



Mathematics Skills Progression

from Nursery to Year 2

Purpose: This document shows how children build number sense, mathematical language, fluency, reasoning and problem solving from Nursery to Year 2. It supports planning alongside the current EYFS framework, the Year 1 and Year 2 mathematics programmes of study, our whole-school curriculum and provision map, and class sequences.

Our mathematics curriculum in practice

Secure foundations. Children handle, compare, sort, build and talk about real objects before using pictures and abstract symbols. Number composition and pattern are revisited in different contexts so that understanding is deep rather than dependent on one activity.

Teaching in key stage 1. Teachers use Master the Curriculum resources in Years 1 and 2 to support carefully sequenced teaching, visual representations, fluency, reasoning and varied practice. Teachers adapt tasks and use checks of understanding to decide when to revisit or deepen a concept.

Mathematical talk. Adults model precise vocabulary, ask children to explain what they notice and how they know, and invite more than one representation or method. Mistakes are discussed as useful evidence for teaching.

Application through provision. Nursery and Reception use everyday routines and indoor and outdoor continuous provision; Year 1 links practical challenges to taught content. Year 2 applies learning through investigations, games, measurements and problems across subjects.

The progression at a glance

Skill	Nursery	Reception	Year 1	Year 2
Number sense	Notice quantities, count objects and explore “more”, “fewer” and pattern in play.	Understand numbers to 10 deeply; subitise, compare, compose and recall small facts.	Count and represent to 100; secure place value and number bonds within 20.	Use place value to 100 and number bonds to 20 with increasing speed and flexibility.
Calculation	Act out adding, taking away and sharing with real objects.	Explore part-whole relationships, number bonds and practical addition and subtraction.	Add and subtract within 20; begin grouping, sharing and repeated addition.	Calculate with two-digit numbers; use 2, 5 and 10 times tables to multiply and divide.
Space and measure	Sort, build, compare and describe shapes, position, length, capacity and time.	Recognise and compose shapes; compare measures in meaningful contexts.	Name shapes; measure and compare length, mass, capacity, time and money.	Describe shape properties; measure with standard units, use money and tell time to five minutes.

How to read the tables. Each row describes intended teaching and application, not a single test or fixed pace. Pupils revisit foundations when needed while continuing to engage with the mathematical ideas of their class.

Number and calculation

Skill	Nursery	Reception	Year 1	Year 2
Counting and cardinality	Say number words in songs and play; match one count word to each object and understand the last number says how many.	Count objects reliably; compare sets, count beyond 20 and link numerals to quantities in daily routines.	Count forwards and backwards to and across 100; count in 2s, 5s and 10s; read and write numbers.	Count in 2s, 3s, 5s and 10s from 0; explain patterns and use counting knowledge in calculation.
Subitising and composition	Recognise small quantities without counting and notice a group can be rearranged or split.	Subitise to 5; explore different compositions of numbers to 10 with objects and images.	Partition numbers in several ways; use number bonds and related subtraction facts within 20.	Partition two-digit numbers flexibly into tens and ones; use related facts and number bonds to 20.
Comparison and place value	Compare groups and use more, fewer, same; order familiar quantities and notice number patterns.	Compare numbers to 10, including equal, greater and less; use a number line and practical representations.	Represent and compare numbers to 100; identify one more and one less and explain tens and ones.	Read, write, order and compare to 100; use place value to identify 10 more and 10 less.
Addition and subtraction	Combine collections or remove objects during play; describe what changed.	Use practical stories and part-whole models; recall number bonds to 5 and some to 10.	Read and write +, – and =; add and subtract within 20, including missing-number problems.	Add and subtract two-digit numbers using mental and written representations; check using inverse relationships.
Multiplication and division	Make equal groups informally and share objects fairly in play.	Explore equal groups, doubles and how a set can be shared; talk about odd and even patterns.	Solve one-step grouping and sharing problems with objects, pictures and arrays.	Recall and use 2, 5 and 10 multiplication and division facts; use arrays, equal groups and inverse facts.
Fluency and mental strategies	Revisit number songs, routines and games; make quick quantity judgements through experience.	Recall small facts and recognise number relationships without relying only on counting all.	Use known bonds, counting on and partitioning; explain why a mental strategy works.	Use known facts, place value and related facts efficiently; choose a method and check reasonableness.

Reasoning and problem solving

Skill	Nursery	Reception	Year 1	Year 2
Mathematical language	Say what is the same or different and describe what happened in play.	Explain an answer using objects, pictures, actions and words such as because.	Represent a problem, describe a pattern and explain a choice or error.	Justify a method, compare solutions and explain a generalisation using precise vocabulary.
Choosing strategies	Try, move objects, notice, predict and try again with adult support.	Choose practical resources to explore a question and explain what changed.	Select objects, drawings or number lines for one-step problems; test a prediction.	Break a problem into steps, select efficient representations and reflect on whether the answer fits.

