

Mathematics Plan
St. Fergus' National School
2025

Introductory Statement and Rationale

Introductory Statement

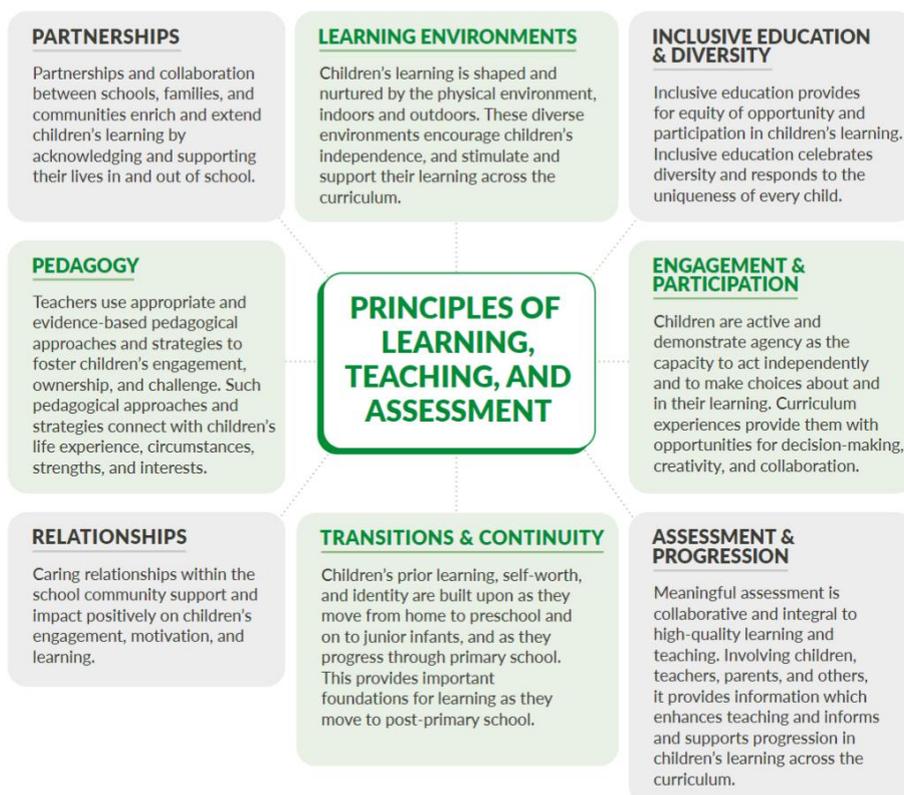
This Mathematics Whole School Plan was revised in the 2024 - 2025 Academic Year, by the staff of St. Fergus' NS to align with the New Primary Mathematics Curriculum and best practices recommended by the Department of Education, Oide, NCSE, and other advisory bodies. The plan will guide the teaching, learning, and assessment of mathematics across all classes and support an inclusive, engaging, and developmentally appropriate approach to numeracy. It will be reviewed annually as part of the School Self-Evaluation (SSE) process.

This plan is informed by key educational frameworks, policies, and guidelines, including:

- Primary Mathematics Curriculum
- Department of Education Circulars and Guidelines – Including Circular 001/2024
- Oide Professional Learning Resources
- NCSE Guidelines on Inclusion and Differentiation
- Indicators of Effective Practice for Primary Schools - Autism Good Practice and Special Education Teaching
- Primary School Framework

Principles of learning, teaching and assessment

The following principles, as outlined in the Primary Curriculum Framework (page 4 of Primary Maths Curriculum), convey what lies at the heart of primary education, including children's learning of Mathematics.



Children’s Mathematical Learning Experiences

At St. Fergus’ NS, Mathematics is embedded within the broader Science, Technology, Engineering, and Mathematics (STEM) Education curriculum area, reflecting its critical role in fostering logical thinking, problem-solving skills, and analytical reasoning. Mathematics serves as the foundation upon which children build and refine their understanding of STEM concepts, enabling them to recognise relationships, identify patterns, and apply their learning to the world around them.

Mathematics learning at St. Fergus’ NS is structured to align with the seven key competencies outlined in the Primary Curriculum Framework. These competencies, which build upon children’s early learning experiences from pre-school and continue into Junior Cycle at post-primary level, are developed through active, inquiry-based, and problem-solving approaches in mathematics. As children engage with progression continua and learning outcomes, they not only deepen their mathematical understanding but also enhance their ability to communicate, collaborate, and think critically.

Through rich mathematical experiences, cross-curricular integration, and STEM-based inquiry, students at St. Fergus’ NS develop the skills necessary to become confident, reflective, and capable problem-solvers, preparing them for lifelong learning in mathematics and beyond.



Rationale

Mathematics is a fundamental aspect of everyday life, supporting problem-solving, logical reasoning, and decision-making in both academic and real-world contexts. A strong foundation in numeracy enhances students' ability to engage meaningfully with other subjects, particularly in STEM, and prepares them for lifelong learning. The Primary Mathematics Curriculum emphasises the importance of a conceptual and skills-based approach, integrating problem-solving, mathematical reasoning, and real-life applications to ensure all learners develop a deep understanding of mathematical concepts.

This plan ensures:

- Alignment with the Primary Mathematics Curriculum and adherence to the most recent Department of Education guidelines.
- Effective teaching methodologies that incorporate problem-solving, reasoning, and application of mathematics in real-world contexts.
- Inclusive and differentiated instruction that supports all learners, including pupils with special educational needs (SEN), EAL learners, and gifted students.

- Consistent assessment practices, utilising both formative and summative strategies to track student progress and inform teaching.
- A structured and progressive framework that ensures continuity and development of mathematical skills from Junior Infants through Sixth Class.
- By implementing this plan, St. Fergus' NS aims to foster a positive mathematical mindset, ensuring that all pupils develop confidence, competence, and a lasting appreciation for numeracy.

