



CRADLEY CE PRIMARY SCHOOL

Mathematics Progression of Knowledge and Skills

Nursery (EYFS) – Mathematics

Number and Place Value

Core Knowledge and Skills

- Develop early number sense through counting, recognising quantities and using number words
- Begin to match numerals to amounts and understand that the last number represents the total
- Explore comparison using language such as more, less and same

Progression

- 2–3: Uses early number words, counting-like behaviour and explores quantity through play
- 3–4: Counts objects accurately, matches numerals to quantities and begins to understand composition of number

Addition and Subtraction (Early Concepts)

Core Knowledge and Skills

- Explore combining and separating groups through practical play
- Begin to understand adding one more and taking one away
- Use real-life contexts to solve simple problems

Progression

- 2–3: Notices changes in quantity (more/less) through play
- 3–4: Begins to add and subtract one using objects and practical experiences

Multiplication and Division (Early Concepts)

Core Knowledge and Skills

- Explore grouping and sharing through play
- Recognise equal groups and simple patterns

Progression

- 2–3: Explores grouping informally through play and routines
- 3–4: Begins to recognise equal groups and simple sharing situations

Fractions (Early Concepts)

Core Knowledge and Skills

- Begin to understand parts of a whole through sharing and grouping

Progression

- 2–3: Experiences sharing through play
- 3–4: Begins to recognise simple equal parts in practical contexts

Measurement

Core Knowledge and Skills

- Compare size, weight, length and capacity using everyday language
- Explore time through routines and sequencing events
- Begin to use simple measuring tools in play

Progression

- 2–3: Uses language such as big/small, full/empty and recognises daily routines
- 3–4: Compares objects, sequences events and begins to explore measuring tools and time concepts



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Geometry (Shape, Space and Measure)

Core Knowledge and Skills

- Recognise and explore shapes and their properties
- Develop spatial awareness through movement and construction
- Use positional language such as under, next to, behind

Progression

- 2–3: Explores shapes, fits objects into spaces and moves within environments
- 3–4: Identifies shapes, creates constructions and uses positional language accurately

Statistics (Early Concepts)

Core Knowledge and Skills

- Sort, group and compare objects
- Begin to notice patterns and relationships

Progression

- 2–3: Sorts and groups objects and explores simple patterns
- 3–4: Creates repeating patterns, compares groups and begins to describe patterns

Progression Across Nursery

- Learning is embedded through play, routines and real-life contexts
- Strong focus on concrete exploration before moving towards representation
- Mathematical language is developed through talk and interaction
- Early problem solving, reasoning and pattern recognition underpin all areas

Reception (EYFS) – Mathematics

Number and Place Value

Core Knowledge and Skills

- Develop secure counting skills, including subitising and one-to-one correspondence
- Understand cardinality and ordinality
- Recognise, represent and compare numbers to 10

Progression

- Early: Focus on subitising, matching, sorting and comparing quantities
- Later: Secure counting, ordering numbers and understanding number relationships within 10

Addition and Subtraction

Core Knowledge and Skills

- Explore composition of number and part–whole relationships
- Combine and separate groups using practical resources
- Solve simple problems through play and real-life contexts

Progression

- Early: Explore combining groups and noticing changes
- Later: Understand number composition and begin to represent addition and subtraction within 10

Multiplication and Division (Early Concepts)



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Core Knowledge and Skills

- Explore grouping, sharing and patterns
- Recognise equal groups through practical activities

Progression

Early: Informal grouping and repeated patterns in play

Later: Begin to recognise equal groups and simple sharing situations

Fractions (Early Concepts)

Core Knowledge and Skills

- Understand whole and part through sharing and grouping

Progression

- Early: Practical sharing experiences
- Later: Recognise equal parts within familiar contexts

Measurement

Core Knowledge and Skills

- Compare length, height, mass and capacity
- Begin to understand time through routines and sequencing
- Use everyday language to describe measures

Progression

- Early: Explore size, weight and capacity through practical play
- Later: Compare and order measures, and begin to use time language

Geometry (Shape, Space and Measure)

Core Knowledge and Skills

- Recognise, name and describe 2D and 3D shapes
- Explore spatial awareness, patterns and positioning
- Build and create using a range of materials

Progression

- Early: Identify and sort shapes, explore pattern and positional language
- Later: Combine and manipulate shapes, visualise and build structures, and explore mapping

Statistics (Early Concepts)

Core Knowledge and Skills

- Sort, compare and group objects
- Recognise, create and describe patterns

Progression

- Early: Matching, sorting and simple pattern recognition
- Later: Create repeating patterns and compare groups using mathematical language

Progression Across Reception

Strong emphasis on subitising, counting and composition as foundations for number