Fractions, geometry, measure and data

Skill	Nursery	Reception	Year 1	Year 2
Fractions and sharing	Share collections and food, notice equal and unequal parts; use everyday “half” language.	Explore equal sharing and halving and doubling with objects and practical problems.	Find and name halves and quarters of shapes, objects and quantities.	Recognise, find, name and write halves, thirds and quarters, including two or three quarters; recognise equivalence of two quarters and one half.
Shape properties	Build, sort and talk about familiar shapes and objects; notice similarities.	Recognise, combine and make shapes; use shape names and describe features in play.	Recognise and name common 2-D and 3-D shapes and use related language.	Describe and sort 2-D and 3-D shapes using sides, vertices, edges and faces; notice symmetry.
Pattern, position and direction	Copy, continue and create simple repeating patterns; follow routes and positional words.	Identify, create and explain repeating patterns; describe position and movement.	Describe position, direction and movement, including whole, half and quarter turns.	Order patterns and sequences; describe movement and turns, including right angles.
Length, mass and capacity	Compare longer/shorter, heavier/lighter and full/empty through sand, water and construction.	Compare, order and describe everyday length, weight and capacity using meaningful objects.	Measure and compare length, mass and capacity with suitable standard units and practical tools.	Use standard units with increasing accuracy; read scales for length, mass, capacity and temperature.
Time and money	Sequence daily events; use now, next and later; play shops with familiar coins.	Use daily routines to compare duration and order events; recognise money in role play.	Sequence events; tell time to the hour and half hour; recognise coins and notes.	Tell time to five minutes and compare durations; make amounts and solve simple problems with money.
Statistics	Sort objects and talk about which group has more or fewer.	Organise objects and information in groups; answer simple comparison questions.	Collect and interpret simple information in practical contexts as a foundation for later data work.	Construct and interpret tally charts, tables, pictograms and simple block diagrams.

Using representations well

Concrete to pictorial to abstract. Children continue to use manipulatives even when they can record symbols. Ten frames, counters, number lines, bead strings, base ten materials, arrays, shapes and measures are chosen for the mathematical idea, then connected explicitly to drawings and notation.

How children practise and show their learning

Skill	Nursery	Reception	Year 1	Year 2
Indoor and outdoor provision	Loose parts, counting collections, blocks, sand, water, snack and shop play invite comparison, sorting and mathematical talk.	Number and shape provocations, games, construction, routes and daily routines revisit taught learning.	Curriculum-linked continuous provision offers number games, measuring tasks, construction constraints and reasoning prompts.	Practical investigations, outdoor measurement, data collection and cross-curricular problems strengthen independent application.
Adult interaction	Notice a child’s idea, model precise language, ask “how many?” or “what changed?” and extend play.	Model and teach a small step, then invite children to represent, explain and revisit it in provision.	Use Master the Curriculum slides and tasks as appropriate; model, check understanding and ask for another representation.	Use varied tasks to probe reasoning; ask pupils to compare methods, identify errors and justify decisions.
Assessment evidence	Observe spontaneous counting, comparison, pattern and use of language in more than one context.	Check understanding through talk, objects, pictures and independent provision; consider EYFS goals at year end.	Use questions, practical work, pupils’ explanations and short Master the Curriculum checks to decide what to reteach.	Review fluency, reasoning and problem solving through discussion, work and independent application across units.

Our values in mathematics

- Kindness.** Listen to a partner’s method, share resources, explain respectfully and help someone test an idea.
- Resilience.** Stay with a challenging problem, change representation, learn from an error and try a different route.
- Creativity.** Spot patterns, find more than one way, design a practical solution and explain an unexpected connection.

Planning and inclusion checks

- Identify the precise concept and vocabulary to teach; revisit prerequisite knowledge and check that pupils understand it before increasing complexity.
- Use objects, images, oral rehearsal, accessible resources and purposeful adult support; retain the intended mathematical idea while reducing barriers, and fade scaffolds when secure.
- Adapt Master the Curriculum tasks to the class sequence and current understanding. Prioritise depth, fluency and reasoning over completing a worksheet or moving ahead too quickly.
- Assess through talk, practical demonstration, representations, short checks and transfer to a new context. Use misconceptions to shape the next lesson and provision.

Source framework and resource references

Department for Education, EYFS statutory framework for group and school-based providers, effective September 2026: gov.uk/government/publications/early-years-foundation-stage-framework--2

Department for Education, National curriculum in England: mathematics programmes of study, Years 1 and 2: gov.uk/government/publications/national-curriculum-in-england-mathematics-programmes-of-study

Master the Curriculum, KS1 mathematics resources and teaching slides: masterthecurriculum.co.uk

Cecil Gowing, Whole School Curriculum and Provision Map, Nursery to Year 2 (school document).