Vision and Aims

Vision

At St. Fergus' NS, we aim to foster a positive attitude towards mathematics and equip students with the knowledge, skills, and confidence to engage with mathematics in school and daily life. We emphasise mathematics as a tool for problem-solving, logical reasoning, and critical thinking while ensuring all students experience success and enjoyment in their learning.

Aligned with the vision of the Primary Mathematics Curriculum, we strive to create a learning environment where all children can develop a deep and lasting understanding of mathematical concepts. Our goal is to cultivate mathematically confident, resilient, and flexible thinkers who can apply their learning in meaningful and real-world contexts. The curriculum promotes the integration of play, inquiry, collaboration, and communication, ensuring that children develop essential skills such as reasoning, fluency, and problem-solving. We value mathematics as a creative and interconnected discipline that enables students to make sense of the world around them.

Through engaging and differentiated teaching practices, we seek to empower students to take ownership of their learning, embrace challenges, and see themselves as capable mathematicians. This vision aligns with a broader commitment to inclusion, diversity, and accessibility, ensuring that every child, regardless of ability, background, or learning needs, can flourish in mathematics and develop a lifelong appreciation for numeracy.

Aims

Our aim is to ensure that all students develop the necessary mathematical skills to become confident, competent and enthusiastic learners. Mathematics at St. Fergus' NS is not just about numbers and calculations but about fostering a deep understanding of mathematical concepts, logical reasoning and real-world application. We strive to develop problem-solving abilities, mathematical fluency and a strong foundation in numeracy through a structured and engaging learning environment. Our curriculum is designed to cater to the diverse needs of students, ensuring differentiated instruction, active participation and the integration of technology and real-life contexts in mathematical learning.

To achieve these goals, we focus on:

- Developing students' mathematical proficiency by emphasising conceptual understanding, procedural fluency, adaptive reasoning, and problem-solving.

- Encouraging mathematical curiosity and fostering an appreciation for the subject's relevance in everyday life.
- Creating an inclusive learning environment that supports all learners, including those with additional needs, through targeted interventions and differentiated instruction.
- Promoting a growth mindset, where mistakes are seen as valuable learning opportunities and resilience is encouraged.
- Utilising technology and real-world applications to deepen understanding and engagement in mathematical concepts.

Curriculum Planning

1. Strands and Strand Units

The Primary Mathematics Curriculum is structured around five key strands, each encompassing essential strand units that build mathematical understanding progressively across the primary years.

1. Number

The Number strand develops students' understanding of numerical concepts, operations, and relationships. It includes:

- ✓ Counting and Number Sense: Understanding number sequences, counting strategies, and numerical relationships.
- ✓ Operations: Mastering addition, subtraction, multiplication, and division using mental and written strategies.
- ✓ Fractions and Decimals: Developing an understanding of part-whole relationships, equivalent fractions, and decimal notation.
- ✓ Percentages and Ratios: Introducing proportional reasoning, linking percentages with fractions and decimals
- ✓ Number Patterns and Properties: Recognising patterns in number sequences and understanding number properties.

2. Algebra

The Algebra strand fosters mathematical reasoning and problem-solving skills by identifying relationships and patterns in numbers and symbols:

- ✓ Patterns and Sequences: Identifying, creating, and extending repeating and growing patterns.
- ✓ Expressions and Equations: Understanding the use of symbols, solving simple equations, and developing algebraic thinking.
- ✓ Functions and Relationships: Exploring how variables interact and how mathematical rules determine outputs.
- ✓ Problem-Solving in Context: Applying algebraic reasoning to real-world mathematical situations.

3. Measures

The Measures strand supports students in understanding and applying measurement concepts in real-world contexts:

- ✓ Length, Weight, and Capacity: Comparing, estimating, and measuring using standard and non-standard units.
- ✓ Time: Understanding and using time-related concepts, including clocks, calendars, and duration.
- ✓ Money: Developing financial literacy through recognition of currency, making calculations, and budgeting.
- ✓ Perimeter, Area, and Volume: Measuring space using appropriate tools and units to solve real-life problems.
- ✓ Speed and Temperature: Applying measurement to everyday applications such as weather and motion.

4. Shape and Space

The Shape and Space strand develops spatial awareness, geometric reasoning, and visualisation skills:

- ✓ 2D and 3D Shapes: Identifying, classifying, and understanding the properties of shapes.
- ✓ Symmetry and Transformations: Exploring symmetry, tessellation, reflection, and rotational movements.
- ✓ Angles and Coordinates: Measuring angles and using coordinate systems for plotting and navigation.
- ✓ Spatial Awareness: Enhancing visualisation and problem-solving using geometric reasoning.

5. Data and Chance

The Data and Chance strand supports students in collecting, analysing, and interpreting data, as well as understanding probability:

- ✓ Data Collection and Representation: Organising and displaying data using graphs, charts, and tables.
- ✓ Statistical Analysis: Identifying trends, calculating averages, and interpreting findings.
- ✓ Probability and Chance: Understanding likelihood and using mathematical language to describe outcomes.
- ✓ Predicting Outcomes: Using experimental and theoretical probability to analyse real-world scenarios.

By engaging with these strands and strand units, students develop a comprehensive mathematical foundation that enables them to think critically, solve problems efficiently, and apply mathematical concepts in practical contexts.

