**Long-Term Recorded Preparation for Maths**

**Note:** This long-term plan is a sample plan only. It has been provided to support the planning needs of teachers using *Maths and Me*. Developed in line with [*Preparation for Teaching and Learning – Guidance For All Primary and Special Schools*](https://ncca.ie/media/5016/preparation-for-teaching-and-learning.pdf) (Government of Ireland, 2021), it contains pre-populated programme information including termly breakdowns. The plan is fully editable, allowing teachers to adjust the content to suit the needs of their own setting and class.

# Long-Term Recorded Preparation for Maths

|  |  |  |
| --- | --- | --- |
| Class: | Year: | Teacher: |
| Senior Infants |  |  |

**Please note:**

**This long-term preparation is a flexible and evolving document. It will likely be amended and adjusted as the year progresses, as I learn more about the children in my class or as unexpected learning opportunities arise.**

**This long-term preparation document does not include overly detailed plans, as they may limit my flexibility to respond to the children's needs, interests and abilities.**

## Aims

The overarching aim of the Primary Mathematics Curriculum (2023) is the development of mathematical proficiency. Mathematical proficiency encompasses adaptive reasoning, strategic competence, conceptual understanding, procedural fluency and productive disposition.

* **Conceptual Understanding** – Understanding concepts such as counting, place value, properties and characteristics of operations is also central to developing and devising flexible strategies, which will aid conceptual understanding.
* **Procedural Fluency** – Recognising that calculations can be performed in a variety of ways and that some strategies can be more effective and efficient than others depending on the numbers will develop procedural fluency.
* **Adaptive Reasoning** – By being able to devise, describe, discuss, critique and justify their own strategies, children will develop adaptive reasoning.
* **Strategic Competence** – By developing, explaining, evaluating, and defending their own strategies, children will build strategic competence.
* **Productive Disposition** – Recognising and acknowledging strategies emphasises the importance and value being assigned to each child’s contribution and encourages them to engage and persevere. This helps to promote productive disposition

*This information is taken from the Primary Mathematics Curriculum, stated on page 12.*

## Strands and Strand Units

For Senior Infants, the following Strands and Strand Units will be developed:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Strand** | **Algebra** | **Data and Chance** | **Measures** | **Number** | **Shape and Space** |
| Strand Unit(s) | Patterns, Rules and Relationships | Data | Measuring  Time  Money | Uses of Number  Numeration and Counting  Place Value and Base Ten  Sets and Operations  Fractions | Spatial Awareness and Location  Shape  Transformation |

## Elements

Children develop their maths skills through processes such as connecting, communicating, reasoning, argumentation, justifying, representing, problem-solving and generalising. The PMC (2023) uses four elements to define these processes and to categorise the suggested learning experiences given in the progression continua.

|  |  |
| --- | --- |
| Elements | Abbreviations |
| Understanding and Connecting | (U&C) |
| Communicating | (C) |
| Reasoning | (R) |
| Applying and Problem-Solving | (A&PS) |

## Learning Outcomes

The below overview ensures that students will have the opportunity to engage with all the Learning Outcomes outlined in the curriculum throughout the school year.

While the overview suggests specific months and weeks for each unit, ***this pacing serves as a guideline only. It will be informed by continuous assessment and adapted as necessary.***

As a teacher, I have planned for Progression Milestones c and d, using the progression continua as a reference, but will apply assessment data and my professional judgement to make necessary adjustments.

