Knowledge Development in Maths

Autumn		Block 1	Block 2	Block 3	Block 4
Reception	Area of learning	Getting to Know You	Just Like Me!	It's me 1, 2, 3!	Light and Dark
	Prior knowledge (Development Matters for Age 3-4)		• Compare quantities using language: 'more than', 'fewer than'. • Make comparisons between objects relating to size, length, weight and capacity. • Talk about and identify the patterns around them. • Use informal language like 'pointy', 'spotty', 'blobs', etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern.	• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Experiment with their own symbols and marks as well as numerals.	• Recite numbers past 5. • Say one number for each item in order: 1,2,3,4,5 • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Solve real world mathematical problems with numbers up to 5.
	New Knowledge (White Rose)	• Baseline Assessment • Getting to know the children	• Match and Sort • Compare Amounts	• Representing 1, 2 and 3 • Comparing 1, 2 and 3 • Composition of 1, 2 and 3	• Representing Numbers to 5 • One more and less
			• Compare size, mass and capacity • Exploring pattern	• Circles and Triangles • Positional Language	• Shapes with 4 sides • Time
	EGPS EYFS Curriculum		• Continue, copy and create repeating patterns. • Compare length, weight and capacity,	• Count objects, actions and sounds. • Count beyond 10.	• Subitise (recognise quantities without counting) up to 5. • Count objects, actions and sounds. • Understand the one more than/one less than relationship
	Key vocabulary Essential previously taught vocabulary		Language of shape, colour, size Match Same Different Pair Sort	One Two Three More Fewer Same amount Order Compare Number Curved Straight Count On top of Next to Behind In between	Four Five Five Frame One More One Less Pattern Repeating Pattern Different orientation Different size Straight Sides Corners Day Night Morning Afternoon Night

				Over Under Around Through Match Shapes Sizes	Before After Today Tomorrow Yesterday Week Weekend More Fewer Shapes Order Compare Count Number Straight Curved

Spring		Block 1	Block 2	Block 3
Reception	Area of learning	Alive in 5!	Growing 6, 7, 8	Building 9 and 10
	Prior knowledge (Development Matters for Years 3-4)	• Make comparisons between objects relating to weight and capacity.	• Make comparisons between objects relating to size, and length. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'	• Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Continue, copy and create repeating patterns.
	New knowledge (White Rose)	• Introducing Zero • Comparing numbers to 5 • Composition of 4 and 5	• 6, 7 and 8 • Making Pairs • Combining 2 groups	• 9 and 10 • Comparing numbers to 10 • Bonds to 10
		• Compare Mass • Compare Capacity	• Length and Height • Time •	• 3D Shape • Pattern
	EGPS EYFS Curriculum	• Compare numbers. • Explore the composition of numbers to 10. • Have a deep understanding of number to 5, including the composition of each number. • Compare quantities up to 5 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts)	• Explore the composition of numbers to 8. • Have a deep understanding of number to 8, including the composition of each number. • Compare quantities up to 8 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Compare and use quantities and measures	• Explore the composition of numbers to 10. • Have a deep understanding of number to 10, including the composition of each number. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Automatically recall (without reference to rhymes, counting or other aids) some number bonds to 10, including double facts. • Show a deep understanding when using numbers to 10 • Recognise, name and describe some 2D and 3D shapes

				• Decompose shapes to that children recognise a shape can have other shapes within it, just as numbers can. • Understand the one more than/one less than relationship between consecutive numbers
	Key vocabulary Essential previously taught vocabulary	Zero Making 5 The same Equal groups Unequal groups Altogether Mass Weight Scales Heavy/heavier than Light/Lighter than Full Empty Capacity Half full Half empty Tall Thin Narrow Wide Shallow One Less Comparing More than Less than	Six Seven Eight Different ways to make Length Long/longer Short/shorter Height Taller Shorter Further Nearer Closer Pair Altogether Tall Short Wide Narrow Today Yesterday Tomorrow Week Weekend	Nine Ten double Greater than Less than One more One less Same shapes

Summer		Block 1	Block 2	Block 3	Block 4
Reception	Area of learning	To 20 and Beyond	First Then Now	Find My Pattern	On the Move
	Prior knowledge (Development Matters for Year 3-4)	• Count beyond 10	• Decompose shapes to that children recognise a shape can have other shapes within it, just as numbers can.		• Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'
	New knowledge (White Rose)	• Building numbers beyond 10 • Counting pattern beyond 10	• Adding more • Taking away	• Doubling • Sharing and Grouping • Even and Odd	• Deepening Understanding • Patterns and Relationships
		• Spatial Reasoning • Match, Rotate, Manipulate	• Spatial Reasoning • Compose and Decompose	• Spatial Reasoning • Visualise and Build	• Spatial Reasoning • Mapping