Mathematical Concepts, Progression Continua, and Strand Units

Junior & Senior Infants Link to [Support Material Across Strand Units](#)

| Strands | Strand Units | Progression Continua | Learning Outcomes | Concepts | Support Materials for Teachers |
|----------------|----------------------|-----------------------------|--|---|---|
| Number | Counting | Developing number sense (a) | Recognise and count numbers in sequence up to 10 and beyond. | Numeration and counting Place Value and Base Ten One-to-one correspondence, number sequence, counting strategies. | Uses of Number Numeration and Counting Place Value and Base Ten |
| | Early numeracy | Subitising (a) | Instantly recognise small sets without counting. | Sets and Operations Recognising number patterns, estimating small quantities. | Sets and Operations |
| | Number relationships | Counting fluency (a) | Develop an understanding of more than, less than, and equal to. Comparing numbers, understanding number magnitude. | Fractions Uses of Number | Sets and Operations |
| Algebra | Patterns | Recognising patterns (b) | Identify, extend, and create simple repeating patterns | Patterns, Rules and Relationships Recognising, creating, and extending | Patterns, Rules and Relationships |

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| | | | | sequences | |
| | Early algebraic thinking | Creating and extending patterns (b) | Explore the concept of relationships in number patterns | Expressions and Equations Identifying simple rules in number relationships. | Expressions and Equations |
| Measures | Length | Estimating and comparing measurements (b) | Compare and order objects by length using non-standard units | Measuring Measuring using informal units, estimating differences in size. Measuring | Measuring |
| | Weight | Estimating and comparing measurements (b) | Explore heavy and light objects through direct comparison | Understanding weight as a property, using comparative language. Measuring | Measuring |
| | Capacity | Estimating and comparing measurements (b) | Compare and estimate the capacity of different containers | Measuring and estimating volume with informal units | Measuring |
| | Time | Understanding sequences of time (b) | Recognise key times of the day and sequence events. | Time Understanding past, present, future, sequencing events. | Time |
| | Money | Recognizing coins and values (b) | Identify coins and understand their values in simple transactions. | Money Recognising and comparing currency values. | Money |
| Shape & Space | Properties of 2D and 3D shapes | Identifying and describing shapes (a) | Name and sort common 2D and 3D shapes. | Shape Identifying and comparing geometric properties. | Shape |
| | Spatial awareness | Sorting and classifying objects by shape and size (a) | Describe positions and movements using spatial language. | Spatial Awareness and Location Transformation | Spatial Awareness and Location Transformation |

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| | | | | Recognising positions, movements, and spatial orientation. | n |
| <u>Data & Chance</u> | Sorting and classifying data | Recognizing data patterns (c) | Sort objects into categories and represent data visually. | Data Organising and classifying information. | Data |
| | Basic probability | Understanding simple chance events (c) | Discuss possible outcomes of familiar everyday events. | Chance Understanding likelihood, predicting events. | Chance |

Mathematical Concepts, Progression Continua, and Strand Units

First & Second Class [Link to Support Material Across Strand Units](#)

| Strands | Strand Units | Progression Continua | Learning Outcomes | Concepts | Support Materials for Teachers |
|-----------------------|-------------------------------------|---|---|---|---|
| <u>Number</u> | Place value | Strengthening number sense (c) | Understand place value in two-digit numbers and beyond. | Numeration and Counting Understanding tens and units, expanding numbers. | Uses of Number Numeration and Counting Place Value and Base Ten Uses of Number |
| | Operations (addition & subtraction) | Developing fluency in calculations (c) | Solve simple addition and subtraction problems using a variety of strategies. | Place Value and Base Ten Sets and Operations Applying number bonds, mental arithmetic strategies. | Sets and Operations |
| | Fractions | Understanding parts of a whole (c) | Recognise halves and quarters in real-life contexts. | Fractions Identifying fractions in shapes and sets. | Fractions |
| <u>Algebra</u> | Exploring number patterns | Identifying and extending sequences (d) | Identify and create number sequences and patterns. | Patterns, Rules and Relationships Recognising and continuing patterns. | Patterns, Rules and Relationships |
| | Relationships | Understanding number relationships | Use simple rules to explore | Expressions and Equations | Expression and Equations |

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| | | (d) | number relationships. | Exploring commutativity, odd and even numbers. | |
| <u>Measures</u> | Standard and non-standard units | Comparing and measuring accurately (d) | Use appropriate units to measure length, weight, and capacity. | Measuring Using rulers, scales, and containers to measure accurately. | Measuring |
| | Money | Understanding value and simple transactions (d) | Recognise and use coins and notes in simple shopping situations. | Money Calculating simple change and total cost. | Money |
| | Time | Reading clocks, understanding days, weeks, months (d) | Read time on analogue and digital clocks to the hour and half-hour. | Time Understanding daily routines and time sequencing. | Time |
| <u>Shape & Space</u> | Symmetry and transformations | Identifying symmetry in objects and patterns (c) | Recognize symmetrical objects and complete symmetrical patterns. | Spatial Awareness and Location Shape Identifying lines of symmetry in various shapes. | Shape |
| | Angles | Recognising and describing angles (c) | Identify right angles in the environment. | Spatial Awareness and Location Transformation Recognising right angles and comparing angles. | Spatial Awareness and Location Transformation |
| <u>Data & Chance</u> | Graphing | Organizing and interpreting data using bar charts (e) | Collect and represent data using simple charts and graphs. | Data Reading and constructing pictograms, bar charts. | Data |
| | Basic probability | Predicting simple outcomes using probability language (e) | Describe likelihood using language such as 'likely' and 'unlikely'. | Chance Recognising certain, possible, and impossible events. | Chance |

Mathematical Concepts, Progression Continua, and Strand Units

Third and Fourth Classes

| Strands | Strand Units | Progression Continua | Learning Outcomes | Concepts | Support Materials for Teachers |
|-----------------------|---------------------------|--|--|---|---|
| <u>Number</u> | Multiplication & division | Expanding number operations (e) | Use multiplication and division facts to solve problems. | Numeration and Counting Sets and Operations Understanding arrays, using multiplication tables. Fractions | Uses of Number Numeration and Counting Uses of Number |
| | Fractions | Understanding equivalent fractions (e) | Compare and order fractions and explore equivalence. | Understanding numerator and denominator relationships. | Fractions |
| | Decimals | Introducing decimal notation and place value (e) | Read, write, and compare decimal numbers up to two decimal places. | Place Value and Base Ten Linking decimals to fractions, place value in decimals. | Place Value and Base Ten Sets and Operations |
| <u>Algebra</u> | Number patterns | Exploring equivalence and sequences (f) | Identify and generate number sequences using patterns. | Patterns, Rules and Relationships Recognising and forming number patterns and relationships. Expressions and Equations | Patterns, Rules and Relationships |
| | Simple equations | Solving for unknowns in basic equations (f) | Solve simple algebraic equations involving one unknown. | Understanding balance and equality in equations. | Expressions and Equations |

