Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
Learning Together, Learning for Life

This document should be read in conjunction with our Maths Policy and Year Group Calculations policies.
KS1 and KS2 follow White Rose Planning. Teachers in Early Years follow the NCETM Mastering Number Planning for their daily adult led lesson and use the White Rose Planning and Development Matters Document to supplement and enrich the curriculum and for continuous and enhanced provision for Child Initiated Learning.

Early Years curriculum map

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Autumn 1	Nursery	Settling in week – focus on counting games	White Rose Counting 1: *Hear and say number names*		White Rose Subitising 1: *I see 1, 2, 3*		White Rose Comparison 1: *More than, fewer than, same*	White Rose Pattern 1: *Explore Repeats*	White Rose Shape, Space & Measure 1: *Explore and build with shapes and objects*
	Reception		NCETM Week 1: *Subitising 1-3*	NCETM Week 2: *Counting, Cardinality and Ordinality up to 5*	NCETM Week 3: *Composition (up to composition of 3 and 4)*	NCETM Week 4: *Subitising up to 4*	NCETM Week 5: *Comparison of number and quantity*	Repeating Patterns: *Continue, copy and create repeating patterns*	Shape: *Select, rotate and manipulate shapes to develop spatial reasoning*
During the term: opportunities through child-initiated learning to explore measure, as well as embedding all other learning.									

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Autumn 2	Nursery	White Rose Counting 2: *Begin to order number names*		White Rose Comparison 2: *Compare and sort collections*		White Rose Shape, Space & Measure 2: *Explore position and space*		Measures: *Make comparisons between objects relating to size, length and capacity.*
	Reception	NCETM Week 6: *Counting, ordinality and cardinality*	NCETM Week 7: *Comparison*	NCETM Week 8: *Composition of numbers*	NCETM Week 9: *Composition of numbers*	NCETM Week 10: *Counting, ordinality & cardinality*	Positional Language: *Describe positions and routes using positional vocabulary*	Shape & Measures: *Compare length, weight and capacity.*
During the term: opportunities through child-initiated learning to explore repeating patterns and shape.								

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Spring 1	Nursery	White Rose Subitising 2: *Show me 1, 2, 3*	White Rose Counting 3: *Move and label 1, 2, 3*	White Rose Comparison 3: *Match, sort, compare*		White Rose Pattern 2: *Join in with repeats*	White Rose Pattern 3: *Explore patterns*
	Reception	NCETM Week 11: *Subitising up to 6*	NCETM Week 12: *Counting, Ordinality and Cardinality (1-5)*	NCETM Week 13: *Composition (within 5)*	NCETM Week 14: *Composition (5 and a bit)*	NCETM Week 15: *Comparison*	NCETM Week 16: *Counting, Ordinality and Cardinality (counting aloud larger numbers, 1 more/1 less, ordering numbers)*
During the term: Opportunities through child-initiated learning to explore and consolidate previous learning about shape, positional vocabulary, measures, repeating patterns.							

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Spring 2	Nursery	White Rose Counting 4: *Take and give 1, 2, 3*		White Rose Pattern 4: *Lead on own repeats*		White Rose Subitising 3: *Talk about dots*	
	Reception	NCETM Week 17: *Comparison (equal/not equal, ordering numbers)*	NCETM Week 18: *Composition (describe numbers as parts of a whole)*	NCETM Week 19: *Composition (equal sets, introducing doubles)*	NCETM Week 20: *Composition (sorting and grouping objects, odd and even numbers)*	NCETM Week 21: *Counting, ordinality & cardinality (counting strategies, counting beyond 20)*	NCETM Week 22: *Subitising (doubles to support, looking at arrangements, seeing numbers within numbers)*
During the term: Opportunities through child-initiated learning to explore and consolidate previous learning about shape, positional vocabulary, measures, repeating patterns.							

