



# YEAR 6 COVERAGE

## Expectations

- Teachers should plan to cover all objectives in a year
- Some objectives may need longer than others based on teacher assessment of children's understanding
- Teachers should plan to teach objectives so children acquire the knowledge needed to be successful but all children should also be developing their problem-solving skills across the different areas of Maths
- Activities should be context driven – money, measures, real life – where possible

**At the end of each half term (minimum) please highlight objectives which have been taught. This will help you monitor your coverage throughout the year. If you are returning to an objective, highlight over it in a different colour or add an asterisk. Note: this is not an assessment document.**

## REASONING AND PROBLEM SOLVING

### Developed Throughout Key Stage Two

- Use mathematics as an integral part of classroom activities, including in other areas of the curriculum
- Be able to recall and apply knowledge rapidly and accurately
- Conjecture relationships and generalisations
- Develop an argument, justification and/or proof using mathematical language
- Explain why an answer is correct
- Estimate solutions and know when an answer cannot be correct
- Try different approaches and find ways of overcoming difficulties when solving problems
- Apply mathematics to routine and non-routine problems
- Break down problems into a series of smaller steps
- Persevere in seeking solutions
- Follow a line of enquiry
- Collate, organise and compare information
- Present information and results in a clear and organised way
- Read and spell mathematical vocabulary accurately
- Organise work, check results and explain thinking

# NUMBER

YEAR	NUMBER, PLACE VALUE & ALGEBRA	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY & DECIMALS	FRACTIONS & PERCENTAGES	STATISTICS
6	<b>6NV1</b> Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	<b>6AS1</b> Solve addition and subtraction multi-step problems in contexts, deciding which operations to use and why	<b>6MD1</b> Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method [long multiplication]	<b>6MY1(D)</b> Multiply and divide decimals by whole numbers in practical contexts	<b>6FP1</b> Use common factors to simplify fractions	<b>6ST1</b> Interpret and construct pie charts and use these to solve problems using knowledge of angles, fractions and percentages
	<b>6NV2</b> Round any whole number to required degree of accuracy [e.g. to the nearest 10, 20, 50 etc]	<b>6AS2</b> Use negative numbers in context, and calculate intervals across zero	<b>6MD2</b> Divide numbers up to 4 digits by a two-digit number using the formal written method [short division]	<b>6MY2(D)</b> Identify the value of each digit in numbers given to 3 decimal places	<b>6FP2</b> Use common multiples to express fractions in the same denominator	<b>6ST2</b> Link percentages or 360° to calculate angles of a pie chart
	<b>6NV3</b> Use symbols and letters to represent variables and unknowns	<b>6AS3</b> Add and subtract positive and negative integers [e.g. to measure temperature] using the number line	<b>6MD3</b> Divide numbers up to 4 digits by a two-digit whole number using the formal written method [long division]		<b>6FP3</b> Compare and order fractions, including fractions >1	<b>6ST3</b> Interpret/construct line graphs relating 2 variables and use these to solve problems from own enquiry
	<b>6NV4</b> Express missing number problems algebraically	<b>6AS4</b> Explore the order of operations using brackets	<b>6MD4</b> Interpret remainders as whole number remainders, fractions or by rounding, as appropriate for context		<b>6FP4</b> Add and subtract fractions with different denominators and mixed numbers, using concept of equivalent fractions	<b>6ST4</b> Calculate/interpret the mean as an average knowing when it is appropriate to find mean of a data set
	<b>6NV5</b> Generate/describe linear number sequences		<b>6MD5</b> Identify common factors, common multiples and prime numbers		<b>6FP5</b> Multiply simple pairs of proper fractions, writing the answer in its simplest form [e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ]	
	<b>6NV6</b> Use simple formulae		<b>6MD6</b> Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places		<b>6FP6</b> Divide proper fractions by whole numbers [e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$ ]	
	<b>6NV7</b> Find pairs of numbers that satisfy an equation with 2 unknowns		<b>6MD7</b> Multiply one-digit numbers with up to two decimal places by whole numbers		<b>6FP7</b> Calculate decimal fraction equivalents for a simple fraction.	
	<b>6NV8</b> Enumerate all possibilities of combinations of 2 variables		<b>6MD8</b> Use written division methods in cases where the answer has up to two decimal places		<b>6FP8</b> Recall/use equivalences between simple fractions, decimals and percentages, including in different contexts	
		<b>6MD9</b> Explore the order of operations using brackets		<b>6FP9</b> Associate a fraction with division		
		<b>6MD10®</b> Solve problems involving relative sizes of 2 quantities where missing values can be found using integer multiplication and division facts. Use notation (a:b) to record ratio/proportion		<b>6FP10®</b> Solve problems involving unequal sharing/grouping using knowledge of fractions and multiples Use notation (a:b) to record ratio/proportion.		
				<b>6FP11®</b> Solve problems involving the calculation of percentages [e.g. 15% of 360] and use percentages for comparison		

