Woodhouse Primary School

Coverage of Maths National Curriculum objectives

2021-2022

Rationale: At Woodhouse Primary School we encourage our pupils to be confident, resilient mathematicians with a love of learning and no fear of 'grappling' with difficult concepts and those expressed in an unfamiliar way. In our school, children are scaffolded, extended and supported through rapid teacher intervention, use of equipment and choice of strategies e.g. jottings/mental/resources. As such teaching is both enabling and extending.

	Year group: Year 6	Sc = Science PE = Physical Education T = Topic	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2	**Notes**
Place value	Read, write and order numbers to 10,000,000 and determine the value of each digit								
	Round any whole number to a required degree of accuracy								
	Use negative numbers in context and calculate intervals across zero				2do				
Four operations (A, S, M, D)	Multiply multi-digit numbers up to 4 digits by a 2 digit whole number using long multiplication								
	Divide numbers up to 4 digits by a 2 digit whole number using long division; interpret remainders as whole number remainders, fractions or by rounding								
	Divide numbers of up to 4 digits by a 2 digit number using short division and interpret remainders								
	Perform mental calculations including with mixed operations and large numbers								
	Know and use the vocabulary of prime numbers, ~~prime factors~~ and composite numbers **Establish whether a number up to 100 is prime and recall prime numbers up to 19** **Recognise and use ~~square and~~ cube numbers and the relevant notation** Identify common factors, common multiples and prime numbers				Catch up				
	Use their knowledge of the order of operations to carry out calculations involving the 4 operations								
	Solve problems involving x/÷ including using knowledge of multiples/factors/squares/cubes and scaling by simple fractions Solve multi-step problems involving the 4 operations								
	Use estimation to check answers to calculations and determine and appropriate degree of accuracy								
Fractions	Use common factors to simplify fractions; use common multiples to express fractions in the same den.								
	Compare and order fractions including fractions >1								
	Add and subtract fractions with different den. and mixed numbers								
	Multiply simple pairs of proper fractions writing the answer in its simplest form								
	Divide proper fractions by whole numbers								
	Read and write decimal numbers as fractions Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction								
	Read, write, order and compare numbers with up to 3dp Identify the value of each digit in numbers to 3dp and x/÷ numbers by 10/100/1000 giving answers to 3dp								
	Multiply 1 digit numbers with up to 2 dp by whole numbers				FB4				
	Use written division methods in cases where the answer has up to 2dp								
	Round decimals with 2dp to the nearest whole number or 1dp Solve problems which require answers to be rounded to a specific degree of accuracy								

	Recognise the % symbol; write percentages as a fraction with denominator 100 and as a decimal **Solve problems which require knowing percentage and decimal equivalents of ½, ¼, 1/5, 2/5, 4/5 and fractions with a denominator of a multiple of 10 or 25** Recall and use equivalences between simple fractions, decimals and percentages							
Ratio/proportion	Solve problems involving the relative sizes of two quantities where missing values can be found using integer x/÷ facts							
	Solve problems involving the calculation of percentages and the use of percentages for comparison							
	Solve problems involving similar shapes where the scale factor is known or can be found							
	Solve problems involving unequal sharing and grouping using knowledge of fractions/multiples							
Algebra	Use simple formulae							
	Generate and describe linear number sequences							
	Express missing number problems algebraically							
	Find pairs of numbers that satisfy an equation with 2 unknowns							
	Enumerate possibilities of combinations of two variables							
Measure	**Solve problems converting between units of time**							
	Solve problems involving the conversion of units of measure using decimal notation up to 3dp							
	Convert between different units of metric measure (e.g. km/m, cm/m, cm/mm, g/kg, l/ml) Use, read, write and convert between standard units using decimal notation of up to 3dp							
	Understand the approximate equivalences between metric units and common imperial units (in, lb, pints)							
	Convert between miles and km							
	Recognise that shapes with the same areas can have different perimeters and vice versa							
	Recognise when it is possible to use formulae for area and volume of shapes							
	Calculate the area of parallelograms and triangles							
	Estimate volume and capacity Calculate, estimate and compare volume of cubes/cuboids using standard units							
Geometry	Draw 2D shapes using given dimensions and angles							
	Identify 3D shapes from 2D representations Recognise, describe and build simple 3D shapes (including making nets)							
	Use the properties of rectangles to deduce related facts including finding missing lengths/angles Compare and classify geometric shapes based on their properties and find unknown angles in any triangles, quadrilaterals and regular polygons							
	Illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius			Catch up				
	Estimate and compare acute, obtuse and reflex angles							
	Draw given angles and measure them in degrees							
	Identify: angles at a point and a whole turn; angles at a point and on a straight line; other multiples of 90° Recognise angles at a point, on a straight line or vertically opposite to find missing angles							
	Describe positions on the full coordinate grid (all 4 quadrants)							
	Identify, describe and represent the position of a shape following a reflection or translation Draw and translate simple shapes on the coordinate plane and reflect them in the axes							
Stats	Interpret and construct pie charts and line graphs and use these to solve problems							
	Calculate and interpret the mean as an average							

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