COLWICH Primary School Curriculum Statement
Maths Progression Grid (3)

God is love, so we: Learn to Love, Love to Learn, Learn for Life

The progression grid outlines the specific knowledge which pupils are expected to learn in each phase, over a two year cycle, along with the specific vocabulary which supports this understanding.

Threshold Concepts

	To use measure	Describe position, direction and movement	To use statistics
At EYFS	*Make comparisons between objects relating to size, length, weight and capacity. * Compare length, weight and capacity	n/a	n/a

At Key Stage 1	**Year 1**
	Measurement - Compare, describe and solve practical problems for:
	• *lengths and heights* [e.g. long/short, longer/shorter, tall/short, double/half]
	• *mass/weight* [e.g. heavy/light, heavier than, lighter than]
	• *capacity and volume* [for example, full/empty, more than, less than, half, half full, quarter]
	• *time* [e.g. quicker, slower, earlier, later]
	• Measure and begin to record: lengths and heights, mass/weight, capacity and volume, and time (hours, minutes, seconds)
	• Recognise and know the value of different denominations of coins and notes
	• Sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]
	• Recognise and use language relating to dates, including days of the week, weeks, months and years
	• *Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.*
	
	Year 2
	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
	• Compare and order lengths, mass, volume/capacity and record the results using >, < and =
	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
	• Find different combinations of coins that equal the same amounts of money
	• ***Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change***
	• Compare and sequence intervals of time
	  • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
	  • Know the number of minutes in an hour and the number of hours in a day.
		Year 1
		• Describe position (such as top, middle, bottom, between, near, inside), and describe direction and movement including whole, half, quarter and three quarter turns.
		
		Year 2
		• Order and arrange combinations of mathematical objects in patterns and sequences
		• *Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and as right angles for quarter, half and three-quarter turns (c/wise and a/clockwise).*
			Year 1
			n/a
			
			Year 2
			• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables
			• Ask & answer simple questions by counting the number of objects in each category and sorting categories by quantity
			• *Ask and answer questions about totalling and comparing categorical data.*

At lower Key Stage 2	**Year 3** • *Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)* • Measure the perimeter of simple 2-D shapes • *Add and subtract amounts of money to give change, using both £ and p in practical contexts* • *Tell and write the time from an analogue clock*, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. • Know the number of seconds in a minute and the number of days in each month, year and leap year • Compare durations of events [for example to calculate the time taken by particular events or tasks]. **Year 4** • *Convert between different units of measure [for example, kilometre to metre; hour to minute]* • Measure and calculate the perimeter of rectilinear figure (including squares) in centimetres and metres • Find the area of rectilinear shapes by counting squares • Estimate, compare and calculate different measures, including money in pounds and Pence • Read, write and convert time between analogue and digital 12- and 24-hour clocks • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	**Year 3** n/a **Year 4** • Describe positions on a 2-D grid as coordinates in the first quadrant • Describe movements between positions as translations of a given unit to the left/right and up/down • *Plot specified points and draw sides to complete a given polygon*.	**Year 3** • *Interpret and present data using bar charts, pictograms and tables* • Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables **Year 4** • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • *Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.*
At upper Key Stage 2	**Year 5** • *Convert between different units of metric measure (e.g. 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 • *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 (cm^2) and square metres (m^2) and estimate the area of irregular shapes* • Estimate volume [e.g using 1 cm^3blocks to build cuboids (including cubes)] and capacity [e.g. using water] • Solve problems involving converting between units of time • Use all four operations to solve problems involving measure [e.g. length, mass, volume, money] using decimal notation, including scaling. **Year 6** • Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate • *Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places* • Convert between miles and kilometres • 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 • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3].	**Year 5** • 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. **Year 6** • *Describe positions on the full coordinate grid (all four quadrants)* • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes.	**Year 5** • Solve comparison, sum and difference problems using information presented in a line graph • *Complete, read and interpret information in tables, including timetables.* **Year 6** • *Interpret and construct pie charts and line graphs and use these to solve problems* • *Calculate and interpret the mean as an average.*

