GALLEYWOOD INFANT SCHOOL

Maths Progression of Skills and Knowledge from EYFS to Year 2 (*NCETM-aligned progression for teaching for mastery)*

Purpose and rationale

This document sets out the intended progression in mathematics from Reception to the end of Year 2 at Galleywood Infant School. It is designed to support coherent curriculum planning, adaptive teaching, assessment and transition, rather than to operate as a checklist of isolated objectives.

The progression draws on the NCETM Early Years materials, the NCETM Mastering Number programme and the NCETM Curriculum Prioritisation materials for Years 1 and 2. The Year 1 and Year 2 curriculum is organised around coherent sequences of learning, with priority given to important prerequisite knowledge and ready-to-progress learning. This reflects the school's teaching-for-mastery approach: children develop secure conceptual understanding, use consistent representations and mathematical language, make connections and reason about what they notice.

The progression should be read alongside the school's curriculum plans, lesson design expectations, calculation guidance and assessment materials. Children may revisit learning across the year; secure understanding is more important than moving rapidly through content.

How this document is aligned to NCETM

EYFS	Year 1	Year 2
NCETM Early Years: six key areas of early mathematical learning. Progression is built through rich experiences, adult interaction, representations, mathematical talk and play.	NCETM Curriculum Prioritisation provides a coherent sequence including counting/number, comparison and part-whole relationships, additive structures, unitising, shape, position and time. Mastering Number strengthens number sense and fluency.	NCETM Curriculum Prioritisation progresses numbers to 100, calculation within 20, two-digit addition/subtraction, multiplication/division structures, fractions, shape, measure, money, time and position. Mastering Number supports flexible number sense and calculation fluency.

The NCETM early mathematics foundation

Reception progression is organised around the six NCETM key areas of early mathematical learning:
Cardinality and counting: Knowing that the last number said tells us how many; developing stable counting sequences and accurate counting.
Comparison: Comparing quantities and numbers using language such as more, fewer, less, equal, greater and smaller.
Composition: Understanding that numbers can be made from other numbers and that a whole can be composed of parts.
Shape and space: Developing spatial awareness, visualising, describing position and exploring shape.
Measures: Comparing and describing continuous quantities such as length, height, weight, capacity and time.
Pattern: Noticing, copying, continuing, describing and creating mathematical patterns.

Number, counting, comparison and place value

EYFS / Reception	Year 1	Year 2
Develop secure counting principles and cardinality. Subitise small quantities and recognise small numbers without counting. Count objects accurately, including irregular arrangements. Compare groups using more, fewer and equal. Develop a strong sense of the numbers to 10 and explore numbers beyond 10 through the counting sequence. Explore one more/one less and the structure of numbers using practical and visual representations.	Build on secure Reception number sense. Count forwards and backwards within 100 and from different starting points. Read, write, represent and compare numbers to 100. Develop understanding of tens and ones and the linear number system. Use number lines, ten-frames and place-value representations. Find one more/one less and ten more/ten less. Compare numbers using mathematical language and symbols.	Extend place-value understanding to two-digit numbers and numbers to 100. Compose and decompose numbers flexibly, including standard and non-standard partitioning. Locate and compare two-digit numbers on the linear number system; identify the previous/next multiple of 10. Count in 2s, 5s and 10s and connect counting to grouping and unitising. Use place value to reason about calculations and measures.

Composition and additive structures

EYFS / Reception	Year 1	Year 2
Explore the composition of numbers within 5 and then 10. Recognise that the same number can be made in different ways. Use part-part-whole structures, objects, fingers, images and stories. Develop automatic recall of some small number facts through meaningful experiences.	Develop part-whole understanding and connect composition to addition and subtraction. Combine parts to make a whole and find missing parts. Understand the equality symbol as a relationship rather than simply an instruction to calculate. Explore addition as combining and subtraction as taking away, finding a difference and finding a missing part. Develop facts within 10 and then 20.	Use secure number facts within 10 to calculate within 20. Develop fluency with addition and subtraction facts and use known facts to derive others. Apply part-whole structures to two-digit addition and subtraction, initially through efficient mental strategies and representations before formal recording. Reason about equivalence, inverse relationships and missing-number problems.