Concrete → pictorial → early abstract representations begin to emerge

Mathematical language develops through talk, play and problem solving

Increasing focus on reasoning, pattern spotting and application in meaningful contexts



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Years 1 & 2

Number and Place Value

Core Knowledge and Skills

- Count forwards and backwards within 100 (Y1) and 1000 (Y2)
- Read, write and represent numbers using concrete resources and pictorial models
- Understand place value: ones and tens (Y1); hundreds, tens and ones (Y2)
- Compare and order numbers using mathematical language

Progression

- Y1 focuses on counting, grouping and representing numbers concretely
- Y2 deepens understanding by partitioning numbers, estimating and using number lines

Addition and Subtraction

Core Knowledge and Skills

- Add and subtract using concrete apparatus and pictorial representations
- Recall and use number bonds to 10 and 20
- Understand the relationship between addition and subtraction
- Solve one-step problems using objects, drawings and equations

Progression

- Y1 uses counting strategies and concrete models
- Y2 moves towards mental strategies and informal written methods

Multiplication and Division

Core Knowledge and Skills

- Understand multiplication as repeated addition
- Understand division as sharing and grouping
- Use arrays and equal groups

Progression

- Y1 explores equal groups using concrete resources
- Y2 introduces the 2, 5 and 10 times tables and related division facts

Fractions

Core Knowledge and Skills

- Recognise and find halves and quarters of shapes and quantities
- Understand fractions as equal parts of a whole

Progression

- Y1 identifies simple fractions of shapes
- Y2 applies understanding to quantities and simple equivalence

Measurement

Core Knowledge and Skills

- Measure and compare length, mass, volume and capacity
- Tell the time to the hour and half hour (Y1); quarter past/to and 5-minute intervals (Y2)
- Recognise coins and notes and calculate totals
- **Progression**
- Y1 focuses on direct comparison and non-standard units
- Y2 uses standard units and simple calculations

Geometry

Core Knowledge and Skills



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- Identify and describe 2D and 3D shapes
- Describe position, direction and movement

Progression

- Y1 names shapes and simple properties
- Y2 compares properties and introduces symmetry

Statistics (Y2)

Core Knowledge and Skills

- Interpret pictograms, tally charts and simple bar charts

Years 3 & 4

Number and Place Value

Core Knowledge and Skills

- Read, write and order numbers up to 10,000 (Y3) and 1,000,000 (Y4)
- Round numbers to the nearest 10, 100 or 1000
- Understand negative numbers in context

Progression

- Y3 builds secure understanding of hundreds
- Y4 extends to larger numbers and rounding

Addition and Subtraction

Core Knowledge and Skills

- Use formal written methods for addition and subtraction
- Solve two-step problems
- Estimate and check answers

Progression

- Y3 introduces column methods
- Y4 applies methods efficiently and accurately

Multiplication and Division

Core Knowledge and Skills

- Recall multiplication and division facts up to 12×12
- Use formal written methods for multiplication
- Solve problems involving scaling and correspondence

Progression

- Y3 uses arrays and partitioning
- Y4 moves towards formal column multiplication

Fractions and Decimals

Core Knowledge and Skills

- Recognise and compare fractions
- Understand equivalence
- Introduce tenths and hundredths (Y4)

Progression

- Y3 focuses on unit fractions
- Y4 links fractions and decimals

Measurement

Core Knowledge and Skills



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- Convert between units of measure
- Tell the time to the minute
- Solve problems involving perimeter and area

Geometry

Core Knowledge and Skills

- Classify shapes by properties
- Identify angles and symmetry

Statistics

Core Knowledge and Skills

- Interpret bar charts and line graphs

Years 5 & 6

Number and Place Value

Core Knowledge and Skills

- Read, write and order numbers up to 10 million
- Use negative numbers and solve problems

Addition, Subtraction, Multiplication and Division

Core Knowledge and Skills

- Use efficient written methods
- Solve multi-step problems
- Apply knowledge to real-life contexts

Fractions, Decimals and Percentages

Core Knowledge and Skills

- Compare, order and calculate with fractions
- Convert between fractions, decimals and percentages

Measurement

Core Knowledge and Skills

- Convert units of measure
- Calculate area, perimeter and volume

Geometry

Core Knowledge and Skills

- Identify properties of shapes
- Use coordinates and transformations

Statistics

Core Knowledge and Skills

- Interpret and construct pie charts and line graphs

Progression Across All Phases

- Concrete → pictorial → abstract approach embedded throughout
- Increasing emphasis on reasoning, justification and problem solving
- Mathematical vocabulary and sentence stems developed progressively
- Fluency supports reasoning and application