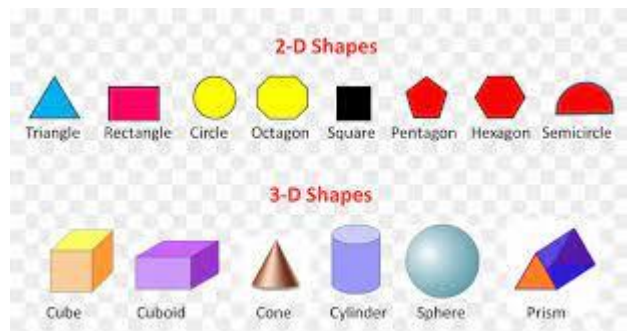
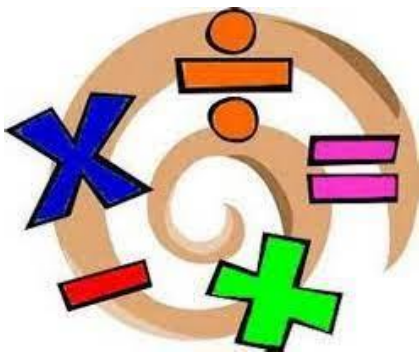




QUARTER PRIMARY SCHOOL

MATHS AND NUMERACY POLICY

AUGUST 2022





Introduction

The Scottish Government's vision for education is to:

'...create a more successful country with opportunities for all of Scotland to flourish ... [by] ensuring that all our children and young people are equipped through their education to become successful learners, confident individuals, effective contributors and responsible citizens... [where] **all** children and young people can realise their potential, regardless of their social background or learning needs, thereby developing the knowledge, skills and attributes they will need to flourish in life, learning and work ... ensuring that every child achieves the highest standards in literacy and numeracy, set out within Curriculum for Excellence levels, and the right range of skills, qualifications and achievements to allow them to succeed.'

(National Improvement Framework, 2016)

Curriculum for Excellence states that:

'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)

'All schools, working with their partners, need to have strategies to ensure that all children and young people develop high levels of numeracy skills through their learning across the curriculum.'

These strategies will be built upon a shared understanding amongst staff of how children and young people progress in numeracy and of good learning and teaching in numeracy.

Collaborative work with colleagues within their own early years setting, school, youth work setting or college and across sectors will support staff in identifying opportunities to develop and reinforce numeracy skills within their own teaching activities.'

(Numeracy Across Learning, P1)



At Quarter Primary we work together to provide a caring, positive and stimulating environment where children actively engage in their learning journey. We encourage all our young people to develop as independent and cooperative learners by providing a breadth of learning experiences which offer appropriate support and challenge, allowing each child to develop to their full potential. Working in partnership with parents, our local and wider community we support our children in developing resilience and skills for learning, life and work.

Rationale and Aims

The numeracy and mathematics programme at Quarter Primary follows Curriculum for Excellence (*CfE*).

CfE recognises that numeracy is a major component of primary education, stating that:

‘Being numerate helps us to function responsibly in everyday life and contribute effectively to society. It increases our opportunities within the world of work and establishes foundations which can be built upon through lifelong learning. Numeracy is not only a subset of mathematics; it is also a life skill which permeates and supports all areas of learning, allowing young people access to the wider curriculum.’

It defines numeracy as: ‘having developed the confidence and competence in using number which will allow individuals to solve problems, analyse information and make informed decisions based on calculations.’

The general framework of numeracy education within Quarter Primary is based upon the *CfE* outcomes for number, money and measure; shape, pattern and movement, and information handling. Experiences and outcomes are used in planning for teaching and assessment. Numeracy benchmarks aid assessment and tracking and monitoring of progress.



Quarter Primary school aims to support all children as they develop across the four capacities through a structured programme of study which capitalises on everyday opportunities to plan responsively and develop numeracy skills across the curriculum.

Learning and teaching of numeracy permeates the whole curriculum, with core knowledge and skills developed during numeracy sessions.

Our pupils will be encouraged to develop responsibility for their learning by ensuring:

- Awareness of what is expected of them through the sharing of learning intentions and success criteria
- Provision of appropriate feedback via self, peer and teacher assessment
- Reflection on where they currently are and on their next steps in learning



The framework for numeracy and mathematics provides a set of progressive statements describing a range of experiences and outcomes which staff will refer to when planning for teaching and learning.

Our numeracy curriculum is designed to develop

- competence in essential numeracy skills, including arithmetical and problem solving skills
- a secure understanding of the concepts, principles and processes of mathematics and ability to apply these in a range of contexts
- positive attitudes towards numeracy development
- personal, inter-personal and team-working skills (important in life and in the world of work)

It provides opportunities to

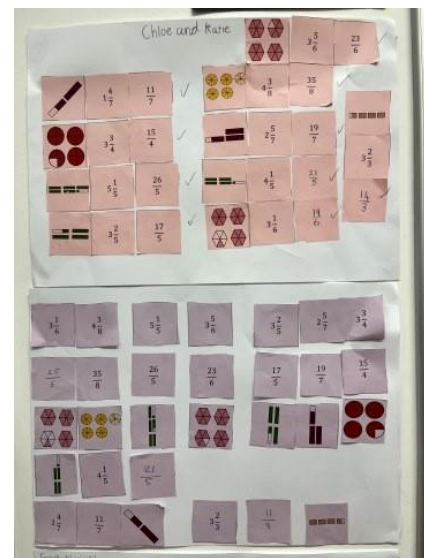


- solve problems
- collect, organise, display and interpret information in number and number notation, in calculations, in patterns, sequences and relationships associated with the properties of 2D and 3D shapes and with properties of position and movement