	EGPS EYFS Curriculum	• Verbally count beyond 20, recognising the pattern of the counting system • Recognise the pattern of the counting system to use numbers beyond 10 • Select, rotate and manipulate shapes in order to develop spatial reasoning skills.	• Compose shapes to that children recognise a shape can have other shapes within it, just as numbers can.	• Explore evens and odds, double facts and how quantities can be distributed equally • Automatically recall doubling facts.	• Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally
	Key vocabulary Essential previously taught vocabulary	Number patterns Subtraction Ordering numerals Rotate Tangrams Patterns Matching Estimating More than Fewer than Ordering Containers Shapes	Represent Remaining How many? less/more/fewer First, then, now Adding/Taking away Shape names Longest/smaller Same as/difference	Arrangements Check Language of position –next to, above, below Similarities/differences Match/sort/compare/order Doubles/doubling Halves/halving Equal Sharing/grouping Odd/even	What if..? Combinations Unit of repeat/repeat Continue Symbols Map Route Similarities/differences Match/sort/compare/order Same/different More/fewer/same amount Measure Longest/shortest Language of position
Autumn		Block 1	Block 2	Block 3	
Year 1	Area of learning	Number and Place Value (within 10)	Addition and Subtraction (within 10)	Geometry - Shape	
	Prior knowledge	• Numbers 0-10 • Comparing amounts • One more and one less	• Numbers to 10 • Number bonds	• Circles and triangles • Shapes with 4 sides • 3d shapes	
	New knowledge (National Curriculum)	• Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. • Count, read and write numbers to 10 in numerals and words. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	• Represent and use number bonds and related subtraction facts within 10. • Read, write and interpret mathematical statements involving addition (+), subtraction ((--) and equals (=) • Add and subtract one digit numbers to 10, including zero. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.	• Recognise and name common 2 D shapes, including: (e.g. rectangles (including squares), circles and triangles). • Recognise and name common 3 D shapes, including: (e.g. cuboids (including cubes), pyramids and spheres).	
	New knowledge (White Rose Small Steps)	• Step 1 Sort objects • Step 2 Count objects • Step 3 Count objects from a larger group • Step 4 Represent objects • Step 5 Recognise numbers as words • Step 6 Count on from any number • Step 7 1 more	• Step 1 Introduce parts and wholes • Step 2 Part-whole model • Step 3 Write number sentences • Step 4 Fact families – addition facts • Step 5 Number bonds within 10 • Step 6 Systematic number bonds within 10	• Step 1 Recognise and name 3-D shapes • Step 2 Sort 3-D shapes • Step 3 Recognise and name 2-D shapes • Step 4 Sort 2-D shapes • Step 5 Patterns with 2-D and 3-D shapes	

		• Step 8 Count backwards within 10 • Step 9 1 less Step 10 Compare groups by matching • Step 11 Fewer, more, same Step 12 Less than, greater than, equal to • Step 13 Compare numbers Step 14 Order objects and numbers • Step 15 The number line	• Step 7 Number bonds to 10 • Step 8 Addition – add together • Step 9 Addition – add more • Step 10 Addition problems • Step 11 Find a part • Step 12 Subtraction – find a part • Step 13 Fact families – the eight facts • Step 14 Subtraction – take away/cross out (How many left?) • Step 15 Take away (How many left?) • Step 16 Subtraction on a number line • Step 17 Add or subtract 1 or 2	
	Key vocabulary - new Essential previously taught vocabulary	Numbers to 10 (words) Digit Place Value Numerals Representation Forwards Backwards Before After Ordinal numbers (1st, 2nd, 3rd etc) Compare Comparison symbols > < = Numbers to 10 Sort Group Order More than Less than Equal to Fewer Most Least	Number bonds Difference between Number sequence Number sentence Fact family Counting on Total Partition Whole Part Model Sum Answer Addition symbol Subtraction symbol Equal symbol	Shape names 2D: rectangle, square, circle, triangle, pentagon, hexagon 3D: cube, pyramid, sphere, cuboid, cylinder, cone Vertices Faces Edges Orientation Sides Corner Pattern Sort Group

Spring		Block 1	Block 2	Block 3	Block 4	Block 5
Year 1	Area of learning	Number and Place Value (within 20)	Number: Addition and Subtraction within 20	Number: Place Value (within 50) (including multiples of 2, 5 and 10)	Measurement: Length and Height	Measurement: Weight and Volume
	Prior knowledge	• Numbers to 10 • Numbers beyond 10	• Adding more • Taking away • Number bonds to 10	• Numbers to 20	• Comparing size • Length and height	• Comparing mass and capacity
	New knowledge (National Curriculum)	• Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number.	• Represent and use number bonds and related subtraction facts within 20.	• Count to 50 forwards and backwards, beginning with 0 or 1, or from any number.	• Measurement: Length and Height • Measure and begin to record lengths and heights.	• Measurement: Weight and Volume • Measure and begin to record mass/weight, capacity and volume.