MEASUREMENT				GEOMETRY		
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
6	<b>6LG1</b> Use, read and convert between standard units, converting measures of length from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	<b>6MS1</b> Use, read and convert between standard units, converting measures of mass from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	<b>6CV1</b> Use, read and convert between standard units, converting measures of volume from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	<b>6TM1</b> Use, read and convert between standard units, converting measures of time from a smaller unit to a larger unit, and vice versa, using decimal notation to 3 decimal places	<b>6SH1</b> Draw 2D shapes using given dimensions and angles using conventional markings and labels for lines and angles	<b>6PS1</b> Extend knowledge of one quadrant to all four quadrants including the use of negative numbers
	<b>6LG2</b> Convert between miles and kilometres	<b>6MS2</b> Know approximate conversions to tell if an answer is sensible	<b>6CV2</b> Calculate and compare volume of cubes and cuboids using centimetre cubed (cm <sup>3</sup> )	<b>6TM2</b> Know approximate conversions to tell if an answer is sensible	<b>6SH2</b> Recognise and describe simple 3D shapes	<b>6PS2</b> Draw and label a pair of axes in all four quadrants with equal scaling
	<b>6LG3</b> Know approximate conversions to tell if an answer is sensible	<b>6MS3</b> Recognise proportionality in context when the relations between quantities are the same ratio	<b>6CV3</b> Calculate and compare volume of cubes and cuboids using cubic metres (m <sup>3</sup> )	<b>6TM3</b> Recognise proportionality in context when the relations between quantities are the same ratio	<b>6SH3</b> Derive unknown angles and lengths from known measurements	<b>6PS3</b> Describe positions on the full co-ordinate grid (all four quadrants)
	<b>6LG4</b> Recognise proportionality in context when the relations between quantities are the same ratio		<b>6CV4</b> Calculate and compare volume of cubes and cuboids using mm <sup>3</sup> and km <sup>3</sup>	<b>6TM4</b> Know compound units for speed [e.g. miles per hour]	<b>6SH4</b> Calculate the area of parallelograms using related area of rectangles and understanding/using formulae	<b>6PS4</b> Draw shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane
			<b>6CV5</b> Know approximate conversions to tell if an answer is sensible		<b>6SH5</b> Calculate the area of triangles	<b>6PS5</b> Draw shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane, and reflect them in the axis
			<b>6CV6</b> Recognise proportionality in context when the relations between quantities are the same ratio		<b>6SH6</b> Recognise shapes with the same area can have different perimeters and vice versa	<b>6PS6</b> Draw and translate simple shapes [rectangles including squares, parallelograms and rhombi] on the co-ordinate plane
					<b>6SH7</b> Build simple 3D shapes, including making nets	<b>6PS7</b> Predict missing co-ordinates using the properties of shapes
					<b>6SH8</b> Compare/classify geometric shapes based on properties/sizes	
					<b>6SH9</b> Illustrate/name parts of circles, (radius, diameter and circumference) Know diameter is twice the radius	
					<b>6SH10</b> Recognise angles where they meet at a point. Find missing angles.	
				<b>6SH11</b> Recognise where angles are on a straight line; find missing angles.		
				<b>6SH12</b> Recognise angles where they are vertically opposite; find missing angles.		
				<b>6SH13</b> Find unknown angles in any triangles		
				<b>6SH14</b> Recognise when to use formulae for area/volume of shapes		
				<b>6SH15</b> Find unknown angles in any regular quadrilaterals and polygons		
				<b>6SH16</b> Express relationships algebraically [e.g. $d = 2r$ ; $a = 180 - (b+c)$ ]		
				<b>6SH17</b> Solve problems involving similar shapes where scale factor is known or can be found. Use notation (a:b) to record ratio/proportion		