Lowbrook Maths Curriculum Long and Medium Term Planning

Curriculum Maps

for

Progress in Understanding Mathematics

Termly content for Year 2

- Blue highlighting denotes specific material moved down from a higher year.
- Yellow highlighting denotes content not explicit in the PNS for the year, to help you transfer from your existing lesson planning.
- **Purple text** denotes repeated statements.
- *Italics* indicate illustrative examples, non-statutory notes and guidance from the new PoS. (NB most of the non-statutory notes and guidance are new, from a higher year, or beyond the PNS.)

Year 2	Autumn	Spring	Summer
NUMBER			
Number and place value	• count in steps of 2 and 5 from 0, and tens from any number, forward or backward *e.g. 93, 83, 73, 63, …* • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • read and begin to write numbers to at least 100 in numerals and in words *e.g. forty* • compare and order numbers from 0 up to 100 • use place value and number facts to solve problems	• count in steps of 2, 3, and 5 from 0, and tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words *e.g. forty-five* • compare and order numbers from 0 up to 100; use <, > and = signs • use place value and number facts to solve problems. • *partition numbers in different ways e.g. 23 = 20 + 3 = 10 + 13*	• count in steps of 2, 3, and 5 from 0, and tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words • compare and order numbers from 0 up to 100; use <, > and = signs • use place value and number facts to solve problems. • *partition numbers in different ways e.g. 23 = 20 + 3 = 10 + 13*
Addition and subtraction	• add and subtract numbers using concrete objects, pictorial	• add and subtract numbers using concrete objects, pictorial	• add and subtract numbers using concrete objects, pictorial

	representations, and mentally, including: ○ a two-digit number and ones ○ a two-digit number and tens *e.g. 87 – 30 = 57* • solve problems with addition and subtraction: ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ○ applying their increasing knowledge of mental and written methods • begin to recall and use addition and subtraction facts to 20, *e.g. 19 – 7 = 12* and derive and use related facts up to 100 • *e.g. 30 = 90 – 60* • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. • show that addition of two numbers	representations, and mentally, including: ○ a two-digit number and ones ○ a two-digit number and tens ○ two two-digit numbers *e.g. 34+29* ○ adding three one-digit numbers *e.g. 6 + 5 + 4* • solve problems with addition and subtraction: ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ○ applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.	representations, and mentally, including: ○ a two-digit number and ones ○ a two-digit number and tens ○ two two-digit numbers *e.g. 63-29* ○ adding three one-digit numbers *e.g. 9 + 7 + 9* • solve problems with addition and subtraction: ○ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ○ applying their increasing knowledge of mental and written methods • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

	can be done in any order (commutative) and subtraction of one number from another cannot	• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • *use the language 'sum' and 'difference' e.g. find two numbers with a difference of 6 (3 and 9, 10 and 16..);*	• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • *use the language 'sum' and 'difference' e.g. three numbers sum to 12, two numbers are 3 and 7, what is the third number?*

Multiplication and division	• begin to recall and use multiplication and division facts for the 2, and 10 multiplication tables, including recognising odd and even numbers *e.g. 22 ÷ 2 = 11* • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • *recognise and use the inverse relationship between multiplication and division in calculations* • *relate multiplication and division to grouping and sharing discrete(e.g. counters and continuous quantities e.g. water* • solve problems involving multiplication and division, using	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • *recognise and use the inverse relationship between multiplication and division in calculations* • *relate multiplication and division to grouping and sharing discrete e.g. counters and continuous quantities e.g. water, and relating these to fractions and measures e.g. 40cm ÷ 2 = 20cm; 20cm is ½ of 40cm*	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • *recognise and use the inverse relationship between multiplication and division in calculations* • *relate multiplication and division to grouping and sharing discrete e.g. counters and continuous quantities e.g. water, and relating these to fractions and measures e.g. 40cm ÷ 2 = 20cm; 20cm is ½ of 40cm*

	materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts *e.g. share 18 counters between 3 children*	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts *e.g. there are 10 pencils in a box, I have 5 boxes and 3 spare pencils, how many do I have altogether?*
Fractions	• recognise, name and write fractions $^1/_3$, $^1/_4$, 2/4 and $\frac{3}{4}$ of a shape	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity *e.g. how long is $^1/_3$ of a ribbon which is 60 cm long?* • write simple fractions e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of two quarters and one half. • *count in fractions e.g. 0, $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, …*	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half. • *count in fractions e.g. $3\frac{1}{4}$, $3^2/_4$, $3\frac{3}{4}$, 4, $4\frac{1}{4}$, …*
MEASUREMENT			
Measurement	• choose and use appropriate standard units to estimate and measure **length/height** in any direction (m/cm) to the nearest appropriate unit, using rulers	• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); **mass** (kg/g) to the nearest appropriate unit, using rulers, scales	• 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

	• compare and order lengths 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 to equal the same amounts of money • *e.g. find different ways to make 25p* • solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change e.g. *I buy a toy for £14; how much change do I get from £20?* • compare and sequence intervals of time • tell and write the time quarter past/to the hour and draw the hands on a clock face to show these times *e.g. draw the hands on a clock face to show ¼ to 6,*	• compare and order lengths, masses 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 to 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 e.g. *I buy 2 bags of sweets for 20p each, how much change will I get from 50p?* • 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.	appropriate unit, using rulers, scales, thermometers and measuring vessels • compare and order lengths, masses, volume/capacity and record the results using >, < and = • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value *e.g. make 73p using the fewest coins* • find different combinations of coins to 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 e.g. *I buy a cake for 60p and a biscuit for 25p, how much change will I get from £1?* • compare and sequence intervals of time • tell and write the time to five

	making sure the hour hand is located correctly		minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.
GEOMETRY			
Properties of shapes	• identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line • *draw lines and shapes using a straight edge* • identify and describe the properties of 3-D shapes, including the number of vertices and faces • compare and sort common 2-D and 3-D shapes and everyday objects • *e.g. sort 3-D shapes in different ways such as whether they have triangular faces, all straight edges…* • *recognise and name, polygons e.g. pentagon, hexagon, octagon and cones*	• identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line • *draw lines and shapes using a straight edge* • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • compare and sort common 2-D and 3-D shapes and everyday objects *e.g. sort 3-D shapes in different ways such as whether they are prisms, whether they have more than 8 edges…* • *recognise and name quadrilaterals, polygons e.g. pentagon, hexagon, octagon, prisms and cones*	• identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line • *draw lines and shapes using a straight edge* • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • compare and sort common 2-D and 3-D shapes and everyday objects *e.g. sort 2-D shapes in different ways such as whether they are quadrilaterals and have line symmetry….* • *recognise and name quadrilaterals, polygons e.g. pentagon, hexagon, octagon, prisms and cones*

		• identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid	• identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid
Position and direction	• order and arrange combinations of mathematical objects in patterns, *including those in different orientations e.g. a turning shape, draw the next shape in the pattern* 	• order and arrange combinations of mathematical objects in patterns, *including those in different orientations* • use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. • *Use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (e.g. pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles)*	• order and arrange combinations of mathematical objects in patterns, *including those in different orientations* • use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. • *Use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (e.g. pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles)*
STATISTICS			

Use and interpret data	• interpret and begin to construct simple pictograms, tally charts, block diagrams and simple tables • answer simple questions by counting the number of objects in each category and sorting the categories by quantity • answer questions about totalling and comparing categorical data.	• interpret and construct simple pictograms *e.g. where the symbol represents 2, 5 or 10 units,* tally charts, block diagrams and simple tables • answer simple questions by counting the number of objects in each category and sorting the categories by quantity • answer questions about totalling and comparing categorical data.	• interpret and construct simple pictograms *e.g. where the symbol represents 2, 5 or 10 units,* tally charts, block diagrams and simple tables • answer simple questions by counting the number of objects in each category and sorting the categories by quantity • answer questions about totalling and comparing categorical data.