Primary Mathematics Progression: Key Knowledge & Skills

KEY STAGE 1 (Years 1–2)

Key Focus:

- Build strong early number sense
- Develop confidence with counting, basic operations, simple shapes & measures
- Establish foundations for reasoning
  - Count, read and write numbers to **100**; count in 1s, 2s, 5s, 10s.
  - Understand **tens and ones**; compare and order numbers.
  - Begin to use number bonds and simple mental strategies.
  - Use concrete objects & pictorial representations.
  - Solve simple problems involving number facts and number lines.
  - Understand multiplication as **equal groups**.
  - Recall facts for **2, 5, 10** multiplication tables.
  - Make simple arrays, grouping and sharing.
  - Recognise and find basic fractions: **½, ⅓, ¼, ⅔, ¾** (shapes and quantities).
  - Compare and measure length, mass, volume/capacity.
  - Recognise coins/notes; tell time to nearest 5 minutes.
  - Recognise, name and describe 2-D & 3-D shapes.
  - Use language of position, direction and movement.
  - Interpret simple **pictograms**, **tally charts**, **block diagrams**.

LOWER KEY STAGE 2 (Years 3–4)

Key Focus:

- Secure formal written methods
- Deepen number fluency
- Broaden understanding of fractions, measurement, geometry & data
- Strengthen reasoning and problem-solving
  - Read, write & compare numbers to **1000** and **10,000**.
  - Understand 3-digit & 4-digit place value.
  - Round to nearest 10, 100, 1000.
  - Count in multiples (4, 8, 50, 100 → Y3; 6, 7, 9, 25, 1000 →).
  - Use **formal written methods** for 3- and 4-digit numbers.
  - Apply mental strategies and use inverse operations to check answers.
  - Recall multiplication facts for **all tables up to 12 × 12**.
  - Multiply and divide using expanding formal written methods.
  - Solve scaling and correspondence problems.
  - Recognise unit and non-unit fractions; compare fractions.
  - Understand **tenths** and **hundredths**; link fractions and decimals.
  - Solve simple fraction of number problems.
  - Convert between units (m/cm/mm; kg/g; litres/ml).
  - Calculate **perimeter** and area of rectangles.
  - Tell time in 12/24-hour formats; use timetables.
  - Compare and classify 2-D shapes; understand symmetry.
  - Identify right, acute and obtuse angles.
  - Use coordinates in the first quadrant.
  - Interpret bar charts and time graphs.
  - Construct tables and simple graphs.

UPPER KEY STAGE 2 (Years 5–6)

Key Focus:

- Master efficient written methods
- Understand complex fractions, decimals, percentages & ratio
- Build algebra foundations
- Confidently apply reasoning across multi-step problems
- Prepare for secondary mathematics
  - Read, write & compare numbers to **1,000,000** and **10,000,000**.
  - Interpret negative numbers, round to any degree of accuracy.
  - Read Roman numerals to 1000 and beyond.
  - Confidently use formal written methods for large numbers.
  - Apply estimation, checking, and reasoning to multi-step problems.
  - Use **long multiplication** and **long division**.
  - Multiply 4-digit numbers by 2-digit numbers.
  - Interpret remainders in context.
  - Add/subtract fractions with different denominators.
  - Multiply fractions; divide fractions by whole numbers.
  - Convert between fractions, decimals & percentages seamlessly.
  - Understand **thousandths** and increasingly precise decimals.
  - Use ratio language and solve ratio problems.
  - Understand proportional reasoning.
  - Introduce **algebraic notation**, missing number problems, simple formulae.
  - Convert between units, including metric ↔ imperial.
  - Calculate perimeter, area and **volume**.
  - Use scales, timetables and measure problems fluently.
  - Draw and measure angles accurately; understand properties of shapes.
  - Use coordinates in **all four quadrants**.
  - Translate and reflect shapes.
  - Construct and interpret **line graphs** and **pie charts**.
  - Calculate and interpret the **mean** as average.