Year 5

Maths Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Mental Objectives
Autumn	Number – Place Value			Number – Addition and Subtraction		Statistics		Number – Multiplication and division			Measurement – Area and Perimeter		Assessment and consolidation	◦ Mental calculation strategies ◦ Tables facts – multiplying and dividing mentally ◦ Prime numbers/factors/square numbers ◦ Properties of shapes ◦ Fractions
Spring	Geometry – Position and direction	Number – Multiplication and Division			Fractions			Geometry - angles		Fractions		Geometry – Position and Direction	Assessment and consolidation	◦ Mental calculation strategies Converting units of measure ◦ Time ◦ Place value – ordering/comparing/ rounding ◦ Counting in powers of 10 ◦ Negative numbers ◦ X / 10, 100, 1000 ◦ Fluent in 5
Summer	Number - Decimals & Percentages			Geometry – Properties of shape		Number – Decimals (calculations)		Measurement – Converting Units		Measures - Volume	Application – Problem solving and puzzles	Assessment and consolidation		◦ Mental calculation strategies ◦ Calculating with fractions ◦ Area and perimeter ◦ Statistics – data handling ◦ Angles ◦ Rounding decimals ◦ Fluent in 5

Autumn Term

Block 1: Place Value

- Read, write, order and compare numbers to at least 1000000 and determine the value of each digit.
- Count forwards or backwards in steps of powers of 10 for any given number up to 1000000.
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero.
- Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000
- Solve number problems and practical problems that involve all of the above.
- Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

Block 2: Addition and subtraction

- Add and subtract numbers mentally with increasingly large numbers.
- Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Block 3: Statistics

- Solve comparison, sum and difference problems using information presented in a line graph.
- Complete, read and interpret information in tables including timetables.

Block 4: Multiplication and Division

- Multiply and divide numbers mentally drawing upon known facts.
- Multiply and divide whole numbers by 10, 100 and 1000.
- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
- Recognise and use square numbers and cube numbers and the notation for squared ($_2$) and cubed ($_3$)
- 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.

Block 5: Measurement - Area and perimeter

- Measure and calculate the perimeter of composite rectilinear shapes in cm and m.
- Calculate and compare the area of rectangles (including squares), and including using standard units, cm_2,m_2 estimate the area of irregular shapes.

Spring Term

Block 1: Geometry – position and direction

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.

Block 2: Multiplication and division

- Multiply and divide numbers mentally drawing upon known facts.
- Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 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 addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.

Block 3: Fractions

- Compare and order fractions whose denominators are multiples of the same number.
- 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 $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1\ {}^{1}/_{5}$]

Block 4: Geometry - angles

- 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 360^{o}), angles at a point on a straight line and ½ a turn (total 180^{o}) other multiples of 90^{o}

Block 5: Fractions

- 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 $^{2}/_{5} + {}^{4}/_{5} = {}^{6}/_{5} = 1\ {}^{1}/_{5}$]
- Add and subtract fractions with the same denominator and denominators that are multiples of the same number.
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- Read and write decimal numbers as fractions [for example $0.71 = {}^{71}/_{100}$]
- Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Block 6: Geometry – position and direction

- 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.

Summer Term

Block 1: Decimals and percentages

- Read, write, order and compare numbers with up to three decimal places.
- Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.

- Round decimals with two decimal places to the nearest whole number and to one decimal place.
- Solve problems involving number up to three decimal places.
- 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.
- Solve problems which require knowing percentage and decimal equivalents and those fractions with a denominator.

Block 2: Geometry – properties of shape

- Identify 3D shapes, including cubes and other cuboids, from 2D representations.
- 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.

Block 3: Decimals - calculations

- Calculate with decimal numbers
- Solve problems involving number up to three decimal places.
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

Block 4: Measures – converting units

- Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]
- 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.

Block 5: Measures – Volume

- Estimate volume [for example using $1cm^3$ blocks to build cuboids (including cubes)] and capacity [for example, using water]
- Use all four operations to solve problems involving measure.