Addition and subtraction calculation

EYFS / Reception	Year 1	Year 2
Solve practical problems involving combining, taking away, comparing and finding a missing amount. Use counting all, counting on and counting back where appropriate. Explain thinking using objects, drawings and mathematical language.	Add and subtract within 20 using concrete and pictorial representations, known facts and efficient strategies. Add/subtract one and two-digit numbers in meaningful contexts. Use number lines and structured representations to bridge through 10. Explain why a strategy works and check answers using inverse relationships.	Calculate fluently within 20 and apply this to two-digit calculations. Use place-value reasoning, partitioning, compensation and other efficient mental methods. Solve one- and two-step problems, including missing-number and comparison problems. Choose representations and methods deliberately and explain reasoning.

Multiplication, division and multiplicative thinking

EYFS / Reception	Year 1	Year 2
Experience equal groups, sharing, grouping and repeating patterns through play and practical contexts. Notice doubles and equal quantities. Begin to recognise when groups are the same size.	Develop the idea of unitising through equal groups and counting in 2s, 5s and 10s. Represent equal groups using objects, arrays and repeated addition. Explore sharing and grouping in practical contexts. Connect doubling and halving with known number relationships.	Build multiplicative structures from equal groups, arrays, repeated addition and grouping. Develop understanding of multiplication as groups of a given size and division as grouping and sharing. Connect multiplication and division as inverse operations. Develop the 2, 5 and 10 times-table structures and use them to solve problems, including correspondence and scaling contexts.

Fractions

EYFS / Reception	Year 1	Year 2
Experience wholes and equal parts through sharing, folding, cutting, shape and quantities. Use language such as whole, half and part in meaningful contexts.	Recognise and name halves and quarters of objects, shapes and quantities. Understand that equal parts must be equal in size. Find simple halves and quarters of quantities using practical and visual representations.	Recognise, find and name halves, thirds and quarters of shapes, lengths, sets and quantities. Connect fractions to division and sharing. Recognise simple equivalence, including the relationship between two quarters and one half. Solve practical fraction problems.

Shape and spatial reasoning

EYFS / Reception	Year 1	Year 2
Recognise and talk about common 2D and 3D shapes. Describe simple properties and explore shape in different orientations. Build, combine, rotate and manipulate shapes. Develop positional language such as above, below, behind, in front, next to, between and inside.	Recognise, name, sort and describe common 2D and 3D shapes using properties. Compose and decompose shapes and recognise shapes in different orientations. Describe position, direction and movement using appropriate mathematical language, including turns.	Describe and compare 2D and 3D shapes using properties, including sides, vertices, faces and edges. Identify and describe simple lines of symmetry. Develop more precise language for position, direction and movement; use turns and simple grids to describe location.

Measure

EYFS / Reception	Year 1	Year 2
Compare and order objects by length, height, weight and capacity using direct comparison and everyday language. Explore measuring through practical experiences and begin to use more precise vocabulary. Develop awareness of time through daily routines and sequencing.	Compare, describe and solve practical problems involving length, height, mass, capacity and time. Begin to measure using standard units and appropriate equipment. Recognise and use common coins and notes and solve simple practical money problems.	Measure, compare, order and solve problems involving standard units of length, mass and capacity. Use money in practical contexts, including finding totals and change. Tell and write time to five minutes and use quarter past/to. Solve simple problems involving intervals and durations.

	Sequence events and tell the time to the hour and half hour.	

Pattern, algebraic thinking and mathematical structure

EYFS / Reception	Year 1	Year 2
Copy, continue and create simple repeating patterns. Notice relationships, predict what comes next and describe patterns using mathematical language. Explore spatial and numerical patterns.	Recognise and continue simple numerical and spatial patterns. Notice relationships between numbers, quantities and representations. Use mathematical structures such as part-part-whole models, ten-frames and number lines to identify what stays the same and what changes.	Generalise and explain simple relationships, including those seen in the number system, calculations, arrays and patterns. Use structure to derive facts rather than relying only on counting. Notice connections between multiplication, division, doubling, halving and place value.

