Lowbrook Maths Curriculum Long and Medium Term Planning

Curriculum Maps

for

Progress in Understanding Mathematics

Termly content for Year 3

- <mark>Blue highlighting</mark> denotes specific material moved down from a higher year.
- <mark>Yellow highlighting</mark> 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 3	Autumn	Spring	Summer
NUMBER			
Number and place value	• Count from 0 in multiples of 4, 50 and 100; find 10 or 100 more or less than a given number *e.g. 10 more than 395* • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Identify, represent and estimate numbers using different representations *including those related to measure e.g. using place value cards to show 985 = 900 + 80 + 5; tally marks; base 10 apparatus.* • *Apply partitioning related to place value using varied and increasingly complex problems e.g. 146 = 100 and 40 and 6, 146 = 130 and 16* • Read and write numbers to at least 1000 in numerals • Compare and order numbers up to 1000 • Solve number problems and practical problems involving place value and rounding.	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Identify, represent and estimate numbers using different representations *including those related to measure* • *Apply partitioning related to place value using varied and increasingly complex problems* • Read and write numbers to at least 1000 in numerals and in words *e.g. three hundred and forty-six* • Compare and order numbers up to 1000 • Solve number problems and practical problems involving place value and rounding	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Identify, represent and estimate numbers using different representations *including those related to measure* • *Apply partitioning related to place value using varied and increasingly complex problems* • Read and write numbers to at least 1000 in numerals and in words • Compare and order numbers up to 1000 • Solve number problems and practical problems involving place value and rounding

Addition and subtraction	• Add and subtract numbers mentally, including:
	  o a three-digit number and ones
	  o a three-digit number and tens
	  o a three-digit number and hundreds *e.g. 858 – 300*
	  o *two-digit numbers where the answer could exceed 100 e.g. 99+18*
	
	• Add and subtract numbers with up to three digits
	
	• Estimate the answer to a calculation and use inverse operations to check answers *e.g. 702 – 249 is approximately 700 – 250 = 450; check 453 + 249 = 702*
	
	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction *e.g. investigate the numbers which could go in the boxes when*
	
	2 ×☐*= 7 +*☐
		• Add and subtract numbers mentally, including:
		  o a three-digit number and ones
		  o a three-digit number and tens *e.g. 476 + 50*
		  o a three-digit number and hundreds.
		  o *two-digit numbers where the answer could exceed 100*
		
		• Add and subtract numbers with up to three digits, using formal written methods of columnar addition
		
		• Estimate the answer to a calculation and use inverse operations to check answers
		
		• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction *e.g. There are 46 boys and 58 girls in Year 3, but 12 children are away; how many Year 3 children are at school?*
			• Add and subtract numbers mentally, including:
			  o a three-digit number and ones
			  o a three-digit number and tens *e.g. 824 – 30*
			  o a three-digit number and hundreds
			  o *two-digit numbers where the answer could exceed 100 e.g. 68+47*
			
			• Add and subtract numbers with up to three digits, using the efficient written methods of columnar addition and subtraction
			
			• Estimate the answer to a calculation and use inverse operations to check answers
			
			• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction *e.g. investigate the numbers which could go in the boxes when*
			
			☐ 3 = 2 ☐ ☐ 6

Multiplication and division	• Recall and use multiplication and division facts for the 3 and 4	• Recall and use multiplication and division facts for the 3, 4 and 8	• Recall and use multiplication and division facts for the 3, 4 and 8