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| | | | Measuring | |
| <u>Measures</u> | Converting units | Applying standard units in real-world contexts (f) | Convert between different units of measurement. | Money |
| | Perimeter & area | Measuring space using appropriate tools (f) | Calculate perimeter and area of simple shapes. | Transformation |
| | Angles & quadrilateral properties | Measuring and constructing angles (e) | Measure and classify angles and quadrilaterals. | Shape |
| <u>Data & Chance</u> | Mean, median, mode | Analyzing sets of data and identifying trends (g) | Calculate and interpret mean, median, and mode. | Data |
| | Probability experiments | Predicting outcomes using data (g) | Conduct probability experiments and interpret results. | Chance |
| | | | Applying conversion factors in length, weight, and volume. | Measuring |
| | | | Understanding units of area and perimeter. | Spatial Awareness and Location |
| | | | Identifying acute, obtuse, and right angles. | Spatial Awareness and Location |
| | | | Understanding data distribution and central tendency. | Shape |
| | | | Using probability scales and predicting likelihood. | Transformation |

Mathematical Concepts, Progression Continua, and Strand Units

Fifth & Sixth Class Link to [Support Material Across Strand Units](#)

| Strands | Strand Units | Progression Continua | Learning Outcomes | Concepts | Support Materials for Teachers |
|-----------------------|---------------------|--|--|--|--|
| <u>Number</u> | Percentages | Applying advanced proportional reasoning (g) | Calculate percentages and apply them in real-life contexts such as discounts and interest. | Numeration and Counting Fractions Sets and Operations Understanding percentage increase/decrease, finding percentages of amounts. | Uses of Number Numeration and Counting Fractions Uses of Number |
| | Ratios | Understanding part-whole relationships in different contexts (g) | Solve problems involving ratios and proportionality. | Fractions Comparing ratios, scaling up/down. | Sets and Operations |
| | Exponents | Exploring powers and roots (g) | Understand and apply the concepts of square numbers and roots. | Place Value and Base Ten Identifying squared and cubed numbers, calculating roots. | Place Value and Base ten Sets and Operations |
| <u>Algebra</u> | Complex equations | Solving multi-step equations (h) | Solve multi-step algebraic equations with one or two unknowns. | Patterns, Rules and Relationships Expressions and Equations Understanding inverse operations, balancing equations. | Patterns, Rules and Relationships |

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| | Coordinate graphing | Plotting points and interpreting graphs (h) | Plot points on a Cartesian plane and interpret relationships. | Understanding x-y coordinates, interpreting linear relationships. | Expressions and Equations |
| <u>Measure</u> <u>s</u> | Volume, speed, metric conversions | Applying measurement to STEM applications (h) | Solve problems involving volume, speed, and conversions between metric units. | Measuring Time Money Calculating speed, distance, and time relationships. | Measuring |
| <u>Shape & Space</u> | 3D transformations | Understanding congruence and similarity (g) | Recognise and apply transformations, congruence, and similarity. | Spatial Awareness and Location Shape Transformation Identifying congruent and similar figures, understanding scale factor. | Shape Transformation |
| <u>Data & Chance</u> | Data representation | Interpreting multiple data sources (i) | Analyze and compare different data representations such as line graphs and pie charts. | Data Constructing and interpreting statistical diagrams. | Data |
| | Probability calculations | Using theoretical and experimental probability to make predictions (i) | Calculate probabilities and make predictions based on experimental and theoretical probability. | Chance Understanding probability scales, calculating expected outcomes. | Data Chance |

Teaching and Learning Primary Mathematics in St. Fergus' NS

At St. Fergus' NS, we embrace a playful approach to mathematics, recognising its fundamental role in deepening understanding, developing curiosity, and fostering a love of learning. The Primary Mathematics Curriculum highlights the importance of playfulness in mathematical learning, ensuring children are actively engaged through exploration, collaboration, and inquiry-based learning.

Playfulness in mathematics is structured through four stages of progression, ensuring continuity and development from Junior Infants to Sixth Class:

- Exploring and Doing – At this stage, children develop their mathematical understanding through hands-on experiences, play-based engagement, and meaningful interactions with their environment. They explore mathematical ideas using concrete materials, discussion, and practical engagement.
- Developing and Applying – As children progress, they begin to recognise patterns and relationships in mathematics, applying their learning to solve problems and develop deeper conceptual understanding. Collaboration and guided discussion help refine their skills.
- Reasoning and Justifying – At this stage, students engage in structured mathematical discussions, learning to explain and justify their thinking, make logical connections, and analyse different problem-solving strategies.
- Communicating and Expressing – In the final stage, students articulate their mathematical reasoning through multiple representations, including symbols, diagrams, and verbal explanations. They confidently communicate their thinking and apply their learning across different contexts.

This structured progression of playful engagement aligns with the Primary Mathematics Curriculum, which illustrates how children's mathematical learning moves from engaging in practical exploration to reasoning, justifying, and expressing complex ideas.

Teachers at St. Fergus' NS will integrate rich mathematical tasks, open-ended problem-solving activities, digital resources, and hands-on manipulatives to support these four stages, ensuring that students experience mathematics as an engaging and meaningful subject that connects to their lives and the world around them.

Our teaching approaches integrate the following five key pedagogical practices:

1. Cognitively Challenging Tasks

Cognitively challenging tasks provide students with opportunities to engage in high-level mathematical reasoning, promoting curiosity and problem-solving skills.

Tasks should:

- Encourage students to make connections between concepts and apply them in novel ways.
- Be open-ended, allowing for multiple solution strategies and student-led exploration.
- Include real-world scenarios that require deep reasoning and justification.

