

St Michael's Primary School



Numeracy and Mathematics Guidelines

Updated: September 2026

Aims

At St Michael's, we aim to provide high-quality learning and teaching in Mathematics and Numeracy which enables every child to develop confidence, competence and enjoyment in mathematics.

Across Early, First and Second Levels, we provide progressive, engaging and meaningful learning experiences which develop secure mathematical understanding, fluency, problem-solving and reasoning skills. We encourage children to explore mathematical ideas, explain their thinking, make connections and apply their learning confidently across the curriculum and in real-life contexts.

Through appropriate challenge, support and high expectations for all, we aim to equip our learners with the mathematical skills, knowledge and positive attitudes they need for learning, life and work.

How we teach Maths

Effective teaching of Mathematics and Numeracy should develop secure understanding, confidence, fluency and the ability to apply mathematical learning in a range of contexts. Across Early, First and Second Levels, teachers should provide carefully planned, progressive learning experiences which allow children to explore mathematical concepts, explain their thinking and make connections between different areas of mathematics.

A Concrete–Pictorial–Abstract (CPA) approach should be used to support the development of deep and secure mathematical understanding.

Concrete

Children should initially have opportunities to explore mathematical concepts using practical materials and manipulatives. Concrete resources allow learners to see, touch and manipulate mathematical ideas, helping them to understand the structure and relationships within mathematics.

Appropriate resources may include counters, cubes, Numicon, ten frames, bead strings, number lines, place-value materials, fraction resources, money and measuring equipment.

Teachers should explicitly model how resources represent mathematical ideas and encourage children to select and use appropriate manipulatives independently.

Pictorial

Children should be supported to represent their mathematical thinking visually. Pictures and diagrams help learners make connections between practical experiences and mathematical notation.

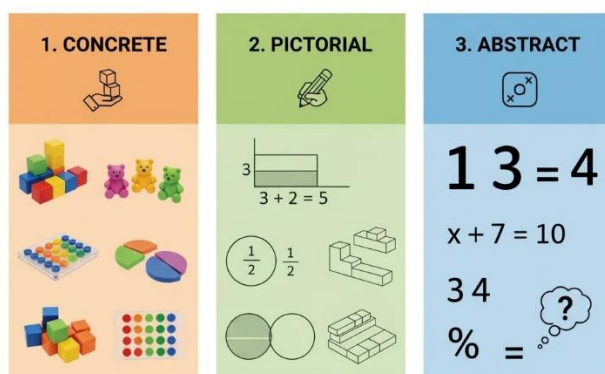
Representations may include drawings, ten frames, bar models, part-whole models, arrays, number lines, place-value charts, diagrams and other visual representations.

Children should be encouraged to create their own representations and use these to explain and justify their thinking.

Abstract

As understanding develops, children should make connections between concrete and pictorial representations and abstract mathematical symbols, notation and calculations.

Teachers should ensure that children understand the mathematics behind a procedure rather than simply memorising a method. Learners should develop increasing fluency in selecting efficient strategies and applying their knowledge independently.



Connecting the Three Stages

In St Michael's, learners move flexibly between concrete, pictorial and abstract representations according to the concept being taught and their individual learning needs.

Effective teaching should therefore:

- model mathematical concepts using carefully selected representations and resources;
- make explicit connections between concrete materials, visual representations and mathematical notation;
- use questioning to develop reasoning and mathematical language;
- encourage children to explain, demonstrate and justify their strategies;
- provide opportunities for discussion and collaborative problem-solving;
- develop fluency alongside conceptual understanding;
- provide appropriate challenge and support for all learners;
- address misconceptions through careful observation, questioning and assessment;
- give children regular opportunities to apply their learning in unfamiliar, problem-solving and real-life contexts.
- revisit key concepts and representations to build secure, progressive mathematical understanding.

Through this approach, children develop not only the ability to carry out mathematical procedures but also a deeper understanding of how and why mathematics works, enabling them to become confident and independent mathematicians.

Maths Jotter Presentation Guidelines

- **Date and title:** Write the date and a clear title at the top of each piece of work. Underline the title neatly with a ruler. The title of the work should be linked to the learning intention.
- **One digit per square:** Put each digit in its own square. This is particularly important for place value, column addition/subtraction, multiplication and division.
- **Keep numbers aligned:** Use the grid to line up units, tens, hundreds and decimal points correctly.
- **Spacing:** Leave appropriate spaces between questions so that calculations are easy to follow. Avoid squeezing work into gaps.
- **Show working:** Calculations and methods should be shown, not just the final answer. Use the squares to organise each stage.
- **Diagrams and graphs:** Use a **ruler and pencil** for straight lines, tables, axes and mathematical diagrams. Label axes and include appropriate scales.
- **Corrections:** Do not scribble over mistakes. Put one neat line through an error and write the correction clearly.
- **Answers:** Make final answers easy to identify and always include the correct **units** where required.
- **Feedback:** Corrections or improvements following teacher feedback should be completed clearly, according to the school's agreed approach.
- **Overall standard:** Work from left to right and top to bottom, keeping the page organised, legible and easy for someone else to follow.

Appendix 1: These were created with the support of the NLC Numeracy Team.

Structure of a Numeracy Lesson

Developing Number Knowledge

Approx. Time	Activity		
5 minutes	Learning Intention and Success Criteria Displayed and Discussed		
10 minutes	Mental Maths (<i>e.g. - Addition – including friendly numbers</i>)		
15 minutes	Mental Agility - Number Talks (<i>e.g. Teaching Friendly Numbers as a specific strategy for addition</i>)		
30/40 minutes	<u>Main Section of the Lesson</u>		
	<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>
	<u>Direct Teaching</u> IA6.5: Jumping Back from a Decuple with Mini Ten-Frames	<u>Activity/Game</u> IA6.3: Decuple Tag	<u>Pencil Task</u> Decuple Worksheet
	<u>Pencil Task</u> TJ Page 25	<u>Direct Teaching</u> A6.4: Jump Across a Decuple	<u>Activity/Game</u> IA6.3: Decuple Tag
	<u>Activity/Game</u> IA6.4: Adding to 50 Game	<u>Pencil Task</u> HAM Pupil Sheet 20	<u>Direct Teaching</u> A6.2: Jump Forward from and Jump Back to a Decuple
10 minutes	Plenary Teacher/self/peer assessment		

