



COLQUHOUN PARK PRIMARY SCHOOL

Numeracy and Maths Strategy

Revised September 2025

Introduction

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)

Achieving Equity and Excellence for all learners in Colquhoun Park Primary School is our central aim. This strategy provides our clear framework to raise attainment in numeracy and mathematics whilst closing the gap between our most and least disadvantaged children and young people.

1. Rationale

Mathematics is vitally important in our everyday life, allowing us to make sense of the world around us and manage our lives.

Learning mathematics develops logical reasoning, analysis, problem solving skills, creativity and the ability to think in abstract ways.

"When a new skill has been acquired, a degree of repeated practice and consolidation may be required in the short term but it is vital that learners are provided with a range of realistic opportunities and activities within which to apply the new skill in both familiar and unfamiliar contexts." (Excellence in maths group)

Over recent years a number of in-depth studies have taken place investigating the teaching and learning of Numeracy and Maths in Scotland:

- Education Scotland produced "***Making Maths Count***" report in 2016
- Education Scotland published **CFE Benchmarks** March 2016
- EDC's Numeracy Strategic Leadership Team published "***A Strategy to Improve Numeracy & Maths for Learning, Life and Work***" (June 2023).

More recently, Education Scotland produced the findings of their thematic inspection:

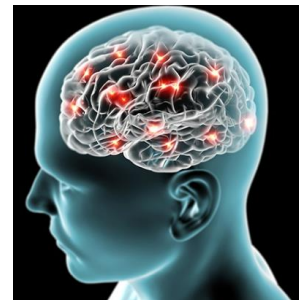
"Enhancing the quality of mathematics education on Scotland" in November 2024:

"It is easy to forget how powerful mathematics can be. Learning mathematics well equips us to solve problems, of course. Mathematics helps us to develop critical skills that are essential for lifelong learning: from analytical thinking and problem-solving, to precision, logic and resilience, to creative thinking. Learning mathematics expands our minds, gives our brains new ways of thinking and introduces us to different approaches to problem-solving. Even more valuable than these is the fact that it builds our confidence across a range of disciplines. It also gives us the mental framework to learn to lead, to innovate, and to succeed in the rapidly changing world in which we live."

(Janie McManus, His Majesty's Chief Inspector of Education, 2024)

2. Aims

Our aim at CPPS is to make maths enjoyable, achievable and relevant giving all our children and parents reasons to value and appreciate that a depth of maths learning give us critical skills for life and that it is important for future success. All staff and pupils encourage a Growth Mindset approach with an “I can attitude”.



3. How we achieve this at C.P.P.S

All of these ideas and principles have stemmed from research, CFE Principles and Practice Papers, Self-evaluation, SIP, collaborative work undertaken by all staff in School Cluster, Authority and working parties and are in line with EDC's refreshed Numeracy Strategy.

3.1 Assessment

Knowledge and understanding of attainment and achievement to ensure equity and raising attainment.

- At the start of a session we use detailed transition information about the children to determine their next steps. This information will have been gathered from ongoing assessment information, and observations which has been gathered by the previous staff, pupils and SLT.
- We use pre (and post) assessment before planning a block of lessons to determine next steps and any gaps in understanding. This ensures appropriate differentiation at the planning stage.
- Children are assessed against the CfE benchmarks to monitor progress.
- HAM has a range of assessments for each subject area. We also have CPPS baseline assessments, TJ maths and Clackmannanshire baselines.

Standardised assessments:

- P1, P4 and P7 participate in SNSA standardised assessments annually
- P2, P3, P5 and P6 participate in PUMA standardised assessments
- All reports and progress are monitored and discussed with SLT and the results are tracked on the school tracking system. Next steps and reports for individuals are analysed with SLT and class teachers to ensure strengths and next steps are identified and acted upon.
- Data from standardised assessments is forensically analysed and trends and themes identified to form part of the school improvement agenda, self-evaluation, staff training and identifying SIP targets.
- Robust tracking of attainment and discussions at T&L meetings will highlight individuals who are not meeting targets. These children will be given a more diagnostic Maths Recovery Assessment to identify next steps. Targeted support and interventions will be planned as necessary.
- In circumstances where learners continue to encounter challenges with numeracy and mathematics and make limited progress in their learning despite the MRAS intervention/SEAL, pupils should be referred to the Pupil Support Group (PSG) for collaborative assessment of numeracy difficulties and, if appropriate, proceed to the next stage of East Dunbartonshire's Dyscalculia assessment process.

- Teachers and practitioners can access guidance via East Dunbartonshire's 'Supporting Specific Learning Difference (Dyscalculia) Guidelines for Assessment and Intervention' policy.

3.1. Planning

Identifying and planning the critical aspects of development and progression in mathematical skills is crucial

All staff use the CFE Numeracy and Mathematics, Experiences and Outcomes to plan the curriculum.

