Year 5 Maths Long Term Plan 2024 - 2025

Autumn Term

Maths Meetings: Multiplication and Division

X and ÷ mentally drawing on known facts

recall multiplication and division facts for multiplication tables up to 12 × 12use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1;

dividing by 1; multiplying together 3 numbers

recognise and use factor pairs and commutativity in mental calculations

Place Value

- 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
- interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero
- round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
- 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.

Addition and Subtraction Inc decimals

- Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)
- add and subtract numbers mentally with increasingly large numbers
- 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
- solve problems involving number up to two decimal places

Multiplication and Division (1)

- identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
- 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
- multiply and divide numbers mentally drawing upon known facts
- multiply and divide whole numbers and those involving decimals by 10, 100 and 1000
- 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
- solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign

Multiplication and Division: Measure

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

Spring Term

Maths Meetings: Fluent in Five and Problem Solving retrieval from Autumn term

Multiplication and Division (2 and 3)

Fractions

Number: Decimals

Percentages

• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method • 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, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	• 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 • Add and subtract fractions with the same denominator and denominators that are 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 [for example, 2/5 + 4/5= = 1 1/5 • 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 • 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 • Read, write, order and compare numbers with up to three decimal places • 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 100', and write percentages as a fraction with denominator 100, and as a decimal fraction • solve problems which require knowing percentage and decimal equivalents of 1/2 , 1/4 , 1/5 , 2/5 , 4/5 and those fractions with a denominator of a multiple of 10 or 25

Summer Term

Maths Meetings: Fluent in Five and Problem Solving retrieval from Spring term

Multiplication and Division (4)	Fractions	Geometry Shape and Angles	Measure Perimeter/Area Volume	Position and Direction	Statistics and Time
• 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 scaling by simple fractions and problems involving simple rates.	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Find fractions of amounts.	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	• estimate volume [for example, using 1 cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • understand and use approximate equivalences between metric	○ Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the	• Solve problems involving converting between units of time • Complete, read and interpret information in tables,

		• draw given angles, and measure them in degrees (°) • draw given angles, and measure them in degrees (o) • identify:angles at a point and 1 whole turn (total 360°) angles at a point on a straight line and half a turn (total 180°)other multiples of 90° • 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	units and common imperial units- pints • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. • convert between different units of metric • 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	shape has not changed.	including timetables.