MathsBeat

Year 3 Medium-term plan 2023-2024

Term 1		
Unit	**NC objectives**	**Content**
Unit 1: Number and place value	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • Recognize the place value of each digit in a 3-digit number (hundreds, tens, ones). • Identify, represent and estimate numbers using different representations. • Read and write numbers up to 1000 in numerals and in words.	**Week 1: Reading and writing 3-digit numbers** • Recognize the place value of each digit in a 3-digit number (hundreds, tens, ones). • Read and write numbers up to 1000 in numerals and in words.
		Week 2: Counting in sequences • Identify and represent numbers using different representations. • Find 10 or 100 more or less than a given number. • Count from 0 in multiples of 50 and 100.
		Week 3: Strategies for adding and subtracting with 3-digit numbers • Recognize the place value of each digit in a 3-digit number (hundreds, tens, ones). • Identify and represent numbers using different representations.

Unit 2: Addition and subtraction	• Add and subtract numbers mentally, including:
	  ○ a 3-digit number and ones
	  ○ a 3-digit number and tens
	  ○ a 3-digit number and hundreds.
	• Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
		Week 4: Choosing effective methods for solving addition problems
		• Add and subtract numbers mentally, including:
		  ○ a 3-digit number and ones;
		  ○ a 3-digit number and tens;
		  ○ a 3-digit number and hundreds.
		• Solve problems, including missing number problems, using number facts and place value.

		Week 5: Comparing triangles and quadrilaterals • Solve problems, including missing number problems, using number facts and place value. • Solve problems, including missing number problems, using more complex addition.

		• Add numbers with up to three digits, using formal written methods of columnar addition.
Unit 3: Geometry: properties of shapes	• Draw 2D shapes and make 3D shapes using modelling materials; recognize 3D shapes in different orientations and describe them. • Recognize angles as a property of shape or a description of a turn. • Identify right angles, recognize 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. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	**Week 6: Exploring angles as a measure of turn** • Draw 2D shapes. • Recognize angles as a property of shape. • Recognize angles as a description of a turn.
		Week 7: Identifying and describing angles. • Identify right angles; recognize 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. • Identify pairs of perpendicular and parallel lines.
Unit 4: Multiplication and division	• Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods. • solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects.	**Week 7: Making connections between multiplication tables** • Recall and use multiplication and division facts for the [2, 5, 10], 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental methods.
		Week 8: Problem-solving in multiplicative contexts • Solve positive integer scaling problem. • Recall and use multiplication and division facts for the [2, 5, 10], 4 and 8 multiplication tables.
		Week 9: Problem-solving in multiplicative contexts • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental methods.
Unit 5: Fractions	• Recognize, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	**Week 10: A fraction represents a part of a whole** • Recognize, find and write fractions of a discrete set of objects: unit fractions with small denominators.

	• Recognize and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Solve problems that involve all of the above.	• Recognize, find and write fractions of a discrete set of objects: non-unit fractions with small
		Week 11: A fraction represents a number • Denominators. Solve problems that involve the above. • Recognize and use fractions as numbers: unit fractions with small denominators.
		Week 12: Measuring, comparing and ordering lengths • Recognize and use fractions as numbers: non-unit fractions with small denominators. • Solve problems that involve the above.
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Term 2		
Unit	**NC objectives**	**Content**
Unit 6: Measurement	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (ℓ/ml). • Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • Know the number of seconds in a minute and the number of days in each month, year and leap year.	**Week 1:** • Measure, compare, add and subtract lengths (m/cm/mm). **Week 2: Analogue clock faces and units of time** • Tell and write the time from an analogue clock. • Estimate and read time with increasing accuracy to the nearest minute. Know the number of seconds in a minute and the number of days in each month, year and leap year.
Unit 7: Number and place value	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • Compare and order numbers up to 1000. • Identify, represent and estimate numbers using different representations. • Read and write numbers up to 1000 in numerals and in words. • Solve number problems and practical problems involving these ideas.	**Week 3: Big, bigger, biggest … small, smaller, smallest** • Count from 0 in multiples of 4, 8. • Identify and represent numbers using different representations. • Compare and order numbers up to 1000. • Read and write numbers up to 1000 in numerals and words. • Solve number problems and practical problems involving these ideas.

Unit 8: Addition and subtraction	• Add and subtract numbers mentally, including:
	  ○ a 3-digit number and ones
	  ○ a 3-digit number and tens
	  ○ a 3-digit number and hundreds.
	• Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
	• Estimate the answer to a calculation and use inverse operations to check answers.
		Week 4: Strategies for adding and subtracting with 3-digit numbers
		• Add and subtract numbers mentally, including:
		  ○ a 3-digit number and ones
		  ○ a 3-digit number and tens
		  ○ a 3-digit number and hundreds.
		• Estimate the answer to a calculation (2-digit numbers) and use inverse operations to check answers.
		• Solve problems, including missing number problems, using number facts and place value.

