YEAR 5 - Maths Curriculum

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number **Place value** VIEW			Number **Addition and subtraction** VIEW		Number **Multiplication and division A** VIEW			Number **Fractions A** VIEW			
Spring term	Number **Multiplication and division B** VIEW			Number **Fractions B** VIEW		Number **Decimals and percentages** VIEW			Measurement **Perimeter and area** VIEW		Statistics VIEW	
Summer term	Geometry **Shape** VIEW			Geometry **Position and direction** VIEW		Number **Decimals** VIEW			Number **Negative numbers** VIEW	Measurement **Converting units** VIEW		Measurement **Volume** VIEW

AUTUMN TERM

National Curriculum	Small Steps
Number and Place Value (3 Weeks) Read roman numerals to 1000 (M) and recognise years written in roman numerals. Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. Solve number problems and practical problems that involve all objectives. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.	Step 1 — Roman numerals to 1,000 Step 2 — Numbers to 10,000 Step 3 — Numbers to 100,000 Step 4 — Numbers to 1,000,000 Step 5 — Read and write numbers to 1,000,000 Step 6 — Powers of 10 Step 7 — 10/100/1,000/10,000/100,000 more or less Step 8 — Partition numbers to 1,000,000 Step 9 — Number line to 1,000,000 Step 10 — Compare and order numbers to 100,000 Step 11 — Compare and order numbers to 1,000,000 Step 12 — Round to the nearest 10, 100 or 1,000 Step 13 — Round within 100,000 Step 14 — Round within 1,000,000
Number + & - (2 Weeks) Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (column addition and subtraction). Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Step 1 — Mental strategies Step 2 — Add whole numbers with more than four digits Step 3 — Subtract whole numbers with more than four digits Step 4 — Round to check answers Step 5 — Inverse operations (addition and subtraction) Step 6 — Multi-step addition and subtraction problems Step 7 — Compare calculations Step 8 — Find missing numbers

AUTUMN TERM

National Curriculum	Small Steps

Number x & / (3 Weeks)

Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.

Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.

Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.

Establish whether a number up to 100 is prime and recall prime numbers up to 19.

Recognise and use square numbers and cubed numbers, and the notation for squared and cubed.

Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 .

Multiply and divide numbers mentally drawing upon known facts.

Small Steps:

- Step 1 — Multiples
- Step 2 — Common multiples
- Step 3 — Factors
- Step 4 — Common factors
- Step 5 — Prime numbers
- Step 6 — Square numbers
- Step 7 — Cube numbers
- Step 8 — Multiply by 10, 100 and 1,000
- Step 9 — Divide by 10, 100 and 1,000
- Step 10 — Multiples of 10, 100 and 1,000

Fractions (4 Weeks)

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, + = = 1].

Compare and order fractions whose denominators are all multiples of the same number.

Add and subtract fractions with the same denominator and denominators that are multiples of the same number.

Small Steps:

- Step 1 — Find fractions equivalent to a unit fraction
- Step 2 — Find fractions equivalent to a non-unit fraction
- Step 3 — Recognise equivalent fractions
- Step 4 — Convert improper fractions to mixed numbers
- Step 5 — Convert mixed numbers to improper fractions
- Step 6 — Compare fractions less than 1
- Step 7 — Order fractions less than 1
- Step 8 — Compare and order fractions greater than 1
- Step 9 — Add and subtract fractions with the same denominator
- Step 10 — Add fractions within 1
- Step 11 — Add fractions with total greater than 1
- Step 12 — Add to a mixed number
- Step 13 — Add two mixed numbers
- Step 14 — Subtract fractions
- Step 15 — Subtract from a mixed number
- Step 16 — Subtract from a mixed number – breaking the whole
- Step 17 — Subtract two mixed numbers

Real Life Maths Week—With a Unit of your choosing

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SPRING TERM

National Curriculum	Small Steps
Number x & / (3 Weeks) Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.	**Step 1** Multiply up to a 4-digit number by a 1-digit number **Step 2** Multiply a 2-digit number by a 2-digit number (area model) **Step 3** Multiply a 2-digit number by a 2-digit number **Step 4** Multiply a 3-digit number by a 2-digit number **Step 5** Multiply a 4-digit number by a 2-digit number **Step 6** Solve problems with multiplication **Step 7** Short division **Step 8** Divide a 4-digit number by a 1-digit number **Step 9** Divide with remainders **Step 10** Efficient division **Step 11** Solve problems with multiplication and division
Fractions (2 Weeks) Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.	**Step 1** Multiply a unit fraction by an integer **Step 2** Multiply a non-unit fraction by an integer **Step 3** Multiply a mixed number by an integer **Step 4** Calculate a fraction of a quantity **Step 5** Fraction of an amount **Step 6** Find the whole **Step 7** Use fractions as operators

SPRING TERM—Continued

National Curriculum	Small Steps

Decimals and Percentages (3 Weeks)

Read, write, order and compare numbers with up to three decimal places.

