

Luncarty Primary School

**Numeracy and Maths
Policy**

REVISED 2019

Review 2022-23

Introduction

Mathematics is the study of the properties, relationships and patterns in number and shape, and the application of this knowledge to analyse, interpret, simplify and solve problems.

Learning mathematics develops logical reasoning, analysis, problem-solving skills and the ability to think in abstract ways, as well as offering opportunities for creativity. It is a universal language of numbers and symbols which allows us to communicate ideas in a concise, unambiguous and rigorous way.

Numeracy promotes the development of the number-based skills that are needed regularly by everyone in their lives and is a part of Mathematics.

Numeracy is a fundamental life skill. Being numerate involves developing confidence and competence in using number that allows individuals to solve problems, interpret and analyse information, make informed decisions, function responsibly in everyday life and contribute effectively to society.

It gives increased opportunities within the world of work and sets down foundations which can be built upon through life-long learning.

Whilst numeracy is part of mathematics, it is also a core skill which permeates all areas of learning, allowing pupils the opportunity to access the wider curriculum

Rationale

All teachers have responsibility for promoting the development of numeracy. With an increased emphasis upon numeracy for all young people, teachers will need to plan to revisit and consolidate numeracy skills throughout schooling.'

Building the Curriculum 1

'To face the challenges of the 21st Century, each young person needs to have confidence in using mathematical skills, and Scotland needs both specialist mathematicians and a highly numerate population.'

Building the Curriculum 1

It is therefore important that all teachers look for opportunities, develop and reinforce numeracy and mathematics skills within their own teaching activities and through cross curricular projects and Interdisciplinary Studies giving opportunities for children to say, write, make and do.

Aims

We aim to:

- promote high standards of achievement in Mathematics and Numeracy by providing an effective framework for the delivery of high-quality learning and teaching in numeracy and mathematics.
- promote progression and continuity at all stages and across areas of transition to ensure a seamless, coherent and relevant numeracy and mathematics curriculum for all
- ensure all learners are provided with maximum opportunities to acquire and develop their own strategies allowing them to solve mental maths calculations effectively
- provide opportunities for the mastery of mental maths skills to improve numeracy and mathematical ability
- ensure mental maths is at the core of all numeracy teaching, through which motivating and challenging tasks will be provided
- provide opportunities to develop the skills for life, learning and work
- raise levels of achievement and attainment in numeracy and mathematics for all learners
- develop a positive attitude to numeracy and maths as an interesting and exciting subject in which all children gain success and enjoyment
- develop an ability in the children to express themselves fluently, to talk about the subject with confidence, using correct mathematical language and vocabulary
- develop an appreciation of relationships within maths and numeracy
- develop the ability to think clearly, logically and creatively with independence of thought and flexibility of mind

Breadth, Depth and Progression

The statements of experiences and outcomes do not have ceilings, so that all children and young people can be challenged at an appropriate level. Pathways of progression have been developed to establish a shared understanding of expectations of standards as well as effective learning and teaching within numeracy.

Numeracy and Maths are currently planned for using the CfE.

Active involvement in mathematical experiences, set in real and relevant contexts, is vital to the development of knowledge, understanding, skills and a positive attitude towards numeracy and mathematics.

Within a rich and supportive learning environment, best practice will draw upon a skilful mix of approaches, including:

- Development of skills and accuracy in mental agility
- Daily planned opportunities to develop and extend strategies in mental maths
- Giving opportunities daily for children to use, apply and explain the strategies they have learned, encouraging them to develop a knowledge of what works best for them
- Planned active learning with opportunities to observe, explore, investigate, experiment and play
- Development of problem-solving capabilities and mathematical thinking skills
- Use of relevant contexts, familiar to young people's experiences
- Appropriate, effective use of technology
- Building on the principles of Assessment for Learning
- Collaborative and independent learning
- Making links across the curriculum, including increased opportunities for discussion, communication and explanation of thinking

Teachers work to ensure that the fundamental numeracy skills are established and consolidated through systematic teaching incorporating interactive approaches, to enable children to develop a sound understanding of number.

Emphasis is still to be placed on establishing the foundations of numeracy, such as confidence in recall and use of number bonds and multiplication facts, understanding of place-value, and the application of mental strategies. These skills will be continually reinforced throughout the pupils' education. Oral/Mental Maths activities are used on a daily basis.

From the early stages onwards, we aim for all our pupils to experience success in mathematics and develop the confidence to take risks, ask questions and explore alternative solutions without fear of being wrong. They should, therefore, enjoy exploring and applying mathematical concepts to understand and solve problems, explaining their thinking and presenting their solutions to others in a variety of ways.