Numeracy and mathematical skills are embedded in the Experiences and Outcomes and cannot be taught in isolation. These skills can be developed through careful planning of learning activities, effective (HOT) questioning and a range of assessments. These should encourage learners to think about the concepts, going beyond the recall of knowledge and encouraging them to explain their thinking. As learners progress through Curriculum for Excellence levels, they should demonstrate increasing sophistication and independence in their ability to demonstrate, link, transfer and apply these **eight skills** in a range of increasingly more challenging contexts:

- interpret questions;
- select and communicate processes and solutions;
- justify choice of strategy used;
- link mathematical concepts;
- use mathematical vocabulary and notation;
- use mental agility;
- reason algebraically; and
- determine the reasonableness of a solution.

At CPPS we have revised planning guides across all levels which indicate CFE E&O's, Benchmarks, a progression in critical steps taken from ASG work and Clackmannanshire planners and key LI and SC. These are across a level for each organiser.

We ensure pupils know what their targets are and where their strengths and weaknesses are and try to incorporate this across the year in meaningful, real-life contexts.

"Children particularly enjoy experiences with an authentic purpose, for example budgeting for an event or measuring out and building items for a school garden."

(Education Scotland, 2024)

Making links across learning

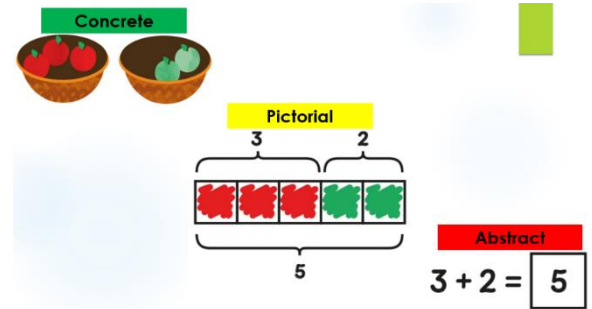
Social Studies	Sciences	Physical Education	Music	Art, Design and Technology
percentages	speed	speed	speed	2D shape
probability	distance	distance	time	3D objects
time	time	time	fractions	proportion
data handling	algebra	data handling	length	tiling
scale	data handling	scale		ratio
coordinates	length	coordinates		scale
ratio	weight	length		length
length	volume	weight		weight
				volume



Raising Attainment in Numeracy in East Dunbartonshire

"A Strategy to Improve Numeracy & Maths for Learning, Life and Work" (June 2023).

In addition to ensuring we use IDL approaches where possible for numeracy and mathematics, we use the **Concrete, Pictorial, Abstract** (CPA) approach (based on Piaget's learning theory) to teaching numeracy and maths. Any new maths concept being planned, should follow this approach and in that order to ensure depth of understanding, allowing children to develop their ability to think and work with more abstract ideas as they progress through the CfE levels.



To support this, we use:

- H.A.M (Heinemann Active Maths) is the principle resource used in teaching and learning in maths but not the only one. Focus must be on the skills and methodologies rather than the resource.
- Number Talks sessions are planned across the week (see Maths guide for further information)
- Planning maths skills in relevant contexts is critical to making maths fun and relevant to real life, Pupil voice is encouraged at all opportunities.
- Making maths skills explicit in other subjects through IDL, Play 2 learn, and practical subjects is critical.
- At CPPS we have a Maths and Numeracy guide for all staff (due to be revised).

3.2 Effective teaching and Learning

Increasing confidence in mental maths, understanding and use of critical maths vocabulary, building a depth of knowledge, understanding and skills in numerically rich environments.

There should be a balance to teaching numeracy concepts and other areas of maths across the week (see maths guide for further information). Differentiation is essential for high quality teaching and learning ensuring equity for all learners - we praise achievement, not ability. We also promote the use of effective questioning and Higher Order Thinking Skills across numeracy and maths.

Number Talks:

Number talks is a strategy used to build flexibility, accuracy and efficiency in mathematical thinking through the articulation of, and sharing of, mental math strategies. (see Maths guide for details).

K.I.S.S. (**K**eeping **I**mportant **S**kills **S**harp) should be carried out on at least 2 occasions per week:

- KISS incorporates critical vocabulary, layouts and word problems across different subject areas. Similar to a daily 10 but the questions and problems are on **mixed concepts**/subject areas e.g. subtraction, time, multiplication, shape etc. This should help with knowledge retrieval across a variety of maths areas.
- KISS can be incorporated into Number Talk sessions.
- KISS should be differentiated so that all or most children will achieve e.g. the first 5 questions with progressively more challenging problems after that.
- KISS should reflect previous teaching and learning. It keeps important skills and knowledge ticking over and will promote the retention of important techniques and skills in learners when you have moved on to a different concept.

A useful website for KISS activities is <https://mathsbot.com/starter> or the Collins Mental Maths books at each stage.

Making Thinking Visible (MTV) and Problem Solving:

All pupils must be encouraged to demonstrate their thinking and show how they thought about a problem using verbal, concrete, pictorial and written techniques. They should be encouraged to show different strategies to solve the same problem and develop an understanding of the concepts and make the links in learning. Working out should be shown. Examples of MTV strategies can be found in the Maths Guide.