Examples

- Exploring and Doing: Sorting and classifying objects by attributes to understand patterns and relationships.*
- Developing and Applying: Investigating how different sets of numbers relate to each other in an interactive number line game.*
- Reasoning and Justifying: Engaging in peer discussions to compare strategies for solving a complex word problem.*
- Communicating and Expressing: Presenting multiple representations of a mathematical pattern and explaining reasoning behind them.*

2. Fostering a Productive Disposition

A productive disposition ensures students view mathematics as achievable, meaningful, and relevant to their daily lives. Teachers can foster this mindset by:

- Encouraging growth mindset language, emphasising effort over ability.
- Providing opportunities for reflection, where students discuss their learning process.
- Creating an inclusive environment that values mistakes as learning opportunities.

Examples

- Exploring and Doing: Using storytelling to present mathematical problems, reinforcing the idea that trying different approaches is part of learning.*
- Developing and Applying: Engaging in classroom discussions where students share what worked well and what challenges they faced.*
- Reasoning and Justifying: Encouraging students to evaluate different solutions and recognise mistakes as part of learning.*
- Communicating and Expressing: Using peer feedback to build mathematical confidence.*

3. Mathematical Modeling

Mathematical modelling connects classroom learning with real-world applications. Effective modelling activities may:

- Present scenarios that require students to formulate, analyse, and refine mathematical solutions.
- Encourage students to collect data, identify patterns, and test predictions.
- Allow for multiple representations (graphs, equations, visual models) to deepen understanding.

Examples

- Exploring and Doing: Using building blocks to explore spatial relationships and patterns.*
- Developing and Applying: Creating shopping scenarios where students estimate total costs and make financial decisions.*
- Reasoning and Justifying: Analysing real-world statistics (e.g., class survey data) to draw conclusions.*
- Communicating and Expressing: Presenting a solution to a real-world problem (e.g., designing a playground layout based on area and perimeter constraints).*

4. Encouraging Playfulness

Playfulness in mathematics fosters curiosity and engagement, ensuring students see maths as enjoyable and meaningful. Teachers can achieve this by:

- Using games, puzzles, and role-play to explore mathematical ideas
- Encouraging student-led inquiry, where children explore concepts through guided discovery.
- Creating opportunities for peer collaboration, allowing students to learn from each other.

Examples

-Exploring and Doing: Using manipulatives like pattern blocks and counters to explore number concepts.

-Developing and Applying: Introducing digital tools that allow students to manipulate shapes and numbers interactively.

-Reasoning and Justifying: Designing student-led investigations, where they create their own math challenges.

-Communicating and Expressing: Encouraging storytelling in mathematics (e.g., explaining how a character in a story solved a problem using maths).

5. Promoting Maths Talk

Mathematical discussions help students articulate their thinking, refine their reasoning, and build a deeper understanding. Effective strategies include:

- Implementing think-pair-share and peer discussions.
- Encouraging students to ask questions, explain their reasoning, and debate different strategies.
- Using mathematical language consistently in the classroom.

[An Introduction to Maths Talk](#)

[Promoting Maths Talk](#)

Examples

- Exploring and Doing: Engaging in maths circle time, where students discuss what they notice about numbers and patterns.

- Developing and Applying: Pairing students to explain their thinking when solving problems.

- Reasoning and Justifying: Structuring mathematical debates, where students defend their solutions.

- Communicating and Expressing: Encouraging students to write reflections on how they approached a mathematical problem.

By embedding these best practices into daily teaching, St. Fergus' NS ensures a rich, engaging, and inclusive mathematics experience for all students, supporting their journey from hands-on exploration to abstract reasoning and confident expression. These methodologies support active learning, collaborative problem-solving, and differentiated instruction.

Inclusion

St. Fergus' NS is committed to ensuring that all students, regardless of ability, background, or learning need, can access and engage with mathematics in a meaningful way. Mathematics instruction is inclusive of all learners, including pupils from diverse linguistic backgrounds, students with SEN, and gifted students. Resources and teaching strategies are adapted to promote equitable participation. This commitment aligns with our Inclusion Policy (2023), Additional Support Policy (2025), and the Guidelines for Primary Schools Supporting Children with Special Educational Needs (2025)

Meeting with individual needs.

Those children who receive scores at or below SET policy's qualifying percentile on the standardised tests will have priority in attending the S.E.T team for supplementary teaching for maths. The availability of supplementary teaching for Maths, however, depends on the caseload of the S.E.T team. Arrangement will be in accordance with the recommended selection criteria as determined by the Department of Education guidelines and laid out in the school's SEN policy. Support will include various models depending on needs of the child/class. Should it be decided that withdrawal is required, parents will be notified and permission will be sought if not already given.

Inclusive Practices in Numeracy

- **Universal Design for Learning (UDL):** Teachers use multiple means of representation, engagement, and expression to ensure accessibility for all learners, including the use of visual supports, concrete materials, and technology-based learning tools.
- **The Continuum of Support Model:** We follow a tiered, problem solving approach, ensuring that students receive the appropriate level of support through in-class differentiation, small-group interventions, and individual support plans when necessary.
- **Targeted Support for SEN Students:** Students with additional needs are provided with structured, differentiated, and scaffolded learning experiences that align with their abilities and learning styles.
- **Mathematics for All:** We embrace mixed-ability grouping, peer collaboration, and co-teaching approaches to foster an inclusive and supportive environment where all students can thrive.
- **Integration of Assistive Technology:** The use of tools such as maths apps, speech-to-text programs, and interactive whiteboards ensures that students with literacy or processing difficulties can fully participate in lessons.
- **Visual Supports:** Clear, structured visuals such as number lines, task schedules, and manipulatives to aid understanding.
- **Predictability and Routine:** A consistent, structured approach to maths instruction to reduce anxiety and build confidence.
- **Social Support:** Encouraging peer-assisted learning, small-group work, and structured social interaction opportunities in numeracy activities.
- **Sensory Considerations:** Adapting the learning environment to support sensory regulation, including the use of quiet spaces and movement breaks when needed.

By embedding inclusive practices in our numeracy plan, St. Fergus' NS ensures that every child has the opportunity to succeed in mathematics, fostering a sense of achievement, confidence, and lifelong mathematical literacy.