	multiplication tables • *Develop efficient mental methods, for example, using commutativity e.g. 2 × 7 × 5 = 2 × 5 × 7 = 10 × 7 = 70 and multiplication and division facts to derive related facts e.g. using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3 to derive 30 × 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3* • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know including for two-digit numbers times one-digit numbers, using mental methods *e.g. 22×3* • Solve problems, ==including missing number problems==, involving multiplication and division *e.g. 90 = 3☐ ×*	multiplication tables • *Develop efficient mental methods, for example, using commutativity and multiplication and division facts to derive related facts* • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and ==progressing to formal written methods== *e.g. 34×5 or 64÷4* • Solve problems, ==including missing number problems==, involving ☐ multiplication and division *e.g. 240 = × 4*	multiplication tables • *Develop efficient mental methods, for example, using commutativity e.g. 4 × 12 × 5 = 4 × 5 × 12 = 20 × 12 = 240 and multiplication and division facts to derive related facts* • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and ==progressing to formal written methods== *e.g. 46×8 or 81÷3* • Solve problems, ==including missing number problems==, involving multiplication and division, ==including integer scaling problems== *(e.g. change a recipe for 2 people to make enough for 6 people)* and ==correspondence problems in which n objects are connected to m objects.== *e.g. 3 hats and 4 coats, how many different outfits? Or Share 6 cakes equally between 4 children.*
Fractions	• ==Count up and down in tenths;== recognise that tenths arise from	• ==Count up and down in tenths;== recognise that tenths arise from	• ==Count up and down in tenths;== recognise that tenths arise from

dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 *e.g. 3 cakes shared between 10 children gives $^3/_{10}$ each.*

- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators *e.g. find $^1/_3$ of 9 beads, then $^2/_3$ of 9 beads*

- *understand the relation between unit fractions as operators (fractions of), and division by integers e.g. to find $^1/_3$, you divide by 3; to find $^1/_5$, you divide by 5*

- Recognise and use fractions as numbers *on the number line*: unit fractions and non-unit fractions with small denominators

- Recognise and show, using diagrams, equivalent fractions with small denominators *e.g. $\frac{1}{2}$ = $^3/_6$*

- Solve problems that involve fractions *e.g. Amy ate $\frac{1}{4}$ of her 12 sweets and Ben ate $\frac{1}{2}$ of his 8 sweets, who ate*

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dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

- *Connect tenths to place value, decimal measures and to division by 10 e.g. $^7/_{10}$ = 0.7*

- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators *e.g. there are 8 marbles and three of them are red; what fraction of the marbles are red?*

- *Understand the relation between unit fractions as operators (fractions of), and division by integers e.g. to find $^1/_3$, you divide by 3; to find $^1/_5$, you divide by 5*

- Recognise and use fractions as numbers *on the number line:* unit fractions and non-unit fractions with small denominators

- *Recognise and show, using diagrams, equivalent fractions with small denominators*

- Compare and order unit fractions,

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dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10

- *Connect tenths to place value and decimal measures (not restricted to decimals between 0 and 1) and to division by 10 e.g. $^{13}/_{10}$ = 1.3*

- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators *e.g. find $^4/_5$ of 30*

- *Understand the relation between unit fractions as operators (fractions of), and division by integers e.g. to find $^1/_3$, you divide by 3; to find $^1/_5$, you divide by 5*

- Recognise and use fractions as numbers *on the number line:* unit fractions and non-unit fractions with small denominators

- *Recognise and show, using diagrams, equivalent fractions with small denominators*

- Add and subtract fractions with the same denominator within one

	more sweets?	and fractions with the same denominators *e.g. put in order* $^3/_8$, $^1/_8$, $^7/_8$, $^5/_8$ • Solve problems that involve fractions	*whole e.g. If* $^1/_3$ *of a cake is eaten then* $^2/_3$ *remains or* $^5/_7 + ^1/_7 = ^6/_7$ • Compare and order unit fractions, and fractions with the same denominators *e.g. put in order* $^1/_2$, $^1/_8$, $^1/_4$, $^1/_6$ • Solve problems that involve fractions *e.g. Ali, Ben and Cara have 24 fish.* $^2/_3$ *of them belong to Ali,* $\frac{1}{4}$ *belong to Ben and the rest belong to Cara; how many fish belong to Cara?*