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Summer 1	Nursery	White Rose Pattern 5: *Making patterns together* White Rose Pattern 6: *My own patterns*			White Rose Counting 5: *Show me 5*		White Rose Subitising 6: *Make games and actions*
	Reception	NCETM Week 23: *Composition (composition of 5, composition of 6, 7, 8 & 9 as '5 and a bit')*	NCETM Week 24: *Composition (composition of 10, subitising the parts of 10)*	NCETM Week 25: *Comparison (magnitude of numbers, ordering numbers, positioning on number track)*	NCETM Week 26: *Subitising on a rekenrek*	NCETM Term 3 Patterns: *Patterns within numbers up to 10.*	NCETM Term 3 Counting: *Counting beyond 20 (recognising the pattern of the counting system)*
During the term: Opportunities through child-initiated learning to explore and consolidate all previous learning.							

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Summer 2	Nursery	White Rose Counting 6: *Stop at 1, 2, 3, 4, 5*		White Rose Shape, Space & Measure 3: *Explore routes and positions*	White Rose Shape, Space & Measure 4: *Match, talk, push and pull*	White Rose Shape, Space & Measure 5: *Start to puzzle*	
	Reception	NCETM Term 3 Understanding Number: *Understanding of numbers to 10*	NCETM Term 3 Recall: *Automatic recall (number bonds to 5, and some number bonds to 10 including doubles facts)*	NCETM Term 3 Comparison: *Comparison (compare quantities up to 10, greater than/less than/same as)*	Shape, Space & Measure: *Measuring, focusing on comparing length and height.*	Time: *Describe a sequence of events, using words such as first, then...*	Shape, Space & Measure: *Select, rotate and manipulate shapes, compose and decompose shapes to recognise shapes within a shape.*
During the term: Opportunities through child-initiated learning to explore and consolidate previous learning.							

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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Key Stage One curriculum map

Key Stage One Maths Overview – White Rose mixed age planning

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	**Year 1**	**Number –** Place value within 10					**Number –** Addition and subtraction within 10					**Geometry -** shape	**Consolidation**
	Year 2	**Number –** Place value					**Number** – Addition and subtraction				**Geometry -** shape		

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	**Year 1**	**Number –** Place value within 20			**Number –** Addition and subtraction within 10			**Number –** Place value within 50		**Measurement –** Length and height		**Measurement –** Mass and volume	
	Year 2	**Measurement –** Money			**Number** – Multiplication and Division				**Measurement –** Length and height		**Measurement –** Mass, capacity and temperature		

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	**Year 1**	**Number** – Multiplication and Division			**Number** – Fractions		**Geometry –** position and direction	**Number –** Place value within 100		**Measurement –** Money	**Measurement –** Time		**Consolidation**
	Year 2	**Statistics**		**Number –** Fractions			**Geometry –** position and direction		**Problem Solving**		**Measurement –** Time		

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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Key Stage Two curriculum map

Key Stage Two Maths Overview – White Rose mixed age planning

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Year 3	**Number –** Place value				**Number –** Addition and subtraction				Number - **Multiplication and Division A**			**Measurement –** Area and Perimeter
	Year 4	**Number –** Place value				**Number** – Addition and subtraction				Number - **Multiplication and Division A**			**Measurement –** Area and Perimeter

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring	Year 3	**Number –** Multiplication and Division B			**Measurement –** Length and perimeter		**Number –** Fractions A			**Measurement –** Mass and Capacity		**Number –** Fractions B	
	Year 4	**Number –** Multiplication and Division B			**Measurement –** Length and perimeter		**Number –** Fractions A			**Measurement –** Mass and Capacity		**Number –** Fractions B	

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Year 3	**Measurement –** Time		**Number –** Decimals			**Measurement –** Money		**Geometry** - shape		**Geometry** – position and direction	**Statistics**	
	Year 4	**Measurement –** Time		**Number –** Decimals			**Measurement –** Money		**Geometry** - shape		**Geometry** – position and direction	**Statistics**	

Curriculum Map for Mathematics – Reed First School

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The following are the end points for each area of mathematics across our Year groups. Teachers use responsive teaching to ensure ends points are secured before subsequent units are taught. The end points are used to support tracking where necessary to support keep up and catch up in identifying any gaps in learning. Teachers will follow these end points to support their planning and track back to understand the previous knowledge their year groups should have in order to secure the next step. Teachers will where gaps are identified secure the steps needed to close the gap and keep up using Mathematics guidance: key stages 1 and 2 for clear exemplification of strategies and expectations.