At all stages, the use of collaborative learning encourages children to reason logically and creatively through discussion of mathematical ideas and concepts.

Misconceptions and wrong answers are to be used as opportunities to improve and deepen children's understanding of mathematical concepts, through use of effective questioning and discussion.

ICT is used to enhance learning at home and in school through the use of Sumdog.

Planning

The Maths and Numeracy curriculum is delivered through the school Maths and Numeracy programme, which underpins the CfE experiences and outcomes and directly links to the National Benchmarks.

Targets are identified for each child and these are the key focus for teaching, learning and assessment.

Children with ASN have I.E.P targets as well as having integrated class or group opportunities to learn in Numeracy and Maths.

Challenge and Enjoyment

Experiences and outcomes are designed to open opportunities for active, challenging, motivating and enjoyable learning. ICT which supports and challenges individual targets is used to develop mastery of skills. Active learning, planned, purposeful play and thinking skills are built into the numeracy and maths routine, which encourages collaborative learning. Interdisciplinary learning gives children the opportunity to develop and apply their numeracy skills in enjoyable and motivating contexts.

Coherence & Relevance

Numeracy permeates a number of areas of the curriculum: teachers support children to make the links between different aspects of their learning within numeracy and mathematics and across all curricular areas during interdisciplinary learning. Teachers also help children to become aware of the relevance of numeracy and mathematics, linking them to learning, life and work.

Personalisation and Choice

Teachers are responsive in their planning and use all opportunities to develop their teaching from the children's ideas and interests helping to make the learning more meaningful.

Assessment, Recording & Reporting

“The process of assessment involves staff and young people gathering, reflecting on, and evaluating evidence of learning, so that they can judge which skills learners are developing and how well they are learning.”

Building the Curriculum 4

In mathematics, assessment forms an integral and ongoing part of learning and teaching. It is gathering of evidence of attainment and progression for the purpose of informing future planning, teaching and reporting.

In working with pupils, teachers continuously evaluate and make use of this assessment in planning future activities. Assessment for Learning strategies are used on a daily basis. Formative and summative assessment will be used in the learning & teaching process in order to:

- Share learning intentions and success criteria, clearly differentiated to meet the needs of all learners
- Assess understanding through skillful questioning
- Give pupils high quality, clear and regular feedback both orally and written
- Assist learners and teachers to identify the next steps in the learning process, which will ensure progression
- engage in the process of self and peer assessment

On-going class work will be the main source of evidence, available through observation of:

- Oral questioning and discussion
- Practical tasks
- Pupils' written work
- Pupil's own assessments and comments

Summative assessments will be used at significant points to confirm the teacher's professional opinion of where the children are in their learning, alongside Scottish National Standardised Assessments (SNSA).

Transitions (Pre-school/Primary/Secondary)

Through liaison within our School, evidence of prior learning will be the starting point for pupil learning.

Information regarding pupil attainment in mathematics at P7 will be passed on to Perth Grammar through existing and developing primary/secondary liaison arrangements.

Roles and Responsibilities

Class Teachers will have the responsibility for:

- ensuring planned opportunities for mental maths are given daily
- effective planning, assessment and tracking of maths and numeracy work
- developing a variety of motivating and challenging activities
- sharing good practice with colleagues
- reflecting and further developing own practice

Head Teacher and PT's

- overall provision of numeracy and mathematics
- Planning discussions, monitoring maths plans and children's progress at regular intervals throughout the session and discussing this with teachers, following up on any actions.
- Monitoring mathematics jotters/workbooks/homework books, and discussing learning and teaching with selected focus groups of pupils
- formal monitoring of mathematics lessons and maths learning walls
- Carrying out audits to review school's progress against national standards

Partnership

Partnership working will underpin the mathematics policy in practice:

- Teaching and support staff collaboration to enhance learning experiences with practical activities
- Partnership working between children will be encouraged when appropriate
- Collaboration between ASN Teacher and Class Teacher to plan IEPs for children as needs arise
- Partnership with parents will be encouraged through the appropriate use of Homework (Sumdog).

Partnership with other schools in the Cluster to support the moderation of Maths and Numeracy when this is appropriate.

Inclusion

We aim to support all children to achieve their full potential. There are procedures in place to identify groups or individuals who would benefit from support or further challenge and teachers set relevant mathematical targets within individual learning plans and support plans which are shared with parents / carers.

Equal Opportunities

All staff aim to provide equal opportunities for all pupils irrespective of ability, gender and cultural background. We strive to enable each child to maximise his/her potential.

