



*Here at Llanedeyrn Primary School, we are committed to providing exceptional teaching and learning experiences in Mathematics and Numeracy, guided by the Curriculum for Wales. We recognise the importance of developing mathematical proficiency among our pupils, enabling them to connect their learning and confidently solve problems in both familiar and unfamiliar contexts.*

### **The Essence of High-Quality Mathematics and Numeracy Teaching**

High-quality teaching in Mathematics and Numeracy is pivotal for improving pupil progress and attainment. At Llanedeyrn Primary School, we focus on ensuring that every teacher is equipped to deliver outstanding Mathematics and Numeracy education. This is fundamental for enabling our pupils to progress academically and succeed in a mathematical context.

### **Ethos and Expectations in Mathematics and Numeracy Classrooms:**

- Classrooms that foster a deep understanding of mathematical concepts;
- Safe and supportive environments rooted in our School's core values;
- Positive teacher-pupil relationships to enhance learning;
- High expectations for all pupils, regardless of their starting points; ■ Inclusive teaching, addressing the diverse needs of our pupils.

### **Pedagogical Principles in Mathematics and Numeracy:**

In line with the Curriculum for Wales, our approach to teaching Mathematics and Numeracy is not confined to any single method. Our classroom strategies are dynamic and adapted to both the context and needs of our pupils. These include:

- Creating authentic mathematical contexts for learning;
- Encouraging learner autonomy in their mathematical journey;
- Supporting the development of mathematical thinking and relationships;
- Fostering problem-solving, creative, and critical thinking in Mathematics;
- Building previous knowledge to engage and interest pupils;
- Integrating cross-curricular responsibilities like Literacy and Digital Competence.

### **Big Maths and CLIC in Our Mathematics Curriculum**

At Llanedeyrn Primary School, we incorporate Big Maths, an innovative and highly effective approach to teaching Mathematics, into our curriculum. Big Maths ensures a systematic and structured progression in mathematical understanding, bolstering our commitment to delivering exceptional Mathematics and Numeracy education.

## Big Maths: A Brief Overview

- **Structured Approach:** Big Maths organises mathematical learning into manageable chunks, ensuring that every child progresses step-by-step;
- **Engaging Methodology:** Utilises engaging and interactive teaching methods to make mathematics accessible and enjoyable for all pupils;
- **Assessment for Learning:** Regular assessments help track pupils' progress, identify areas for development, and tailor teaching accordingly.

## CLIC Sessions: The Foundation of Our Mathematics Lessons

- **Counting:** Pupils develop a robust understanding of numbers and counting, forming the basis for more complex mathematical concepts;
- **Learn Its:** Focusing on essential arithmetic facts, enabling pupils to recall these quickly and accurately;
- **It's Nothing New:** This principle helps pupils apply their existing knowledge to new mathematical concepts;
- **Calculation:** Pupils learn various strategies for addition, subtraction, multiplication, and division, enhancing their calculation skills.

## Utilising CLIC Assessment Data for Monitoring Pupil Progress

In our Mathematics and Numeracy Curriculum at Llanedeyrn Primary School, we place a strong emphasis on the use of CLIC (Counting, Learn Its, It's Nothing New, Calculation) assessment data to meticulously monitor and support each pupil's mathematical progress. This systematic approach allows us to tailor our teaching strategies to meet the unique needs of every learner.

## Key Aspects of CLIC Assessment Data Utilisation:

### 1. Regular Assessment:

- CLIC assessments are conducted regularly to track pupils' progress in key mathematical areas. This regularity ensures that we have up-to-date information on each pupil's understanding and skills;

### 2. Identifying Strengths and Areas for Improvement:

- The data from these assessments helps us identify each pupil's strengths and areas where they need more support. It allows us to celebrate successes and pinpoint specific topics or concepts that require additional focus;

### 3. Informing Teaching Strategies:

- The insights gained from CLIC assessments guide our teaching strategies. If a trend in learning challenges is identified within a class or group, it informs our lesson planning and instructional methods, ensuring that we address these challenges effectively;

### 4. Engaging with Parents and Carers:

- CLIC assessment data also plays a crucial role in our communication with parents and carers. By sharing this data, we can provide a clear picture of each pupil's progress and involve parents and carers in supporting their child's learning journey.

## Impact on Pupil Progress:

The use of CLIC assessment data at Llanedeyrn Primary School has a profound impact on our pupils' mathematical development. It ensures that our teaching is always responsive to their needs, leading to improved outcomes and a deeper understanding of mathematics. The data-driven approach fosters an environment where every pupil can thrive in their mathematical journey, aligned with the principles of the Curriculum for Wales

## Five Interdependent Proficiencies in Mathematics and Numeracy:

### 1. **Conceptual Understanding:**

- Developing and deepening pupils' understanding of mathematical concepts through varied representations and applications;
- Encouraging pupils to connect different mathematical ideas and apply them in diverse contexts.

