Pupil Profile'/ Pupil Report which is sent to parents in June.

Open Day

We run an Open Day for the parents/carers of prospective P1 parents in December/January each year. Parents can look at children's academic work and observe the vast range of activities which our children engage in during and after school hours. They are also invited to visit the P1 and P2 classes and see our children and teachers at work. Members of our School Leadership Team are on hand to answer any questions.

Adopted March 2019

Review due 2021