

Year 5: Medium Term Plan

Autumn	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	Week 14
	Number: Place value			Number: Addition and subtraction		Measurement: Perimeter, area and volume		Number: Multiplication and division		Geometry: Position and direction	Number: Fractions			Consolidation
Spring	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	Week 14
	Number: Multiplication and division			Measurement: Converting units and reading scales		Number: Decimals				Statistics		Consolidation		
Summer	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	Week 14
	Number: Fractions			Geometry: Properties of shape			Number: Decimals and percentages				Consolidation			

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Autumn Term

Place value

- Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- 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
- Round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000
- Solve number problems and practical problems that involve all of the above

Addition and subtraction

- Add and subtract numbers mentally with increasingly large numbers e.g. $12,462 - 2300$
- Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Measurement – area, perimeter and volume

- Calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes
- Estimate volume (e.g. Using 1 cm^3 blocks to build cubes and cuboids)
- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres

Multiplication and division (properties of number)

- Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers
- Multiply and divide numbers mentally drawing upon known facts
- 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)
- Establish whether a number up to 100 is prime and recall prime numbers up to 19
- Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

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

Fractions (simplify, equivalences, order and compare)

- Compare and order fractions whose denominators are all 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 (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)

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Spring Term

Multiplication and division (written methods)

- 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
- 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
- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign
- Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes

Measurement – converting units and reading scales

- Convert between different units of metric measure (e.g. Kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- Solve problems involving converting between units of time
- Understand and use equivalences between metric units and common imperial units such as inches, pounds and pints
- Use all four operations to solve problems involving measure (e.g. Length, mass, volume, money) using decimal notation including scaling.

Decimals

- Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)
- 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 numbers up to three decimal places

Statistics

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

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Summer Term

Fractions – calculations – addition, subtraction and multiplication

- Add and subtract fractions with the same denominator and multiples of the same number
- Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5}$
 $= 1\frac{1}{5}$)
- Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams

Geometry – properties of shape

- 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
- Draw given angles, and measure them in degrees ($^{\circ}$)
- Identify: angles at a point and one whole turn (total 360°) Angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) Other multiples of 90°
- Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- Use the properties of rectangles to deduce related facts and find missing lengths and angles

Decimals and percentages

- Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths
- Read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)
- 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 as a decimal fraction
- Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25.