MEASUREMENT

Measurement	• Measure, compare, add and subtract: **length** (m/cm/mm) *e.g. how much ribbon is left when 36cm is cut from 1m? Which is longer: 6$\frac{1}{2}$cm or 62mm? 5m or 450cm? Measure and draw lines to the nearest $\frac{1}{2}$ cm. Know the approximate length of a book, a room, a handspan…* • Add and subtract amounts of money to give change, using both £ and p in practical contexts *e.g. I buy 2 packs of sweets for 75p each; how much change will I get from £2?*	• Measure, compare, add and subtract: length (m/cm/mm) **mass** (kg/g) *e.g. find 3 vegetables which weigh between 100g and 300g. Read 250g on a scale labelled every 100g. Which is heavier: 1kg 300g or 1$\frac{1}{2}$kg? Know the approximate mass of a book, an apple, a baby, a man…* • Add and subtract amounts of money to give change, using both £ and p in practical contexts *e.g. I have a £2 coin, two £1 coins, three 50p coins, a 20p and seven 5p coins;*	• measure, compare, add and subtract: length (m/cm/mm); mass (kg/g); **volume/capacity** (l/ml) *e.g. Read 300ml on a scale labelled every 200ml. Order a set of containers by capacity, using a measuring jug and water to check. Know the approximate capacity of a cup, a jug, a bucket…* • measure the perimeter of simple 2-D shapes *e.g. measure accurately the sides of a triangle in cm or mm, in order to find the perimeter*

	• Tell and write the time from an analogue clock *e.g. draw hands on a clock face to show 'ten to four', making sure the hour hand is located correctly* • Record and compare time in terms of ==seconds==, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight • Compare durations of events, for example to calculate the time taken by particular events or tasks.	*how much more do I need to make £10?* • Tell and write the time from an analogue clock, ==including using Roman numerals from I to XII==, and 12-hour *digital* clocks • Estimate and read time with increasing accuracy to the ==nearest minute==; record and compare time in terms of ==seconds==, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight • Compare durations of events, for example to calculate the time taken by particular events or tasks. • ==Know the number of seconds in a minute and the number of days in each month, year and leap year==	• add and subtract amounts of money to give change, using both £ and p in practical contexts *e.g. Ali is saving 80p each week, to buy a toy costing £5; how many weeks will it take him?* • tell and write the time from an analogue clock, ==including using Roman numerals from I to XII==, and 12-hour ==and 24-hour== *digital* clocks • estimate and read time with increasing accuracy to the ==nearest minute==; record and compare time in terms of ==seconds==, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight • Compare durations of events, for example to calculate the time taken by particular events or tasks. • ==Know the number of seconds in a minute and the number of days in each month, year and leap year==
GEOMETRY			
Properties of shapes	• Draw 2-D shapes and make 3-D shapes using modelling materials;	• Draw 2-D shapes and make 3-D shapes using modelling materials;	• Draw 2-D shapes and make 3-D shapes using modelling materials;

	recognise 3-D shapes in different orientations; and describe them *e.g. number of faces, edges and vertices (singular: vertex), e.g. guess my shape: it has a square face and four triangular faces (square-based pyramid)*	recognise 3-D shapes in different orientations; and describe them • Recognise that angles are a property of shape or a description of turn • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • *Describe the properties of shapes using accurate language, including symmetrical/not symmetrical, lengths of lines, and acute and obtuse angles e.g. sort triangles into those with an obtuse angle and those without*	recognise 3-D shapes in different orientations; and describe them • Recognise that angles are a property of shape or a description of turn • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • *Describe the properties of shapes using accurate language, including symmetrical/not symmetrical, lengths of lines, and acute and obtuse angles* • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
STATISTICS			
Use and interpret data	• Interpret and present data using bar charts, pictograms and tables, *understanding and using simple scales e.g. 2, 5, 10 units per cm with increasing accuracy.*	• Interpret and present data using bar charts, pictograms and tables, *understanding and using simple scales e.g. 2, 5, 10 units per cm with increasing accuracy.*	• Interpret and present data using bar charts, pictograms and tables, *understanding and using simple scales e.g. 2, 5, 10 units per cm with increasing accuracy.*

• Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables. • *Interpret data presented in many contexts*	• Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables. • *Interpret data presented in many contexts*	• Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables. • *Interpret data presented in many contexts*