

Essential Skills and Knowledge – Priorities for the Maths Curriculum.

The Ready-to-Progress (RTP) criteria identify the essential mathematical knowledge and skills pupils need to move successfully to the next year group. Teachers regularly assess these key concepts and use the information to plan targeted support and interventions where needed, ensuring all pupils develop secure foundations and are prepared for future learning.

Year 1. A pupil is ready for Year 2 if they can:

Number & Place Value	Count securely within 100, forwards and backwards, and compare, order and place numbers to 20.
	Compare numbers to 20 using $<$ $>$ and $=$
Number Facts (Mental Strategies)	Develop fluency of addition and subtraction facts within 10.
	Count in multiples of 2, 5 and 10 and recognise simple number patterns
Addition & Subtraction	Understand numbers to 10 by recognising different ways to make, split and represent them. (part-part-whole relationships)
	recognise simple number patterns including odd and even numbers.
	Use addition and subtraction to solve simple problems and understand the symbols $+$ $-$ $=$
Geometry	Recognise, describe and sort common 2D and 3D shapes; know that rectangles, triangles, cuboids and pyramids are not always similar to one another.
	Combine and manipulate shapes to make new shapes and patterns, following an example.

Year 2. A pupil is ready for Year 3 if they can:

Number & Place Value	Understand the value of each digit in a 2-digit number, partition numbers flexibly, and place, compare and order numbers to 100.
	Compare, order and place two-digit numbers on a number line. Identify the previous and next multiple of 10.
Number Facts (Mental Strategies)	Know addition and subtraction facts within 10 automatically.
	Develop fluency of addition and subtraction facts bridging 10.
Addition & Subtraction	Securely add and subtract numbers within 100 using mental and written methods.
	Use addition and subtraction to solve problems, including finding the difference between numbers and questions of the form, "How many more...?"
Multiplication and Division	Understand multiplication as repeated addition and use the 2-, 5- and 10-times tables to solve problems.
	Understand division as sharing and grouping and explain the link between multiplication and division.
Fractions	Recognise, find and compare simple fractions such as $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{3}{4}$.
Geometry	Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties.

Year 3. A pupil is ready for Year 4 if they can:

Number & Place Value	Use place value to understand that 10 tens make 100 and that 100 is 10 times the size of 10. Work out how many 10s there are in other three-digit multiples of 10 e.g. $345 = 34$ tens and 5 ones.
	Understand the value of each digit in a 3-digit number, partition numbers flexibly, and compare and order numbers to 1,000.
	Place 3-digit numbers on a number line, identifying the previous and next multiple of 100 and 10.
	Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.
Number Facts (Mental Strategies)	Secure fluency in addition and subtraction facts that bridge 10, through continued practice.
	Recall and use multiplication and division facts for the 2, 4-, 5-, 8- and 10-times tables. Recognise that these are multiples.
	Apply place-value knowledge to known number facts (scaling facts by 10), for example: $8 + 6 = 14$ so $80 + 60 = 140$ / $140 - 60 = 80$ and $3 \times 4 = 12$ so $30 \times 4 = 120$ / $120 \div 4 = 30$
Addition & Subtraction	Calculate complements to 100, for example: $46 + ? = 100$
	Add and subtract 3-digit numbers using column methods
	Understand that addition and subtraction are inverses and can be used to check each other. Know that numbers can be split into parts and combined to make a whole. Understand that numbers can be added in any order and the answer stays the same. (commutative law) Understand that changing the order in a subtraction calculation changes the answer.
Multiplication and Division	Use multiplication and division facts to solve problems involving sharing, grouping and equal groups.
Fractions	Recognise and write fractions as equal parts of a whole shape, set or quantity.
	Find simple fractions of amounts using division and multiplication facts.
	Compare and place fractions on a number line between 0 and 1.
	Add and subtract fractions with the same denominator, within 1.
Geometry	Recognise right angles in shapes and turns, even when shapes are rotated.
	Draw and identify common 2D shapes and recognise parallel and perpendicular sides.