	Reception	Year One	Year Two	Year Three	Year Four
Number and place value	Begin to develop a sense of the number system by verbally counting forward to and beyond 20, pausing at each multiple of 10.	Count within 100, forwards and backwards, starting with any number. Read and write numbers from 1 – 20 in numerals and words.	Know that 10 ones are equivalent to 1 ten, and that 40 (for example) can be composed from 40 ones or 4 tens. Know how many tens there are in multiples of 10 up to 100.	Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three digit multiples of 10.	Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.
		Know that 10 ones are equivalent to 1 ten. Know that multiples of 10 are made up from a number of tens, for example, 50 is 5 tens.	Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non standard partitioning.	Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.	Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non standard partitioning.
	Play games that involve moving along a numbered track, and understand that larger numbers are further along the track.	Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = Place the numbers 1 to 9 on a marked, but unlabelled, 0 to 10 number line. Estimate the position of the numbers 1 to 9 on an unmarked 0 to 10 number line. Count forwards and backwards to and from 100.	Reason about the location of any two digit number in the linear number system, including identifying the previous and next multiple of 10.	Reason about the location of any three digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.
			Count in multiples of 2, 5 and 10.	Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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	Reception	Year One	Year Two	Year Three	Year Four
Number facts	Begin to experience partitioning and combining numbers within 10.	Develop fluency in addition and subtraction facts within 10.	Secure fluency in addition and subtraction facts within 10, through continued practice.	Secure fluency in addition and subtraction facts that bridge 10, through continued practice.	
	Distribute items fairly, for example, put 3 marbles in each bag. Recognise when items are distributed unfairly.	Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.	Recall multiplication facts, and corresponding division facts, in the 10, 5 and 2, multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.	Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 3, 4, 6, 9 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.	Recall multiplication and division facts up to and including 12 x12 , and recognise products in multiplication tables as multiples of the corresponding number.
				Use known division facts to solve division problems. Calculate small differences, for example: 74 – 72 = 2	Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.
			Automatically recall addition and subtraction facts within 10, and across 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten.	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). e.g. 80 + 60 = 140 140 – 60 = 80 30 x 4 = 120 120 ÷ 4 = 30	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) e.g. 3 x 4 =12 and 12 ÷ 4 = 3 So 300 x 4 = 1,200 1,200 ÷ 4 = 300

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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	Reception	Year One	Year Two	Year Three	Year Four
Addition and subtraction	Understand the cardinal value of number words, for example understanding that 'four' relates to 4 objects. Subitise for up to to 5 items. Automatically show a given number using fingers.	Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. Learn and use number bonds to 10, for example: 8 + ? = Partition numbers within 10, for example: 3 + 2 = 5	Add and subtract across 10. e.g. 8 + 5 = 13 13 – 5 = 8 Automatically recall number bonds to 9 and to 10. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred.	Calculate complements to 100.	Calculate how much change is due when paying for an item.
	Devise and record number stories, using pictures, numbers and symbols (such as arrows).	Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	Automatically recall addition and subtraction facts within 10 and across 10. Recognise the place value of each digit in two- and three-digit numbers. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred. Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".	Add and subtract up to three-digit numbers using columnar methods.	

Curriculum Map for Mathematics – Reed First School

		Add and subtract within 10, for example: 6 + 3 = 9 6 – 2 = 4 Know that a multiple of 10 is made up from a number of tens, for example, 50 is 5 tens.	Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. Have experience with the commutative property of addition, for example, have recognised that 3 + 2 and 2 + 3 have the same sum. Be able to write an equation in different ways, for example, 2 + 3 = 5 and 5 = 2 + 3 Write equations to represent addition and subtraction contexts.	Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.	
		Add and subtract within 10. Know that a multiple of 10 is made up from a number of tens, for example, 50 is 5 tens.	Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two digit numbers.		Add and subtract numbers greater than 100, recognising unitising, for example: so 32 ones and 23 ones = 55 ones So 32 tens and 23 tens = 55 tens 320 + 230 = 550

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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	Reception	Year One	Year Two	Year Three	Year Four
Multiplication and division			Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division. Multiply two-digit numbers by 10, and divide three-digit multiples of 10 by 10.	Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.
		Count in multiples of 2, 5 and 10 to find how many groups of 2, 5 or 10 there are in a particular quantity, set in everyday contexts.	Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).	Understand the inverse relationship between multiplication and division. Write and use multiplication table facts with the factors presented in either order.	Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.
					Understand and apply the distributive property of multiplication.

