

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

(NC:2014)

Intent

At Longford, children are encouraged to enjoy mathematics and become enthusiastic mathematicians by developing their skills, knowledge and understanding through practical experiences which have relevance and purpose in everyday situations. It is important that children develop the skills of numeracy to become lifelong learners. They should be able to apply these skills in different situations across the curriculum and in daily living outside school.

Aims:

- To become fluent in the fundamentals of Mathematics through varied and frequent practice of increasingly complex problems over time.
- To develop the ability to recall and apply knowledge rapidly and accurately.
- To develop the ability to solve problems through decision making and reasoning in a range of contexts.
- To develop mathematical language through speaking and listening, practical activities and recording work

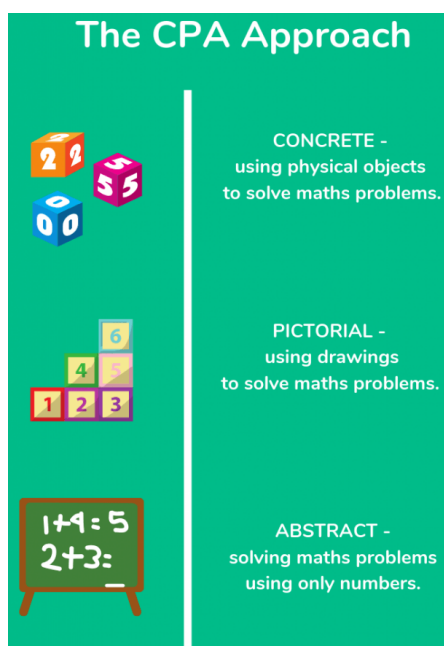


Implementation

We want pupils to acquire a deep, long-term, secure and adaptable understanding of the subject. We allow a majority of pupils to access the curriculum at the same pace. Differentiation is through scaffolding to allow children to access the work. Lessons and resources are shaped to allow children to get deep conceptual and procedural knowledge. All children will access fluency, problem solving and reasoning activities (for some this may be oral and become written when they are ready to do so). In mixed age year groups all children will be exposed to their year group expectations. The use of open-ended investigations provides excellent opportunities for differentiated outcomes. We use teaching assistants to support and extend children's learning.

Nursery & Reception:

Maths is taught as a whole class daily lesson and guided maths sessions take place each day. Maths games are played weekly across the phase and there are mathematical opportunities offered daily throughout the learning environment, both inside and outdoor.



Year 1-6:

There is an hourly maths lesson, which includes basic skills revision.

Morning skills sessions may also be used to practise mental arithmetic and consolidate learning.

When planning for objective coverage, teachers are expected to take the following mastery strategies into account:

- Implementing the concrete, pictorial and abstract (CPA) approach to introducing, exploring and applying mathematical concepts
- Considering key questions and mathematical vocabulary at the point of unit planning
- Multiple opportunities for verbal and written/drawn reasoning (explaining and using mathematical vocabulary to explain methods or reasoning) within unit.
- Inclusion of relevant problem-solving opportunities, where children are expected to draw on and apply multiple concepts to address or approach a challenge
- Modelling and sharing of efficient and accurate application of methods
- Opportunities to explore maths concepts/objectives at 'greater depth'
- Applying/using the Bar Model approach as a strategy to approach calculation/problems
- Include all learners, providing relevant support for those with additional needs

Staff will use marking and feedback to ensure children to “keep up” and not need to “catch up”. Post teach and intervention should be prompt, relevant and show immediate impact.

Impact

Mathematics teaching be will interactive and engaging and content is made relevant to children’s real-world experiences. This will support consolidation and retention of knowledge and skill.

Children should approach mathematics with confidence and enthusiasm. They will tackle challenges with self-belief and be secure in year group expectations.

Approach and response to reasoning activities should improve term on term.

By the end of the year, children are happy to define and use mathematical vocabulary introduced by their teacher and use in reasoning activities.



Reception Overview

Autumn	Place Value - numbers to 5 Addition and Subtraction - Sorting Place value - Comparing groups Addition and Subtraction - Change within 5 Measurement - Time
Spring	Addition and Subtraction - Numbers to 5 Place Value - numbers to 10 Addition and Subtraction - Addition to 10 Geometry - Shape and space
Summer	Geometry - Exploring patterns Addition and Subtraction - Count on and back Place value - Numbers to 20 Measurement - Measure

Year 1 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		Consolidation
Spring	Number: Addition and Subtractions (within 20)				Number: Place Value (within 50) (Multiples of 2, 5, 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time		Consolidation

Year 2 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number: Place Value			Number: Addition and Subtraction					Measurement: Money		Number: <u>Multiplication</u> and Division		
Spring	Number: Multiplication and <u>Division</u>		Statistics		Geometry: Properties of Shape			Number: Fractions			Measurement: Length and Height	Consolidation	
Summer	Position and Direction			Problem solving and efficient methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations			

Year 1 and 2 Mixed Age Class Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number: Place Value Y1: Numbers to 20 Y2: Numbers to 100				Number: Addition and Subtraction Y 1: numbers within 20 (including recognising money) Y2: Numbers within 100 (including money)					Number: Y1: Place Value to 50 and Multiplication Year2: Multiplication			
Spring	Number: Y1: Division & consolidation. Y2: Division		Year 1: Place value to 100		Measurement: Length and height,	Geometry- Y1: Shape and consolidation Y2: Properties of Shape			Number: Y1: Fractions and consolidation Y2: Fractions.		Consolidation		
		Year 2: statistics											
Summer	Geometry : Position and Direction	Measurement: Time		Problem solving and efficient methods		Measurement: Y1: Weight and Volume Y2: Mass, Capacity and Temperature.			Consolidation & Application				

Year 3 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Number: Multiplication and Division			Consolidation	
Spring	Number: Multiplication and Division			Measurement: Money	Statistics		Measurement: Length and Perimeter			Number: Fractions		Consolidation
Summer	Number: Fractions			Measurement: Time			Geometry: Property of Shapes	Measurement: Mass and Capacity				Consolidation

Year 4 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction				Measurement: Length and Perimeter	Number: Multiplication and Division			Consolidation
Spring	Number: Multiplication and Division			Measurement: Area	Fractions				Decimals			Consolidation
Summer	Decimals		Measurement: Money		Measurement: Time	Statistics		Geometry: Property of Shape		Geometry: Position and Direction		Consolidation

Year 3 and 4 Mixed Age Class Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value				Number: Addition and Subtraction				Number: Multiplication and Division			
Spring	Number: Multiplication and Division		Measurement: Length, Perimeter and Area		Fractions				Y3: Measurement: Mass and Capacity. Y4: Number: Decimals		Consolidation	
Summer	Number: Decimals (including money)			Measurement: Time		Statistics		Geometry: Property of Shape (including Y4: Position and Direction)			Consolidation	

Year 5 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction		Statistics		Number: Multiplication and Division		Perimeter and Area		Consolidation
Spring	Number: Multiplication and Division			Number: Fractions						Number: Decimals and Percentages		Consolidation
Summer	Number: Decimals				Geometry: Properties of Shapes			Geometry: Position and Direction	Measurements: Converting Units		Measurement: Volume	Consolidation

Year 6 Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division				Fractions				Geometry: Position and Direction	Consolidation
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Consolidation
Summer	Geometry: Properties of Shapes		Problem solving			Statistics		Investigations				Consolidation