Fluency, reasoning and problem solving

EYFS / Reception	Year 1	Year 2
Develop mathematical talk through play, exploration and adult interaction. Explain choices, notice relationships, predict and check. Use representations to communicate mathematical ideas.	Develop fluency alongside conceptual understanding. Explain how representations show the mathematics. Solve problems in familiar and unfamiliar contexts, including problems with missing information. Compare strategies and begin to identify efficient methods.	Apply secure knowledge flexibly to unfamiliar problems. Select representations and methods, explain reasoning and identify errors or misconceptions. Use known facts and relationships to derive new facts. Develop confidence in proving, justifying and explaining mathematical ideas.

Expected progression in mathematical representations

At Galleywood Infant School, we use a range of mathematical representations to help children develop a deep and secure understanding of mathematical ideas. Children move between *concrete resources, pictorial representations and mathematical symbols,* making connections between what they can see, what they understand and how mathematics is recorded.

Representations are carefully chosen to make mathematical structures visible, support children to explain their thinking and develop independence. As children's understanding becomes more secure, they are supported to use increasingly efficient representations and move towards more abstract mathematical thinking.

Our aim is not for children simply to use equipment or draw pictures, but to understand why a representation works and what it shows. This supports fluency, reasoning and problem solving and helps children apply their understanding in new situations.

Representation / practice	**EYFS**	**Year 1**	**Year 2**
Concrete resources	Objects, fingers, ten-frames, small-world contexts, manipulatives and everyday materials.	Concrete resources used deliberately to expose structure, especially ten-frames, part-whole models, number lines, counters and place-value equipment.	Concrete resources remain available and are used to reveal structure and justify efficient strategies; increasingly linked to pictorial and abstract representations.
Pictorial representations	Drawings, arrangements, images, marks and simple models that show quantity and relationships.	Ten-frames, part-whole models, number tracks/lines, arrays and simple diagrams.	Number lines, part-whole models, arrays, bar models and other diagrams used to reason about structure, calculation and problems.
Symbols and recording	Children encounter numerals and mathematical marks in meaningful contexts; recording develops from children's representations.	Develop accurate mathematical notation for equations, comparison and simple calculations; equality is taught relationally.	Use equations and symbols accurately to represent relationships, calculations and inequalities; explain what an equation means.
Mathematical language	Everyday mathematical vocabulary developed through purposeful talk.	Precise vocabulary taught alongside representations and repeatedly revisited.	Precise vocabulary used to explain relationships, methods, reasoning and generalisations.

Fluency and Mastering Number spine

Number fluency is not treated as a separate worksheet-based activity. It develops through short, regular opportunities to notice, represent, discuss, recall and apply number relationships. The Mastering Number programme is designed to secure firm foundations in number sense from Reception through Year 2, with the aim that pupils leave KS1 fluent and flexible with number.

Reception	**Year 1**	**Year 2**
Subitising and cardinality; composition within 5 and then 10; counting; comparison; doubles and other small number relationships; development of the linear number system.	Secure composition and number bonds; flexible use of number relationships; calculation within 10 and 20; connections to numbers within 100; unitising and place-value foundations.	Consolidate bonds and composition; use known facts to calculate within 20 and beyond; reason about the linear number system; develop flexibility with addition/subtraction and multiplicative structures.

Curriculum planning principles for Galleywood Infant School

Coherence: learning is sequenced so that new ideas build directly on secure prior knowledge and children repeatedly reconnect with important ideas.
Representation and structure: manipulatives and images are selected because they make mathematical structure visible, not simply because they are engaging.
Mathematical thinking: children are expected to notice, conjecture, explain, justify, compare and make connections.
Variation: examples are varied so that children distinguish essential features from irrelevant ones and recognise underlying mathematical structures.
Fluency: key facts and relationships are developed to the point of flexible recall, while maintaining understanding and connections.
Adaptive teaching: support addresses the mathematics children need to understand rather than reducing the mathematical demand or providing excessive additional work.
Mathematical language and oracy: precise vocabulary and stem sentences support children to articulate relationships and explain their thinking.
Assessment for learning: teachers use questioning, representations, discussion and carefully chosen tasks to identify misconceptions and gaps, then adapt teaching accordingly.

How to use this progression for assessment

This progression is intended to support teacher assessment rather than a tick-list. Teachers work to gather evidence to show whether pupils can understand, represent, apply and explain the mathematics in different contexts. Where a child is not secure, teachers will identify the specific prerequisite knowledge and representation that needs strengthening before moving on.