The Piggott School: Charvil Primary

'Go and do Likewise' Luke 10:25, -37 The Parable of the Good Samaritan
We live with love and compassion, seeking help in times of need

Curriculum Map: Maths Year 5

Long Term Plan

Autumn	Spring	Summer
Investigating Number Systems	Reasoning with Measures	Visualising Shape
Pattern Sniffing	Discovering Equivalence	Exploring Change
Solving Calculation Problems	Reasoning and Fractions	Proportional Reasoning
Generalising Arithmetic	Solving Number Problems	Describing Position
Exploring Shape	Investigating Statistics	Measuring and Estimating

Content Declarative Knowledge 'I know' and Skills Procedural Knowledge 'I know how to'

Number				Measurement	Geometry		Statistics
Number and Place Value	Addition and Subtraction	Multiplication and Division	Fractions, Decimals & Percentages		Properties of Shapes	Position & Direction	
read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit (M1)	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) (M7)	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers (M11)	compare and order fractions whose denominators are all multiples of the same number (M22)	convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) (M34)	identify 3-D shapes, including cubes and other cuboids, from 2-D representations (M41)	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 (M47)	solve comparison, sum and difference problems using information presented in a line graph (M48)

count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 (M2)	add and subtract numbers mentally with increasingly large numbers (M8)	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers (M12)	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths (M23)	understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints (M35)	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles (M42)		complete, read and interpret information in tables, including timetables (M49)
interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero (M3)	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy (M9)	establish whether a number up to 100 is prime and recall prime numbers up to 19 (M13)	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, $^2/_5 + ^4/_5 = ^6/_5 = 1\ ^1/_5$ (M24)	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres (M36)	draw given angles, and measure them in degrees (o) (M43)		
round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 (M4)	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why (M10)	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 (M14)	add and subtract fractions with the same denominator and denominators that are multiples of the same number (M25)	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 (M37)	identify: - angles at a point and one whole turn (total 360°) - angles at a point on a straight line and $^1/_2$ a turn (total 180°) - other multiples of 90°(M44)		

solve number problems and practical problems that involve all of the above (M5)		multiply and divide numbers mentally drawing upon known facts (M15)	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams (M26)	estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] (M38)	use the properties of rectangles to deduce related facts and find missing lengths and angles (M45)		
read Roman numerals to 1000 (M) and recognise years written in Roman numerals (M6)		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 (M16)	read and write decimal numbers as fractions [for example, 0.71 = $^{71}/_{100}$] (M27)	solve problems involving converting between units of time (M39)	distinguish between regular and irregular polygons based on reasoning about equal sides and angles. (M46)		
		multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 (M17)	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents (M28)	use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling (M40)			
		recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) (M18)	round decimals with two decimal places to the nearest whole number and to one decimal place (M29)				

		solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes (M19)	read, write, order and compare numbers with up to three decimal places (M30)			
		solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign (M20)	solve problems involving number up to three decimal places (M31)			
		solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates (M21)	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 (M32)			

			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. (M33)			

Vocabulary

Number and place value	Addition and subtraction	Multiplication and division	Measure	Geometry (position and direction)	Geometry (properties of shape)	Fractions, decimals and percentages
Powers of 10	Efficient written method	Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written method	Volume Imperial units, metric units	Reflex angle Dimensions	Regular and irregular Polygons	Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths Ratio, proportion