Year 4. A pupil is ready for Year 5 if they can:

Number & Place Value	Understand that 10 hundreds make 1 thousand and use this to work out how many hundreds are in larger numbers.
	Understand the value of each digit in a 4-digit number and partition numbers using standard and non-standard partitioning.
	Compare, order, round and place 4-digit numbers on a number line.
	Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.
Number Facts (Mental Strategies)	Know all multiplication and division facts up to 12×12 and recognise multiples of these numbers.
	Solve division problems with remainders and decide what the remainder means in the context. e.g. $74 \div 9 = 8 \text{ r } 2$
	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), for example: $8 + 6 = 14$ and $14 - 6 = 8$ so $800 + 600 = 1400$ and $1400 - 600 = 800$ $3 \times 4 = 12$ and $12 \div 4 = 3$ so $300 \times 4 = 1200$ and $1200 \div 4 = 300$
Multiplication and Division	Use place value knowledge to multiply and divide whole numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size.
	Understand the commutative property of multiplication and manipulate multiplication and division equations e.g. to find missing numbers.
	Use understanding of multiplication to break calculations into simpler parts. (Distributive law i.e. $24 \times 5 = (20 \times 5) + (4 \times 5)$)
Fractions	Reason and place mixed numbers and fractions on a number line.
	Convert mixed numbers to improper fractions and vice versa.
	Add and subtract fractions and mixed numbers with the same denominator, including bridging whole numbers. e.g. $7\frac{2}{5} + \frac{4}{5} = 8\frac{1}{5}$
Geometry	Plot and read coordinates in the first quadrant and use them to draw shapes and translate them.
	Identify and describe regular and irregular polygons with 3-8 sides and calculate their perimeter.
	Recognise lines of symmetry and complete symmetrical shapes.

Year 5. A pupil is ready for Year 6 if they can:

Number & Place Value	Understand the scaling relationship between tenths, hundredths and whole numbers and use this knowledge to multiply and divide by 10 and 100.
	Understand the value of each digit in numbers with up to 2 decimal places and partition decimal numbers flexibly.
	Compare, order, round and place numbers with up to 2 decimal places on a number line.
	Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.
	Convert between units of measure, including using common decimals and fractions.
Number Facts (Mental Strategies)	Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.
	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth), for example: $8+6=14$ so $0.8+0.6=1.4$ and $0.08+0.06=0.14$ $3 \times 4 = 12$ so $0.3 \times 4 = 1.2$ and $0.03 \times 4 = 0.12$
Multiplication and Division	Multiply and divide numbers by 10 and 100, understanding how the digits move in place value; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.
	Find factors and multiples, including common factors and common multiples and express a given number as a product of 2 or 3 factors.
	Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.
	Divide a number with up to 4 digits by a one-digit number using a formal written method and interpret remainders appropriately for the context.
Fractions	Find non-unit fractions of quantities.
	Find equivalent fractions and understand that they have the same value and the same position in the linear number system.
	Know common fraction and decimal equivalents, such as $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$ and multiples of these.
Geometry	Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size using a protractor.
	Calculate and compare the area of rectangles and squares.

Year 6. A pupil is ready for Year 7 if they can:

Number & Place Value	Understand how numbers become 10, 100 or 1,000 times bigger or smaller, including decimals.
	Understand the value of each digit in numbers up to 10 million, including decimals, and partition numbers using standard and non-standard partitioning.
	Compare, order, round and place numbers up to 10 million on a number line.
	Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.
Addition & Subtraction AND Multiplication and Division	Understand how addition, subtraction, multiplication and division are connected.
	Use efficient calculation strategies and known number facts to solve problems and find missing numbers.
	Solve problems involving ratio relationships.
	Solve problems with 2 unknowns.
Fractions	Simplify fractions using common factors.
	Compare fractions with different denominators using reasoning or common denominators and justifying the choice.
	Calculate with fractions, including fractions greater than 1.
Geometry	Draw, combine and decompose shapes using their properties, including side lengths, angles and area in order to solve problems.