Assessment and Record Keeping

Assessment is an essential component of effective mathematics instruction at St. Fergus' NS, ensuring that teaching is responsive to the needs of all learners and aligns with the Department of Education's guidelines, NCCA Assessment Guidelines for Schools (2007), and

our Assessment Policy 2024. Our approach to assessment incorporates Formative Assessment, Summative Assessment, and Continuous Progress Monitoring, in line with best practices.

Assessment in Mathematics

- **Formative Assessment (Assessment for Learning - AfL):** Ongoing assessment strategies such as teacher observation, questioning, self-assessment, peer assessment, and discussion-based feedback help teachers adjust instruction to meet students' needs. Teachers use formative assessment to identify misconceptions, track progress, and provide immediate feedback that guides students' mathematical learning.
- **Summative Assessment (Assessment of Learning - AoL):** Periodic assessments, including teacher-designed tasks, standardised tests (Sigma-T, Drumcondra Reading Test) and end-of-term evaluations, provide an overview of students' attainment. These assessments ensure that students are meeting curriculum expectations and inform future planning.
- **Continuous Progress Monitoring:** This ensures that student growth is tracked over time. Tools such as work samples, portfolios, checklists, and digital assessments allow teachers to evaluate progress systematically and provide targeted support where needed.
- Teachers will complete a formal classroom based assessment at Halloween, Christmas, Easter and Summer which will inform pupils learning, teacher planning and School SET register.

Approaches to Assessment in Mathematics

- ❖ **Teacher Observation and Formative Assessment:** Teachers use ongoing observations, questioning, and discussions to assess students' mathematical understanding in real-time, adjusting instruction accordingly.
- ❖ **Teacher-Designed Tasks and Tests:** Regular problem-solving activities, written tasks, and quizzes assess students' grasp of key concepts and procedural fluency.
- ❖ **Work Samples and Portfolios:** A collection of student work, including projects and problem-solving tasks, is maintained to track progress over time.
- ❖ **Student Self-Assessment:** Reflection and self-evaluation strategies, such as learning logs and rubrics, encourage students to take ownership of their mathematical learning.
- ❖ **Standardised Testing:** In line with Circular 0056/2011, Sigma-T and Drumcondra standardised tests are administered with results being submitted to the DES, in 2nd, 4th, and 6th classes annually to monitor attainment levels in mathematics at national norms.
- ❖ **Screening and Diagnostic Testing:** Tools such as BIAP (Junior Infants) and Drumcondra Early Numeracy are used to identify early numeracy difficulties, ensuring timely intervention.
- ❖ **Digital Assessments and ICT Integration:** Platforms such as Google Classroom, Google Forms, and digital portfolios support real-time assessment and feedback.

Record Keeping and Reporting

Record keeping and reporting are an essential part of all curricular development. In St. Fergus' NS we use the following;

- Individual Pupil Profiles: Each child's mathematical progress is documented using assessment records, teacher observations, and student work samples.
- Whole-School Data Analysis: Standardised test results and formative assessment data are used to inform school-wide numeracy strategies and targeted interventions.
- Parent Communication: Assessment outcomes are shared through report cards, parent-teacher meetings, and digital reports, ensuring transparency in student progress.
- Transition of Records: 6th Class reports, including standardised test scores and teacher assessments, are shared with post-primary schools as part of the Education Passport initiative.

Our Assessment and Data Protection Policies are designed to be inclusive, comprehensive, and aligned with national guidelines, ensuring that all students receive the necessary support and challenge to succeed in mathematics.

Mathematical Resources for Teaching and Learning

At St. Fergus' NS, a broad range of high-quality mathematical resources is used to support effective teaching and learning, ensuring alignment with the Primary Mathematics Curriculum, as well as guidance from Oide, NCSE, and the Department of Education. These resources facilitate active learning, differentiation, and inclusive practices, ensuring that all pupils, including those with special educational needs (SEN), EAL learners, and gifted students, have access to high-quality numeracy education.

In March 2024, on foot of a STEM Grant from the Department of Education, we audited school maths equipment and restocked each classroom with maths resources requested by the teachers for their rooms.

Concrete and Digital Resources

- ✧ Manipulatives and Hands-On Tools: Numicon, Cuisenaire rods, base-ten blocks, tangrams, counters, and fraction walls support conceptual understanding and early numeracy development.
- ✧ Mathematical Technology: Interactive whiteboards, maths-based educational apps, and online platforms such as IXL, Khan Academy, and Mangahigh enhance engagement and facilitate self-paced learning.
- ✧ STEM and Real-World Application Resources: Measuring tools (scales, timers, rulers), financial literacy resources, and probability experiments encourage real-world problem-solving.

Inclusive and Differentiated Learning Materials

- ✧ Visual Supports and Structured Learning Aids: Visual schedules, step-by-step worked examples, and anchor charts align with and support students with additional learning needs.
- ✧ Assistive Technology: Speech-to-text software, C Pen and accessibility tools support students with dyscalculia and processing difficulties.
- ✧ Multisensory Learning Resources: Tactile number tracing, interactive storytelling, and kinesthetic games cater to diverse learning styles.

Mathematical Literacy and Problem-Solving Resources

- ✧ Rich Mathematical Tasks: Open-ended investigations, reasoning challenges, and maths trails ensure engagement in all learning stages.
- ✧ Mathematical Literature and Cross-Curricular Links: Storybooks, puzzles, and coding activities integrate literacy and STEM within numeracy education.
- ✧ Collaborative Learning Materials: Pair and group activities such as peer tutoring, discussion-based problem-solving, and structured debates support mathematical dialogue.

Assessment and Progress Monitoring Tools

- ✧ Diagnostic and Formative Assessment Resources: Tools such as BIAP, Drumcondra Early Numeracy, and Sigma-T support ongoing progress monitoring.
- ✧ Digital Portfolios and Self-Assessment Platforms: Google Classroom enable student reflection, teacher feedback, and continuous progress tracking.
- ✧ Structured Teacher Assessment Resources: Checklists, rubrics, and targeted feedback tools.