Knowledge, Context and Vocabulary

	To use measure	Describe position, direction and movement	To use statistics
EYFS	Measure, size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few, nearly, close to, about the same as, just over, just under <u>Length</u> Metre, length, height, width, depth, long, short, tall, high, low, wide, narrow, thick, thin, longer, shorter, taller, higher … and so on, longest, shortest, tallest, highest … and so on, far, near, close <u>Weight</u> weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest, scales <u>Capacity and Volume</u> full, empty, half full, holds, container <u>Time</u> time, days of the week, Monday, Tuesday …day, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinner time, playtime, today, yesterday, tomorrow, before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly, slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes longer, takes less time, hour, o'clock, clock, watch, hands <u>Money</u> money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay	position, over, under, above, below, top, bottom, side, on, in, outside, inside, around, in front, behind, front, back, beside, next to, opposite, apart, between, middle, edge, corner, direction left, right up, down forwards, backwards, sideways ,across, next to, close, near, far along, through to, from, towards, away from, movement, slide, roll, turn, stretch, bend whole turn, half turn	count, sort group, set list
Year 1	measurement, roughly <u>Length</u> centimetre, ruler, metre stick <u>Weight</u> kilogram, half kilogram <u>Capacity and Volume</u> litre, half litre, capacity, volume, more than, less than, quarter full <u>Time</u> months of the year (January, February ...), seasons: (spring, summer, autumn, winter) weekend, month, year, earlier, later, first, midnight, date how long ago? how long will it be to …? how long will it take to …? how often? always, never, often, sometimes, usually, once, twice, half past, quarter past, quarter to clock face, hour hand, minute hand, hours, minutes <u>Money</u> change, dear, costs more, cheap, costs less, cheaper, costs the same as how much …? how many …? total	underneath, centre, journey, quarter turn, three-quarter turn	vote table
Year 2	measuring scale <u>Length</u> further, furthest, tape measure <u>Weight</u> gram <u>Capacity and Volume</u> millilitre, contains	route, higher, lower, clockwise, anticlockwise, right angle, straight line	tally, graph, block graph, pictogram, represent, label, title, most popular, most common,

	Temperature temperature, degree Time fortnight, 5,10,15….minutes past, digital/analogue clock/watch, timer, seconds Money bought, sold		least popular, least common
Year 3	division, approximately Length millimetre, kilometre, mile, distance apart … between … to … from …. perimeter Weight All of the above Capacity and Volume All of the above Temperature centigrade Time century, calendar, earliest, latest, a.m p.m. Roman numerals, 12-hour clock time, 24-hour clock time Money All of the above	compass point, north, south, east, west, N, S, E, W horizontal, vertical, diagonal angle … is a greater/smaller angle than acute angle, obtuse angle	chart, bar chart, frequency table Carroll diagram, Venn diagram axis, axes diagram
Year 4	unit, standard unit, metric unit Length breadth, edge, area, covers, square centimetre (cm2) Weight mass: big, bigger, small, smaller weight: heavy/light, heavier/lighter, heaviest/ lightest Capacity and Volume measuring cylinder Time leap year, millennium, noon, date of birth, timetable, arrive, depart Money All of the above	north-east, north-west, south-east, south-west, NE, NW, SE, SW translate, translation rotate, rotation degree reflection ruler, set square, angle measurer, compass	survey, questionnaire, data
Year 5	imperial unit, Length square metre (m2), square millimetre (mm2) Weight All of the above Capacity and Volume pint, gallon Time All of the above Money discount, currency	coordinate, protractor	database, bar chart line chart, line graph, maximum/minimum value, outcome

Year 6	*All the above* *Length* yard, foot, feet, inch, inches, circumference Weight tonne, pound, ounce Capacity and Volume centilitre, cubic centimetres(cm3), cubic metres (m3), cubic millimetres (mm3), cubic kilometres (km3), Time Greenwich Mean Time, British Summer Time, International Date Line Money profit, loss	reflex angle	pie chart, mean mode, median, range as estimates statistics, distribution