Read and write decimal numbers as fractions.

Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.

Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5 and 4/5 and those fractions with a denominator of a multiple of 10 or 25.

Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

Solve problems involving number up to three decimal places.

Round decimals with two decimal places to the nearest whole number and to one decimal place.

Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.

Step 1 — Decimals up to 2 decimal places
Step 2 — Equivalent fractions and decimals (tenths)
Step 3 — Equivalent fractions and decimals (hundredths)
Step 4 — Equivalent fractions and decimals
Step 5 — Thousandths as fractions
Step 6 — Thousandths as decimals
Step 7 — Thousandths on a place value chart
Step 8 — Order and compare decimals (same number of decimal places)
Step 9 — Order and compare any decimals with up to 3 decimal places
Step 10 — Round to the nearest whole number
Step 11 — Round to 1 decimal place
Step 12 — Understand percentages
Step 13 — Percentages as fractions
Step 14 — Percentages as decimals
Step 15 — Equivalent fractions, decimals and percentages

Measure (Area and Perimeter—2 Weeks)

Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.

Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.

Step 1 — Perimeter of rectangles
Step 2 — Perimeter of rectilinear shapes
Step 3 — Perimeter of polygons
Step 4 — Area of rectangles
Step 5 — Area of compound shapes
Step 6 — Estimate area

Statistics (2 Weeks)

Solve comparison, sum and difference problems using information presented in a line graph.

Complete, read and interpret information in tables, including timetables.

Step 1 — Draw line graphs
Step 2 — Read and interpret line graphs
Step 3 — Read and interpret tables
Step 4 — Two-way tables
Step 5 — Read and interpret timetables

SUMMER TERM

National Curriculum	Small Steps
Geometry (Shape—3 Weeks) Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (o). Identify: • angles at a point and one whole turn (total 360o) • angles at a point on a straight line and 1/2 a turn (total 180o) • other multiples of 90o Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Identify 3-D shapes, including cubes and other cuboids, from 2-D representations.	Step 1 Understand and use degrees Step 2 Classify angles Step 3 Estimate angles Step 4 Measure angles up to 180° Step 5 Draw lines and angles accurately Step 6 Calculate angles around a point Step 7 Calculate angles on a straight line Step 8 Lengths and angles in shapes Step 9 Regular and irregular polygons Step 10 3-D shapes
Geometry (Position—2 Weeks) Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	Step 1 Read and plot coordinates Step 2 Problem solving with coordinates Step 3 Translation Step 4 Translation with coordinates Step 5 Lines of symmetry Step 6 Reflection in horizontal and vertical lines
Decimals (3 Weeks) Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Solve problems involving number up to three decimal places. Read, write, order and compare numbers with up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 .	Step 1 Use known facts to add and subtract decimals within 1 Step 2 Complements to 1 Step 3 Add and subtract decimals across 1 Step 4 Add decimals with the same number of decimal places Step 5 Subtract decimals with the same number of decimal places Step 6 Add decimals with different numbers of decimal places Step 7 Subtract decimals with different numbers of decimal places Step 8 Efficient strategies for adding and subtracting decimals Step 9 Decimal sequences Step 10 Multiply by 10, 100 and 1,000 Step 11 Divide by 10, 100 and 1,000 Step 12 Multiply and divide decimals – missing values

SUMMER TERM

National Curriculum	Small Steps
Negative Numbers (1 Week) Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.	**Step 1** Understand negative numbers **Step 2** Count through zero in 1s **Step 3** Count through zero in multiples **Step 4** Compare and order negative numbers **Step 5** Find the difference
Converting Units (2 Weeks) Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre). Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.	**Step 1** Kilograms and kilometres **Step 2** Millimetres and millilitres **Step 3** Convert units of length **Step 4** Convert between metric and imperial units **Step 5** Convert units of time **Step 6** Calculate with timetables
Measures (Volume 1 Week) Estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. Use all four operations to solve problems involving measure (volume) using decimal notation, including scaling.	**Step 1** Cubic centimetres **Step 2** Compare volume **Step 3** Estimate volume **Step 4** Estimate capacity

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