By embedding these high-quality resources in numeracy instruction, St. Fergus' NS ensures that all students receive a rich, engaging, and accessible mathematics education, fostering deep understanding, problem-solving skills, and confidence in their mathematical abilities.

Whole-School Planning for Mathematics at St. Fergus' NS

Whole-school planning for mathematics at St. Fergus' NS is guided by national policy, curriculum frameworks, and evidence-based best practices outlined by the Department of Education, NCCA, Oide, and NCSE. Our whole-school plan ensures a cohesive, progressive, and inclusive approach to numeracy education, promoting continuity of learning, effective assessment practices, and differentiation strategies.

A collaborative approach to planning ensures that all teachers are supported in their delivery of high-quality mathematics instruction. The Primary Mathematics Curriculum emphasises integration, problem-solving, and active learning, all of which are reflected in our planning and teaching methodologies.

Key Elements of Whole-School Planning in Mathematics in our School

1. **Curriculum Implementation:** The school's numeracy plan aligns with the Primary Mathematics Curriculum, incorporating learning outcomes, and mathematical processes to ensure consistency across all class levels.
2. **Collaborative Planning Structures:** Regular staff meetings, as well as Oide led and in-school/individual CPD sessions provide opportunities for shared planning, reflection, and professional development.
3. **Assessment and Data-Driven Decision Making:** Standardised tests (Sigma-T) and formative assessments inform whole-school strategies for numeracy development, ensuring early identification of learning needs and targeted interventions.
4. **Inclusion and Differentiation:** Following the NCSE Relate Framework and Inclusion Policy (2023), we ensure that mathematics instruction is accessible for all learners, including SEN students, EAL learners, and high-achieving pupils.
5. **Cross-Curricular Integration and Real-World Application:** Mathematics is integrated across the curriculum, connecting with STEM, literacy, geography etc, fostering real-world problem-solving and interdisciplinary learning.

Teacher Planning, Reporting, and Timetabling in Mathematics

At St. Fergus' NS, teacher planning, reporting, and timetabling align with Department of Education guidelines, the Primary Mathematics Curriculum, and key principles from Oide, NCCA, and NCSE. Teachers engage in visible, invisible, and recorded preparation, as outlined in Preparation for Teaching and Learning (2021), ensuring a dynamic and responsive approach to numeracy instruction.

◆ Individual Planning

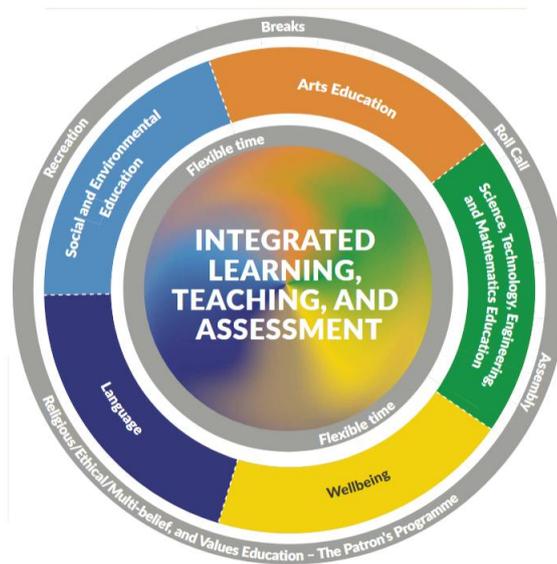
Teachers prepare long-term and short-term plans based on learning outcomes, progression continua, and assessment data, ensuring coverage of all strands and strand units. Planning is flexible and evolving, allowing for emerging learning opportunities while maintaining alignment with the curriculum framework. Differentiation strategies, as outlined in Inclusion Policy (2023) and NCSE Relate Framework, are incorporated into planning to support diverse learning needs.

◆ Reporting and Reflection

Teachers complete Cuntas Míosúil, reflecting on student progress, learning experiences, and necessary adjustments. Student assessment records are based on formative and summative assessments, ensuring a comprehensive understanding of individual learning journeys. Parent communication is maintained through written reports, digital platforms (Aladdin), and parent-teacher meetings to ensure transparency and collaboration.

- ◆ Timetabling for Mathematics
- ◆ In line with Primary Framework (2023) and Circular 0056/2011, adequate instructional time is allocated for mathematics, ensuring structured yet flexible learning periods. Integrated cross-curricular approaches, such as linking mathematics with STEM, literacy, and problem-solving contexts, provide meaningful learning opportunities. In-class support models, including team teaching, small-group interventions, and targeted SEN support, ensure inclusive mathematics instruction.

| Stage | Weekly Allocations | Monthly Allocations (4 Weeks) |
|--|--------------------|-------------------------------|
| Stage 1 - Junior and Senior Infants | 3 hours | 12 hours |
| Stage 2 - 1 st & 2 nd | 4 hours | 16 hours |
| Stage 3 - 3 rd to 6 th | 4 hours | 16 hours |



Teacher Professional Learning

At St. Fergus' NS, teacher professional learning in mathematics is central to maintaining high-quality numeracy instruction, fostering a culture of collaboration, and ensuring alignment with national best practices. Professional learning is structured around Oide professional development framework Cosán.

Key Elements of Teacher Professional Learning in Mathematics

- **Continuous Professional Development (CPD)/Teacher Professional Learning:** Teachers are encouraged to engage in ongoing CPD through Oide, focusing on play-based learning, mathematical reasoning, assessment strategies, and digital integration.
- **Collaborative Professional Learning Communities (PLCs):** Staff meetings and peer mentoring facilitate shared learning and innovation in mathematical pedagogy.
- **Use of Research-Based Strategies:** Teachers incorporate evidence-based methodologies such as cognitively challenging tasks, problem-solving approaches, and exploratory learning, in line with the Primary Mathematics Curriculum.