### 2. **Communication using Symbols:**

- Guiding pupils to understand and manipulate a range of mathematical symbols;
- Teaching the application of symbols to represent mathematical concepts succinctly.

### 3. **Fluency:**

- Enhancing pupils' ability to recall facts, relationships, and techniques in Mathematics;
- Fostering accuracy and proficiency in mathematical skills and applications.

### 4. **Logical Reasoning:**

- Developing pupils' ability to understand and reason about mathematical relationships;
- Encouraging justification and proof using abstract representations

### 5. **Strategic Competence:**

- Empowering pupils to recognise and apply mathematical structures in problem-solving;
- Encouraging the formulation of mathematical problems and strategies for their resolution.

## Incorporating Real-Life and Authentic Maths in Our Lessons

At Llanedeyrn Primary School, we place significant emphasis on embedding real-life and authentic Maths experiences within our curriculum. This approach not only enriches the learning experience but also helps pupils see the relevance and application of mathematics in their everyday lives.

### Key Strategies for Integrating Real-Life Maths:

- **Contextual Learning:**  
We design lessons that incorporate mathematical concepts within real-world contexts. This could involve solving problems related to shopping, budgeting, cooking, or time management, helping pupils understand how Maths is used in everyday situations;
- **Project-Based Learning:**  
Implementing project-based learning that involves real-life mathematical applications. Projects may include planning a school event with a budget, designing a garden with specific area measurements, or conducting surveys and analysing the data;
- **Use of Technology:**  
Integrating technology to simulate real-life scenarios where Maths is applied. This includes using educational software that models real-world situations, online resources, and interactive tools that provide practical mathematical experiences;
- **Problem Solving and Critical Thinking:**

Encouraging problem-solving and critical thinking through real-life mathematical challenges. This approach helps pupils develop the ability to think logically, reason, and make informed decisions based on mathematical understanding.

### **Impact on Learning:**

By incorporating real-life and authentic Maths into our lessons, we achieve several key outcomes:

- **Enhanced Engagement:** Pupils are more engaged and motivated when they see the relevance of Maths in their daily lives;
- **Deeper Understanding:** Applying Maths to real-world problems helps deepen understanding and retention of mathematical concepts;
- **Practical Skills Development:** Pupils develop practical skills that are essential for their future academic and life pursuits;
- **Confidence in Maths:** Seeing the practical applications of Maths builds confidence in pupils, reducing Maths anxiety and promoting a positive attitude towards the subject.

### **Integrating Numeracy Across the Curriculum at Llanedeyrn Primary School**

At Llanedeyrn Primary School, we recognise the importance of numeracy as a key skill that transcends beyond the mathematics classroom. Our approach is to embed numeracy skills across all areas of the curriculum, ensuring that our pupils develop a versatile and practical understanding of numeracy that is applicable in various contexts.

### **Strategies for Embedding Numeracy Across the Curriculum:**

1. **Cross-Curricular Projects:**
  - Implementing projects that require numeracy skills in subjects such as Science, Geography, and Design & Technology. For instance, in Science, pupils might use measurements and data analysis, while in Geography, they might engage in map reading and calculating distances;
2. **Literacy and Numeracy Integration:**
  - In Literacy lessons, incorporating activities that involve understanding numerical information in texts, creating graphs from story data, or solving mathematical problems embedded in narratives;
3. **Use of Real-World Examples:**
  - Applying numeracy in real-world contexts across subjects. In History, this might involve analysing timelines or in Physical Education, tracking and evaluating performance statistics;
4. **Digital Competence:**
  - Leveraging digital tools and resources across subjects to enhance numeracy skills. This includes using educational software for data handling and analysis, and integrating numeracy into digital creation projects;
5. **Problem Solving in Varied Contexts:**
  - Encouraging problem-solving involving numeracy in different subjects, fostering the ability to apply mathematical thinking in diverse scenarios;
6. **Collaborative Learning:**
  - Facilitating group activities where pupils apply numeracy skills in collaborative projects, enhancing their ability to work with others and apply numeracy in team settings.

### **Impact of Cross-Curricular Numeracy:**

- **Enhanced Application Skills:** Pupils develop the ability to apply numeracy in a variety of contexts, enhancing their understanding and skillset;

- **Broader Understanding:** This approach helps pupils see the relevance of numeracy in different areas, fostering a more comprehensive understanding of the subject;
- **Preparation for Real Life:** By applying numeracy across the curriculum, we prepare our pupils for real-life situations where numeracy is essential;
- **Encouragement of Lifelong Learning:** Embedding numeracy across the curriculum encourages a culture of lifelong learning and curiosity, essential for personal and academic growth.

**Evaluation and Impact:**

We constantly reflect and evaluate our teaching methods in Mathematics and Numeracy to ensure the highest quality of education. Our aim is to significantly impact our pupils' mathematical understanding, equipping them with skills that will benefit them throughout their lives.