**Term One**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Week | Unit No. | Unit Title | Strand(s) > Strand Unit(s) | Learning Outcome(s) |
| September | 1 | 1 | Numbers to 10 | **Number > Numeration and Counting**  **Number > Uses of Number**  Number > Sets and Operations  Algebra > Patterns, Rules and Relationships | Through appropriately playful and engaging learning experiences children should be able to   * develop an awareness that numbers have a variety of uses * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * recognise and understand what happens when quantities (sets) are partitioned and combined * explore, extend and create patterns and sequences. |
| 2 |
| 3 | 2 | Measuring 1 | **Measures > Measuring** | Through appropriately playful and engaging learning experiences children should be able to   * demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared. |
| 4 |
| October | 5 | 3 | Operations within 10 | **Number > Sets and Operations**  Number > Place Value and Base Ten  Number > Numeration and Counting  Number > Uses of Number  Algebra > Patterns, Rules and Relationships | Through appropriately playful and engaging learning experiences children should be able to   * recognise and understand what happens when quantities (sets) are partitioned and combined * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * develop an awareness that numbers have a variety of uses * explore, extend and create patterns and sequences. |
| 6 |
| 7 | 4 | Time 1 | **Measures > Time** | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of time and its uses. |
| 8 | Review | | |  |
| November | 9 | 5 | Numbers to 15 | **Number > Place Value and Base Ten**  Number > Uses of Number  Number > Numeration and Counting  Algebra > Patterns, Rules and Relationships | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of ten as the foundation for place value and counting * develop an awareness that numbers have a variety of uses * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * explore, recognise and create patterns and sequences. |
| 10 |
| 11 | 6 | Shape | **Shape and Space > Shape** | Through appropriately playful and engaging learning experiences children should be able to   * explore and recognise properties of 3-D and 2-D shapes. |
| 12 |
| December | 13 | 7 | Operations within 15 | **Number > Place Value and Base Ten**  Number > Sets and Operations  Number > Numeration and Counting  Algebra > Patterns, Rules and Relationships | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of ten as the foundation for place value and counting * recognise and understand what happens when quantities (sets) are partitioned and combined * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * explore, recognise and create patterns and sequences. |
| 14 |
| 15 | Review | | |  |

**Term Two**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Week | Unit No. | Unit Title | Strand(s) > Strand Unit(s) | Learning Outcome(s) |
| January | 16 | 8 | Numbers to 20 | **Number > Place Value and Base Ten**  Number > Numeration and Counting  Number > Uses of Number  Algebra > Patterns, Rules and Relationships | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of ten as the foundation for place value and counting * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * develop an awareness that numbers have a variety of uses * explore, recognise and create patterns and sequences. |
| 17 |
| 18 | 9 | Location and Transformation | **Shape and Space > Spatial Awareness and Location**  **Shape and Space > Transformation** | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of spatial awareness in relation to their bodies and the immediate environment * describe the spatial features of objects and their relative position in space * explore the effects of shape movements. |
| 19 |
| February | 20 | 10 | Addition | **Number > Sets and Operations**  **Number > Numeration and Counting**  Algebra > Patterns, Rules and Relationships  Data and Chance > Data | Through appropriately playful and engaging learning experiences children should be able to   * recognise and understand what happens when quantities (sets) are partitioned and combined * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes * explore, extend and create patterns and sequences * explore, interpret and explain data in a variety of ways for a range of purposes. |
| 21 |
| 22 | Review | | |  |
| March | 23 | 11 | Measuring 2 | **Measures > Measuring** | Through appropriately playful and engaging learning experiences children should be able to   * demonstrate an awareness that attributes such as length, weight, capacity and area can be measured and compared. |
| 24 |
| 25 | 12 | Subtraction | **Number > Sets and Operations**  Number > Numeration and Counting  Algebra > Patterns, Rules and Relationships  Data and Chance > Data | Through appropriately playful and engaging learning experiences children should be able to   * recognise and understand what happens when quantities (sets) are partitioned and combined * develop an awareness that the purpose of counting is to quantify. * use a range of counting strategies for a range of purposes * explore, extend and create patterns and sequences * explore, interpret and explain data in a variety of ways for a range of purposes. |
| 26 |
| April\* | 27 | 13 | Patterns | **Algebra > Patterns, Rules and Relationships** | Through appropriately playful and engaging learning experiences children should be able to   * explore, extend and create patterns and sequences. |
| 28 | Review | | |  |

\* Depending on when Easter falls, April may be wholly or partly in Term Three.

**Term Three**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Month | Week | Unit No. | Unit Title | Strand(s) > Strand Unit(s) | Learning Outcome(s) |
| May | 29 | 14 | Money | **Measures > Money**  Number > Sets and Operations  Number > Numeration and Counting | Through appropriately playful and engaging learning experiences children should be able to   * develop an awareness of money and its uses * recognise and understand what happens when quantities (sets) are partitioned and combined * develop an awareness that the purpose of counting is to quantify * use a range of counting strategies for a range of purposes. |
| 30 |
| 31 | 15 | Fractions | **Number > Fractions**  Number > Sets and Operations | Through appropriately playful and engaging learning experiences children should be able to   * develop an awareness of part-whole relationships using a variety of models (area, length and set) * recognise and understand what happens when quantities (sets) are partitioned and combined. |
| 32 |
| June | 33 | 16 | Time 2 | **Measures > Time** | Through appropriately playful and engaging learning experiences children should be able to   * develop a sense of time and its uses. |
| 34 |
| 35 | 17 | Data | **Data and Chance > Data** | Through appropriately playful and engaging learning experiences children should be able to   * explore, interpret and explain data in a variety of ways for a range of purposes. |
| 36 | Review | | |  |

## Learning Experiences

A range of playful, engaging and inclusive routines that promote mathematical talk, thinking and modelling among children are used. These repeatable routines have been chosen because they are proven to activate prior knowledge, foster productive disposition and provide valuable formative assessment opportunities for teachers.