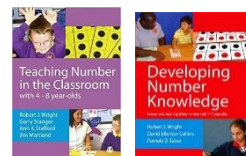
Numeracy Blueprint Boards are used across the school. They build on and link the principles of concrete, pictorial and abstract learning processes. Children need to demonstrate that they can solve problems in a number of ways. Blueprint boards support children to make their thinking visible (See Maths guide for more details)

Children should be encouraged to use their estimations to check answers and upper school to use the inverse operation to check.

- **Algebraic Thinking** - Learners need to create patterns and geometrical understanding through spatial awareness and problem solving at an early age. Learners need to understand that numbers can be replaced by pictures or symbols and use this to solve problems; and apply commutative, associative and distributive laws to work with expressions and equations. Using function machines, exploring patterns and sequences, missing digits and symbols with the answer given are all examples of algebraic thinking at early and first level. HAM has a progressive plan at 2nd Level.
- **Problem Solving** - In addition to all of the above we are introducing NRich resources and a progressive plan is outlined in the maths guide. See also <https://nrich.maths.org/primary>

Maths Recovery:

As a means of raising attainment in maths and closing the PRAG, we use Maths Recovery as an early intervention tool/programme for children who are experiencing maths learning difficulties. EDC MRAS (Maths Recovery Assessment Scales) are carried out which identifies the gaps in a child's learning, instructional activities are then planned for the child over a six-week (approx.) intervention period. The child is then re-assessed at the end of the block and the impact is then measured.



SEAL (Stages of Early Arithmetical Learning):

SEAL pedagogy underpins Maths Recovery (see below) and the CPA approach to teaching numeracy and maths at early level, it is a framework that we can use to understand the development of children's numerical knowledge. The SEAL planners break down every tiny skill needed for a depth of understanding of number, many of which are embedded within our Early Level maths planner. The SEAL planner can be used alongside/in addition to our Early and First Level Maths planners and gives a wide range of progressive skills and activities to build number sense and knowledge, thus preventing gaps in number as children progress through the CfE levels. In Colquhoun Park Primary we also make use of SEAL as a daily intervention programme to support pupils who have significant gaps in their knowledge or basic numeracy skills by teaching additional strategies.

3.4 Moderation

Moderation is integral to planning learning, teaching and assessment. At CPPS moderation occurs regularly at stage and staff meetings, with SLT at T&L and SfL meetings. Teachers and practitioners should make reference to Education Scotland's moderation cycle when planning, delivering and moderating assessment outcomes. It is essential that learners are at the heart of every stage of the moderation cycle and where possible lead dialogue about their own learning.

Evidence of progress and achievement includes:

- observing day-to-day learning within and out with the classroom;
- course work including summative and formative assessment;
- learning conversations;
- Information from standardised assessments where trends, strengths and difficulties are highlighted.

3.5 Parental and Partner Engagement

“Numeracy, as responsibility for all, includes parents/carers and the wider community. To ensure our learners get the best start in life, are well-supported in their learning and achieve their full potential, schools and centres should be proactive in developing positive relationships with families. This relationship will provide opportunities to share the positive message about numeracy and mathematics, raise expectations and build capacity in families to support children and young people.”

A Strategy to Improve Numeracy & Maths for Learning, Life and Work (June 2023)

- At CPPS we participate in the annual Maths Week Scotland activities which often involve workshops/activities with families.
- Read Write, Count programme
- Curriculum evenings/Parent workshops on various subjects to be organised across stages e.g. Numeracy Blueprint Boards, Number Talks & CPA approaches
- Family Learning is offered via Count Me In, our Maths Champ and our FLA is now trained to support numeracy learning with families.
- Continuing to develop partnerships with families and community businesses through our contexts for learning.
- Set relevant and purposeful mathematical learning at home including use of digital platforms like Active Learn.
- Promote National events, competitions, events and information.

3.6 Teacher Professionalism

‘The most valuable resource that all teachers have is each other. Without collaboration our growth is limited to our own perspectives.’

- Robert John Meehan

All our staff at CPPS have access to a high-quality bespoke, annual programme of Career Long Professional Learning provided by EDC, to enhance teacher confidence, skills, knowledge and understanding of the teaching and learning in numeracy and mathematics. All CLPL offered promotes the use of SEAL, Maths Recovery and CPA strategies and approaches to everyday teaching and learning. Further to this, staff have access to Education Scotland's [Numeracy](#)

[Professional Learning Resource](#) as well as [Numeracy and Mathematics PLC](#) as a means of enhancing high quality teaching and learning of numeracy and maths.

Our Maths Champion(s) at CPPS can provide support and guidance to teachers by:

- attending and sharing core training, promoting effective teaching and learning approaches in numeracy and maths
- sharing resources and good practice through the Maths Champion network
- supporting the implementation of their school's numeracy strategy in line with EDC's numeracy strategy
- supporting colleagues, raising confidence and improving skills and abilities
- supporting colleagues implementing maths recovery assessments and activities

3.7 Self Evaluation & Improvement Planning

Our staff at CPPS are committed to self-evaluation as a means of improving our practice and moving the school forward with our improvement priorities. We use Education Scotland's Self-Evaluation Framework as a tool to evaluate our teaching practice, highlighting our strengths, challenges and improvements.

“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)