

This policy has been created by the school, building on national best practice as well as East Renfrewshire Council and Education Scotland guidance.

Article 28: Young people should be encouraged to reach the highest level of education they are capable of. **Convention on the Rights of the Child**



Rationale

Mathematics is important in our everyday life, allowing us to make sense of the world around us and to manage our lives. Using mathematics enables us to model real-life situations and make connections and informed predictions. It equips us with the skills we need to interpret and analyse information, simplify and solve problems, assess risk and make informed decisions.

Numeracy and Maths Principles and Practice Paper

The Numeracy and Mathematics Programme in St John's aims to provide all pupils with a solid grounding in the basic skills of mathematics so that they can use and apply these skills across the curriculum and in a wide variety of real life, relevant contexts.

- **Excellence through raising attainment:** ensuring that every child achieves the highest standards in literacy and numeracy and the right range of skills, qualifications and achievements to allow them to succeed; and
- **Achieving equity:** ensuring every child has the same opportunity to succeed.

National Improvement Framework 2019, Vision

Improving attainment in numeracy and maths, closing the attainment gap and ensuring that the skills our young people develop will support them in their future learning, life and work are key objectives in the Local Improvement Plan as informed by the [National Improvement Framework](#). We also consider the advice from the [Making Maths Count Group Report](#) taking account of the drive towards:-

- Transforming public attitudes to maths;
- Improving confidence and fluency in maths for children, young people, parents and all those who deliver maths education to
- Raise attainment and achievement across learning and
- Promote the value of maths as an essential skill for every career.

Read, Write, Count Report 2016

Aims

The Numeracy and Mathematics programme aims to:

- Have consistent methodology which addresses the [Experiences and Outcomes](#) of Curriculum for Excellence from Early through to Third Level.
- Promote enjoyment and enthusiasm for maths.
- Develop a range of mental strategies.
- Provide a progressive skills development with opportunities for pupils to revisit, consolidate and extend learning ([New ERC Skills Framework](#))
- Develop confidence and competence in using and applying mathematical skills in a variety of contexts, both familiar and unfamiliar
- Develop the ability to solve problems through enquiry, reasoning and decision making in a range of contexts.
- Provide opportunities to encourage creative thinking in maths through development of higher order thinking skills
- Enable children to understand and appreciate the importance of mathematics in everyday life.
- Encourage children to work actively and cooperatively and demonstrate creativity, initiative and independence.
- Ensure that children understand, develop and use the language of mathematics.

Principles

Teachers plan a differentiated programme to meet the needs of all pupils and to interest and motivate pupils to continually improve their numeracy and mathematics skills through:-

- Considering the Seven Principles of Curriculum for Excellence - challenge and enjoyment, breadth, progression, depth, personalisation and choice, coherence, relevance
- Sufficiently differentiated and challenging activities in which all pupils can achieve success
- Stimulating and positive experiences which will motivate and inspire pupils.
- High expectations for the mathematical attainment of pupils.
- Use of digital technologies to engage, extend and support learning and teaching
- Use of feedback and pupil involvement in making decisions about their learning
- Playful pedagogy
- Engaging in Outdoor Learning
- Inter-disciplinary and cross-curricular learning
- Rigorous assessment, recording and tracking of pupil progress to inform next steps in learning and teaching
- Early identification of pupils requiring additional support providing a range of experiences allows for different rates of progression as outlined in the [St Luke's Cluster Gradient of Learning](#)
- Professional dialogue and moderation across classes, stages and schools
- Transition and cluster development working including associated nursery, primary and secondary partners
- Partnerships with parents to encourage involvement and participation in their child's education

Practice

Learning and Teaching of Numeracy and Mathematics within the Curriculum Within our cluster we have an agreed [Common Language and Methodology Framework](#) for the teaching of Numeracy and Mathematics. Approaches are progressive to meet the needs of the learner.

Frequency: Numeracy and Mathematics should be taught daily. 8 periods should be timetabled per week. This can be a combination of single and double periods.

Structure: All Numeracy and Mathematics lessons should include an interactive starter session lasting around 20 minutes. This will include a CLIC Session from the Big Maths Programme (see below). This starter will be followed by a mixture of differentiated group work, independent work, active learning, teacher led activities and consolidation exercises. Finally a plenary session of around 10 minutes should be planned to conclude the lesson and allow pupils to feedback on their learning. AifL strategies should be used throughout the lesson with appropriate summative assessments following a unit of work on a particular concept.

Big Maths – Mental Agility

We are using the ‘Big Maths’ programme in order to improve mental agility from Early-Third Level. The methodology focuses on 4 main areas – Learn Its, Counting, It’s Nothing New and Calculations.

Counting	Counting is done in many ways including counting forwards and backwards in various increments; work on place value and reading and ordering numbers.
Learn Its	‘Learn Its’ are 72 number facts which are learnt throughout the years from Primary 1 to Primary 5. They are split across the different terms so that each class works on a few Learn Its at a time, to ensure they are fully embedded. 36 are addition facts and 36 are multiplication facts; these are learnt in class and revised at home and are tested once a week in school through the ‘Big Maths Beat That!’ Challenge.
It’s Nothing New	Children use a bank of facts and methods that they already have, to solve problems and that each step of progress is very small; children will use and apply their skills and methods to a range of different situations and problems.
Calculations	focuses on teaching solid written and mental methods for addition, subtraction, multiplication and division. The children move through progress drives which introduce small, focused steps of progress throughout the year.

Pupils who struggle to retain basic number bonds or multiplication facts receive support through the 5 Minute Box Resource.

Assessment and Moderation

Essential to effective teaching and learning of numeracy and mathematics is allowing children to demonstrate their progress and their ability to transfer previous taught concepts in a new and unfamiliar context.

Teachers adopt a range of formative and summative assessment strategies appropriate to the concepts being taught which include questioning, active learning tasks, mental maths games, group discussion, and written tasks.

The systematic use of feedback and next steps from the teacher is integral to the teaching and learning process. This allows every child to develop an understanding of how they can progress and improve their skills in Numeracy and Mathematics.

Summative assessment of Numeracy and Mathematics is on-going and contributes to Curriculum for Excellence teacher judgements and includes:

- ‘Big Maths Beat That!’ – timed challenge where children answer ‘Learn Its’ questions. The aim is to beat their previous score Updated June 2016
- End of Unit Assessments
- ERC Standardised Tests (P1 Baseline, P3, P5, P7)
- SNSA (P1, P4, P7)
- Staff have created a bank of assessments for Early, First and Second level for each Experience and Outcome.

To be Revised: March 2020 (or before in light of relevant developments).