In addition to supporting the five key pedagogical practices, the routines also support formative assessment and inclusive practices.

These routines are as follows:

* Think-Pair-Share (T-P-S)
* Notice & Wonder
* Reason & Respond
* Write-Hide-Show (W-H-S)
* Quick Images
* Build it; Sketch it; Write it
* Concept Cartoon
* Choral Counting
* Three-Act-Task
* Would This Work?

Other learning experiences include 'Let's Play', which fosters playfulness around maths through engaging games and interactive activities, making maths fun and enjoyable for children. 'Maths Eyes' encourages children to observe their surroundings and recognise maths in the real world. 'Let's Investigate' promotes the development of creative strategies through active participation and exploration. Additionally, picture books and concrete materials support learning through hands-on activities and exploratory play.

## Assessment Practices

Assessment will be an integral part of learning and teaching in my class. The learning experiences will be specifically chosen to activate prior knowledge and to provide me with valuable formative assessment information. The learning experiences are structured in such a way that they simultaneously promote the development of maths skills and fluency and enable me as the teacher to gather, record, interpret, use and report information about a child’s progress and achievements. I can then respond to the insights gathered from the assessments and adjust my teaching accordingly.

I will use the three types of assessment advocated in the Primary Curriculum Framework (2023) and the Primary Mathematics Curriculum (2023)**:**

**Intuitive Assessment**: For example, posing appropriate questions to scaffold learning; being flexible and responsive to indications of children’s misconceptions.

**Assessment Interactions**: For example, presenting the children with specific tasks that enable them to communicate their current understanding of a topic (including, but not limited to Learning Experiences/routines such as Notice & Wonder, Think-Pair-Share, Reason & Respond, Concept Cartoon, etc., as well as the children’s responses to other tasks, including written tasks; conferencing with a child about a piece of work, representation created, etc.

**Assessment Events**: For example, teacher-designed tests/quizzes; information gathered from the progress assessment booklet; externally constructed standardised assessments.

## Cross-Curricular Learning

The integration of maths learning with other curricular areas and whole-school events allows children to see the relevance of mathematical concepts in various contexts. As class teacher, I will, where appropriate, design units of work that integrate mathematical concepts with other curriculum areas, such as science and technology, in alignment with the Primary Curriculum Framework.

Additional examples include:

**Maths Week**: This annual event can incorporate cross-curricular activities such as designing posters in Art, calculating distances in PE and solving real-world problems in Geography, reinforcing key mathematical skills.

**Science Week**: Maths and Science naturally complement each other. During Science Week, children can collect data from experiments, calculate averages or measure ingredients for science investigations, thereby integrating numeracy into scientific inquiry.

**Week of Code**: Coding involves logical thinking and problem-solving, which directly tie into mathematical reasoning. Through activities such as programming robots (beebots) or creating algorithms, children can apply concepts of sequencing, patterns and spatial awareness.

**Engineering Week**: Integrating maths with engineering encourages children to apply measurement, geometry and problem-solving skills as they design and build structures, connecting maths to real-world applications.

**Sports Day**: Maths can be integrated into Sports Day by having students calculate their times, distances and averages, helping children apply mathematical operations in a practical, fun setting.

These examples show how maths learning can be made more meaningful by integrating it with other curricular areas and engaging in whole-school practices that highlight the practical applications of maths in everyday life.

Other opportunities to integrate maths will arise throughout the year and will be outlined in the Short-Term Plan.

## Classroom routines, culture and practices

Classroom routines, culture and long-term practices are key to supporting maths learning.

Regular use of routines such as Write-Hide-Show, Notice & Wonder and Reason & Respond promotes self-assessment, while Universal Design for Learning (UDL) ensures diverse needs are met through multiple representations like visuals and manipulatives.

A growth mindset is encouraged by celebrating mistakes, fostering resilience. Inclusive practices such as maths talk and language development engage all students, while playful interactions and student choice—like picking materials or using maths boxes—promote exploration and ownership.

Together, these elements create a dynamic, supportive environment that nurtures confidence and curiosity in maths.