Curriculum Map for Mathematics – Reed First School

REED FIRST SCHOOL
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	Reception	Year One	Year Two	Year Three	Year Four
Fractions			Pupils should count in fractions up to 10, starting from any number and using the $\frac{1}{2}$ and $\frac{2}{4}$ equivalence on the number line (for example, $1\frac{1}{4}$, $1\frac{2}{4}$ (or $1\frac{1}{2}$), $1\frac{3}{4}$, 2). This reinforces the concept of fractions as numbers and that they can add up to more than 1.	Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	
		Recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity Recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity	Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity	Find unit fractions of quantities using known division facts (multiplication tables fluency).	
			Reason about the location of whole numbers in the linear number system.	Reason about the location of any fraction within 1 in the linear number system.	Reason about the location of mixed numbers in the linear number system.
		Automatically recall addition and subtraction facts within 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten, and that these units can be added and subtracted.	Write simple fractions, for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ Meet $\frac{3}{4}$ as the first example of a non-unit fraction.	Identify unit and non- unit fractions.	Convert mixed numbers to improper fractions and vice versa.
				Add and subtract fractions with the same denominator, within 1 whole.	Add and subtract improper and mixed fractions with the same denominator,

Curriculum Map for Mathematics – Reed First School

					including bridging whole numbers.
Geometry	Reception	Year One	Year Two	Year Three	Year Four
	See, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base).	Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.	Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.	
	Select, rotate and manipulate shapes for a particular purpose, for example: • rotating a cylinder so it can be used to build a tower • rotating a puzzle piece to fit in its place	Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.		Draw polygons by joining marked points, and identify parallel and perpendicular sides.	Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.
					Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.
					Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.

Curriculum Map for Mathematics – Reed First School

Measure	Reception	Year One	Year Two	Year Three	Year Four
		Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] mass/weight [for example, heavy/light, heavier than, lighter than] capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]	Compare and order lengths, mass, volume/capacity and record the results using >, < and =	Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Convert between different units of measure [for example, kilometre to metre; hour to minute] Estimate, compare and calculate different measures, including money in pounds and pence
		Measure and begin to record the following: lengths and heights mass/weight capacity and volume	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	Measure the perimeter of simple 2-D shapes	Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Find the area of rectilinear shapes by counting squares

Curriculum Map for Mathematics – Reed First School

		Recognise and use language relating to dates, including days of the week, weeks, months and years Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] Measure and begin to record time (hours, minutes, seconds)	Compare and sequence intervals of time	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]	Solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days
Measure		Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times Compare, describe and solve practical problems for: time [for example, quicker, slower, earlier, later]	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	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, am/pm, morning, afternoon, noon and midnight	Read, write and convert time between analogue and digital 12- and 24-hour clocks
		Recognise and know the value of different denominations of coins and notes.	Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value	Continue to become fluent in recognising the value of coins, by adding and subtracting amounts, including mixed units, and giving change using	Ensure accurate use of the decimal point

			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	manageable amounts. Record £ and p separately. Add and subtract amounts of money to give change, using both £ and p in practical contexts	
Statistics	Reception	Year One	Year Two	Year Three	Year Four
	Together use practical concrete resources to Interpret and construct simple pictograms, tally charts, block diagrams and tables Answer simple questions by counting the number of objects in each category.	Use practical concrete resources to Interpret and construct simple pictograms, tally charts, block diagrams and tables Answer simple questions by counting the number of objects in each category. Ask-and-answer questions about totalling	Interpret and construct simple pictograms, tally charts, block diagrams and tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask-and-answer questions about totalling and comparing categorical data.	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	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