Within the numeracy and mathematics framework there are three organisers within which there are subdivisions –

Number, money and measure

- estimation and rounding
- number and number processes
- multiples, factors and primes
- powers and roots
- fractions, decimal fractions and percentages
- money
- time
- measurement
- mathematics: its impact on the world, past, present and future
- patterns and relationships
- expressions and equations



Shape, pattern and movement

- properties of 2D shapes and 3D objects
- angles, symmetry and transformation

Information Handling

- Data and analysis
- Ideas of chance and uncertainty

In planning, our staff consider each organiser and sub-divisions across the curricular areas, taking account of individual needs and abilities, ensuring depth,



balance and progression. Teachers will recognise how these areas of numeracy and mathematics impact on children's lives and will identify opportunities to develop numeracy for children and young people.

Across the *CfE* levels, challenge and progression appropriate to individual abilities will be at the heart of learning and teaching to ensure that each child achieves their potential. Through active learning strategies we provide opportunities which support a range of learning styles.

From the early stages onwards our children will experience success in numeracy and mathematics and develop the confidence to take risks, ask questions and explore alternative solutions in a supportive environment. They will explore and apply mathematical concepts to understand and solve problems, explain their thinking and present their solutions to others in a variety of ways. Across all stages, an emphasis on collaborative learning will encourage children to reason logically and creatively through discussion of mathematical concepts.

We aspire to make learning coherent and relevant in order that learners link the purpose and value of the experiences to their lives.

Effective learning and teaching in numeracy and mathematics will involve a mix of appropriate approaches. These include:

- the use of relevant, real life and enjoyable contexts
- effective, direct and interactive teaching



- a balance of spontaneous and planned play activities

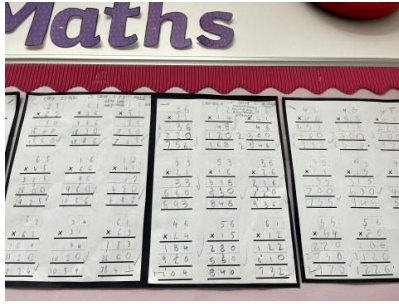
- responsive planning which motivates children and stimulates their interest



- collaborative working and independent thinking and learning
- making meaningful links across different curriculum areas
- developing the principles of Assessment is for Learning
- frequent opportunities to communicate in a wide range of contexts for relevant purposes and for real audiences
- the development of problem solving skills and approaches
- the appropriate and effective use of ICT
- regular opportunities to develop and practise mental maths ability across all numeracy and mathematics organisers

The balance between these approaches will vary at different stages. We strive to make learning relevant, motivating, engaging, active and fun!





Assessment, Tracking and Monitoring

Staff recognise the importance of assessment in providing a clear picture of children's progress, and in planning for further learning to ensure progression and consolidation. Each child is given regular feedback in a range of ways, including

Assessment is for Learning, to identify next steps and set personal targets.

Staff include specific assessment tasks when planning, for example through interdisciplinary topics, to assess how well skills taught in numeracy lessons are applied in other curricular areas and contexts. Progress will also be measured by children's competence and confidence in applying mathematical concepts in their learning, in their daily lives and in their path towards the world of work.

Through assessment children's mathematical skills are identified, in

- interpreting and analysing information
- simplifying and solving problems
- assessing risk and making informed choices
- collaborating and working independently

Staff will assess numeracy skills through children's

- understanding of number processes and concepts
- ability to solve problems, drawing on previously learned skills and concepts
- ability to tackle problems in unfamiliar contexts
- ability to apply skills accurately when working independently
- evaluation of their solutions/data
- understanding of personal finance
- capacity to engage with and complete tasks



Attainment in numeracy is tracked and monitored regularly through learning plan dialogues between class teachers and head teacher, using a range of formal assessments to confirm professional judgement. Progression through numeracy progression planners is tracked to ensure appropriate pace and challenge. An additional support plan may be started for children with specific educational needs, with long-term and termly targets identified and reviewed in order to ensure needs are met.

Use of media in Numeracy and Mathematics

We use an ever increasing range of technological resources to support numeracy across the curriculum, including

- GLOW
- Interactive smartboards
- Computer/internet and websites
- Tablets



Financial Education

At Quarter Primary we understand the importance of educating our children about financial awareness across all stages. Developing financial skills not only benefits individuals but supports the Scottish Government's strategic objective in 'creating a more successful country':

- Wealthier and Fairer – management of personal finances to improve employability leading to a financially skilled workforce
- Smarter – enabling children to gain skills for individual use and for contributing to the wider economy as well as continuing their learning path in later life
- Healthier – good financial management is linked to higher life satisfaction and better health
- Safer and Stronger – developing financial capability in our children gives them better opportunities and leads to a better quality of life.



CfE experiences and outcomes in Numeracy and Mathematics for Money include the various uses of money, such as calculating change; how to manage money and compare costs; understanding the benefits and risks involved in using bank cards, and understanding the terms budgeting, profit and loss in buying and selling activities.

At Quarter Primary financial education is embedded across all stages, with outcomes planned and taught at relevant points throughout the school year; linking to other curricular areas as well as to enterprise and fundraising events.