- **Engagement with National Initiatives:** Participation in STEM education programs, Maths Week activities, and numeracy-focused research initiatives supports broader professional learning goals.
- **Reflective Practice and Self-Evaluation:** Teachers use tools such as Cuntas Míósúil, peer observations, SSE and feedback mechanisms to reflect on their instructional strategies and refine teaching approaches.

By prioritising teacher professional learning, St. Fergus' NS ensures that educators remain skilled, adaptive, and informed, ultimately enhancing mathematical learning outcomes for all students.

Parental Involvement in Mathematics at St. Fergus' NS

At St. Fergus' NS, we recognise the vital role that parents play in supporting their child's mathematical development. Parental engagement enhances student confidence, reinforces learning, and fosters a positive attitude towards numeracy.

Our school promotes a strong home-school partnership through structured engagement initiatives.

Some Ways We Engage Parents in Mathematics;

- ✓ Home-School Numeracy Initiatives: Activity packs, online resources, and guided home-based numeracy games ensure reinforcement of mathematical concepts outside the classroom.
- ✓ Digital Communication and Resources: Platforms such as Google Classroom, SIP, Aladdin, and school newsletters provide parents with regular updates on mathematical topics and learning strategies.
- ✓ Numeracy-Themed Events: Activities like Maths Week and real-life numeracy challenges encourage active participation and engagement in numeracy learning.
- ✓ Individualised Parent-Teacher Support: Parent-teacher meetings and ongoing communication ensure tailored guidance for each child's numeracy development, particularly for students requiring additional support or extension activities.

Through this collaborative approach, St. Fergus' NS ensures that parents are equipped with the tools and knowledge to actively support their child's mathematical growth, reinforcing a positive, inclusive, and engaging numeracy culture both at school and at home.

Success Criteria for Mathematics Plan

The success of this Mathematics Plan at St. Fergus' NS will be measured through a combination of student engagement, achievement, teacher effectiveness, and whole-school impact. The following criteria will be used to evaluate its effectiveness:

- a) **Improved Student Outcomes:** Evidence of enhanced mathematical understanding, problem-solving skills, and fluency across all class levels, as reflected in formative and summative assessments.
- b) **Effective Implementation of the Primary Mathematics Curriculum:** Teachers demonstrating the use of learning outcomes, progression continua, structured differentiation, and inquiry-based learning in their practice.

- c) **Engagement and Playful Learning:** Increased use of hands-on manipulatives, digital tools, real-world problem-solving, and exploratory learning in daily instruction.
- d) **Inclusion and Accessibility:** All students, including those with SEN, EAL, and high-achieving pupils, have equitable access to learning through differentiated instruction and Universal Design for Learning (UDL) principles.
- e) **Effective Assessment Practices:** The use of Assessment for Learning (AfL), Assessment of Learning (AoL), and Continuous Progress Monitoring, ensuring that formative and standardised data inform teaching and learning.
- f) **Collaboration and Professional Development:** Evidence of staff engagement in CPD, collaborative planning, and peer observations to enhance teaching methodologies.
- g) **Parental Involvement and Home-School Links:** Increased participation in maths home numeracy initiatives, and family engagement activities.
- h) **Whole-School Review and Reflection:** The plan will be reviewed annually as part of the School Self-Evaluation (SSE) cycle, ensuring that it remains responsive to emerging curriculum updates, assessment data, and best practices.

By continuously evaluating and adapting this plan, St. Fergus' NS ensures that mathematics teaching remains inclusive, engaging, and effective, fostering a lifelong love of numeracy and problem-solving among all students.

Implementation and Review

The implementation of this Mathematics Plan at St. Fergus' NS is guided by collaborative planning, professional development, continuous assessment, and reflective practice, ensuring alignment with national policies, curriculum frameworks, and best practices.

Implementation Strategy

- ✓ **Whole-School Engagement:** Teachers will integrate the Primary Mathematics Curriculum, ensuring a consistent and structured approach to numeracy teaching and learning.
- ✓ **Professional Development:** Ongoing CPD, including Oide workshops, peer learning, and in-house training, will support teachers in delivering high-quality numeracy instruction.
- ✓ **Assessment and Monitoring:** The school will track progress through formative, summative, and continuous progress monitoring, using tools such as Cuntas Míósúil, standardised tests, and digital assessments.
- ✓ **Parental and Community Involvement:** Parents will be actively engaged through home/school communication.
- ✓ **Inclusive Practices:** The implementation strategy will adhere to the NCSE Relate Framework and Our Inclusion Policy, ensuring that all students, including SEN and EAL learners, have equitable access to learning.

Review Process

- **Annual Review Cycle:** The Mathematics Plan will be reviewed annually as part of the School Self-Evaluation (SSE) process, incorporating feedback from staff, parents, and students.

- **Assessment-Driven Adjustments:** Data from standardised tests (Sigma-T), classroom assessments, and student progress reports will inform plan modifications.
- **Collaborative Reflection:** Staff meetings, PLCs, and feedback from external advisory bodies (NCSE, Oide, NEPS) will guide ongoing improvements in numeracy instruction.

By embedding a structured yet flexible approach to implementation and review, St. Fergus' NS ensures that mathematics teaching remains inclusive, engaging, and responsive to student needs, fostering a culture of continuous improvement and excellence in numeracy education.

This revised Mathematics Plan ensures a progressive, inclusive, and engaging approach to numeracy, aligning with national curriculum updates and best practices for the pupils in St. Fergus' NS.

Ratification of the Mathematics Plan

This Mathematics Plan for St. Fergus' NS was formally ratified by the Board of Management at a meeting held in December 2025. The plan aligns with national educational policies, curriculum guidelines, and best practices to ensure high-quality mathematics teaching and learning for all students. It will be subject to ongoing review and evaluation as part of the School Self-Evaluation (SSE) process, ensuring it remains responsive to emerging educational research, assessment data, and school-wide developments.

This policy will be implemented from January 2026, and all stakeholders, including teachers, parents, and students, will be actively engaged in its continuous development.

It will be reviewed in 2029 or sooner if deemed necessary.

Signed: _____

Chairperson, Board of Management

Date: _____