	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	• Solve problems, including missing number problems, using more complex subtraction.
		Week 5: Developing methods of calculation • Subtract numbers with up to three digits, using formal written methods of columnar subtraction. • Solve problems, including missing number problems, using number facts and place value. • Solve problems, including missing number problems, using more complex subtraction. • Estimate the answer to a calculation (2-digit numbers) and use inverse operations to check answers.
Unit 9: Geometry: properties of shapes	• Draw 2-d shapes and make 3D shapes using modelling materials; recognize 3D shapes in different orientations and describe them. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	**Week 6: Making 3D shapes** • Make 3D shapes using modelling materials; recognize 3D shapes in different orientations and describe them. • Identify horizontal and vertical lines.
Unit 10: Measurement	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (ℓ/ml). • Add and subtract amounts of money to give change, using both £ and p in practical contexts.	**Week 7: Estimate, compare and use measures, including money** • Measure, compare, add and subtract: mass (kg/g). • Measure, compare, add and subtract: volume/capacity (l/ml). • Add and subtract amounts of money to give change, using both £ and p in practical contexts.
Unit 11: Multiplication and division	• Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using	**Week 8: Multiplication and division facts** • Recall and use multiplication and division facts for the [2, 5, 10], 3, 4 and 8 multiplication tables. • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects.

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	mental and progressing to formal written methods. • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects.	**Week 9: Multiplication and division methods** • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.
Unit 12: Fractions	• Recognize and show, using diagrams, equivalent fractions with small denominators. • Add and subtract fractions with the same denominator within one whole, e.g. $^5/_7 + ^1/_7 = ^6/_7$. • Compare and order unit fractions, and fractions with the same denominators.	**Week 10: Are these two fractions equal? If not, which is larger?** • Recognize and show, using diagrams, equivalent fractions with small denominators. • Compare and order unit fractions. • Compare and order fractions with the same denominators. **Week 11: Adding and subtracting fractions with the same denominator (within one whole)** • Add fractions with the same denominator within one whole, e.g. $^5/_7 + ^1/_7 = ^6/_7$. • Subtract fractions with the same denominator within one whole, e.g. $^5/_7 – ^1/_7 = ^4/_7$].
Unit 13: Statistics	• Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions, e.g. How many more? and How many fewer? using information presented in scaled bar charts and pictograms and tables.	**Week 12: Collecting, representing and summarizing data** • Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions, e.g. *How many more?* and *How many fewer?* using information presented in scaled bar charts and pictograms and tables.
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Term 3		
Unit	**NC objectives**	**Content**
Unit 14: Number and place value	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • Recognize the place value of each digit in a 3-digit number (hundreds, tens, ones). • Read and write numbers up to 1000 in numerals and in words. • Solve number problems and practical problems involving these ideas.	**Week 1: Solving number problems using our counting skills** • Find 10 more or less than a given number. • Count from 0 in multiples of 50 and 100. • Count from 0 in multiples of 4 and 8. • Recognize the place value of each digit in a 3-digit number (hundreds, tens ones). • Read and write numbers up to 1000 in numerals and words. • Solve number problems and practical problems involving these ideas.
Unit 15: Measurement	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (ℓ/ml). • Measure the perimeter of simple 2D shapes.	**Week 2: Measuring perimeter** • Measure, compare, add and subtract: lengths (m/cm/mm). • Measure the perimeter of simple 2D shapes.
Unit 16: Addition and subtraction	• Add and subtract numbers with up to three digits, using formal 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.	**Week 3: Adding and subtracting larger numbers** • Add numbers with up to three digits, using formal written methods of columnar addition. • Subtract numbers with up to three digits, using formal written methods of columnar subtraction. • Estimate the answer to a calculation (3-digit numbers) and use inverse operations to check answers. • Solve problems, including missing number problems, using more complex addition. • Solve problems, including missing number problems, using more complex subtraction.
Unit 17: Multiplication and division	• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including	**Week 4: Reasoning in multiplication and division contexts** • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for

	for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.	2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods.
Unit 18: Measurement	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. Compare durations of events (e.g. to calculate the time taken by particular events or tasks).	**Week 5: Telling the time and the time of day** • 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. • Compare durations of events (e.g. to calculate the time taken by particular events or tasks).
Unit 19: Fractions	• Count up and down in tenths; recognize that tenths arise from dividing an object into 10 equal parts and in dividing 1-digit numbers or quantities by 10. • Recognize and show, using diagrams, equivalent fractions with small denominators. • Add and subtract fractions with the same denominator within one whole (e.g. 57 + 17 = 67). • Compare and order unit fractions, and fractions with the same denominators. • Solve problems that involve all of the above.	**Week 6: 10 equal parts** • Count up and down in tenths. • Recognize that tenths arise from dividing an object into 10 equal parts. • Recognize that tenths arise from dividing 1-digit numbers or quantities by 10. • Add and subtract fractions with the same denominator within one whole.
		Week 7: Comparing and ordering fractions • Recognize and show, using diagrams, equivalent fractions with small denominators (one of which is 10). • Compare and order fractions with the same denominator (10). • Solve problems that involve all of the above.
Unit 20: Multiplication and division	• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	**Week 8: Further reasoning in multiplication and division contexts** • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects.

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Unit 21: Statistics	• Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions, e.g. How many more? and How many fewer? using information presented in scaled bar charts and pictograms and tables.	**Week 9: Representing, interpreting and responding to data** • Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions, e.g. *How many more?* and *How many fewer?* using information presented in scaled bar charts and pictograms and tables.
Unit 22: Problem solving	• Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. • Add and subtract amounts of money to give change, using both £ and p in practical contexts.	**Week 10: Solving problems involving number and measure** • Solve problems, including missing number problems, using number facts and place value. • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objects. • Add and subtract amounts of money to give change, using both £ and p in practical contexts.
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