		• Count, read and write numbers to 20 in numerals and words. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Add and subtract one-digit and two-digit numbers to 20, including zero. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □ –9.	• Count, read and write numbers to 50 in numerals. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. • Count in multiples of twos, fives and tens.	• • Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half).	• Compare, describe and solve practical problems for mass/weight:[for example, heavy/light, heaver than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].
	New knowledge (White Rose Small Steps)	• Step 1 Count within 20 • Step 2 Understand 10 • Step 3 Understand 11, 12 and 13 • Step 4 Understand 14, 15 and 16 • Step 5 Understand 17, 18 and 19 • Step 6 Understand 20 • Step 7 1 more and 1 less • Step 8 The number line to 20 • Step 9 Use a number line to 20 • Step 10 Estimate on a number line to 20 • Step 11 Compare numbers to 20 • Step 12 Order numbers to 20	• Step 1 Add by counting on within 20 • Step 2 Add ones using number bonds • Step 3 Find and make number bonds to 20 • Step 4 Doubles • Step 5 Near doubles • Step 6 Subtract ones using number bonds • Step 7 Subtraction – counting back • Step 8 Subtraction – finding the difference • Step 9 Related facts • Step 10 Missing number problems	• Step 1 Count from 20 to 50 • Step 2 20, 30, 40 and 50 • Step 3 Count by making groups of tens • Step 4 Groups of tens and ones • Step 5 Partition into tens and ones • Step 6 The number line to 50 • Step 7 Estimate on a number line to 50 • Step 8 1 more, 1 less	• Step 1 Compare lengths and • Step 2 Measure length using objects • Step 3 Measure length in centimetres	• Step 1 Heavier and lighter • Step 2 Measure mass • Step 3 Compare mass • Step 4 Full and empty • Step 5 Compare volume • Step 6 Measure capacity • Step 7 Compare capacity
	Key vocabulary - new Essential previously taught vocabulary	Numbers to 20 (numerals and words) Partition Part Whole Model Numbers to 20 Sort	Related facts Bar Model Number bonds Difference between Number sequence Number sentence	Numbers to 50 (numerals and words) Numbers to 20 Sort Group Order	Measurement Length Height Unit of measurement - standard Long	Capacity Mass Weight Heavy Light Full

		Group Order More than Less than Equal to Fewer Most Least Digit Place Value Numerals Representation Forwards Backwards Before After Ordinal numbers (1st, 2nd, 3rd etc) Compare Comparison symbols > < = Forwards Backwards	Fact family Counting on Total Partition Whole Part Model Sum Answer Addition symbol Subtraction symbol Equal symbol	More than Less than Equal to Fewer Most Least Digit Place Value Numerals Representation Forwards Backwards Before After Ordinal numbers (1st, 2nd, 3rd etc) Compare Comparison symbols > < = Forwards Backwards Partition Part Whole Model	Short Tall High Unit of measurement – non-standard Ruler	Empty Amount Compare More Less Same Equal Comparison symbols > < =

Summer		Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Year 1	Area of learning	Number: Multiplication and (including multiples of 2, 5 and 10)	Number: Fractions	Geometry: Position and Direction	Number: Place Value (within 100)	Measurement: Money	Measurement: Time
	Prior knowledge	• Count in 2s and 5s		• Positional language	• Numbers within 50		• Time
	New knowledge (National Curriculum)	• Count in multiples of twos, fives and tens. • Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	• Recognise, find and name a half as one of two equal parts of an object, shape or quantity. • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. • Compare, describe and solve practical problems for: lengths and	• Describe position, direction and movement, including whole, half, quarter and three quarter turns	• Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. • Count, read and write numbers to 100 in numerals. • Given a number, identify one more and one less. • Identify and represent numbers using objects and pictorial	• Recognise and know the value of different denominations of coins and notes.	• Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. • Recognise and use language relating to dates, including days of the week, weeks,

			heights (for example, long/short, longer/shorter, tall/short, double/half) • Compare, describe and solve practical problems for: 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].		representations including the number line, and use the language of: equal to, more than, less than, most, least.		months and years. • 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]. • Measure and begin to record time (hours, minutes, seconds).
	New knowledge (White Rose Small Steps)	• Step 1 Count in 2s • Step 2 Count in 10s • Step 3 Count in 5s • Step 4 Recognise equal groups • Step 5 Add equal groups • Step 6 Make arrays • Step 7 Make doubles • Step 8 Make equal groups – grouping • Step 9 Make equal groups – sharing	• Step 1 Recognise a half of an object or a shape • Step 2 Find a half of an object or a shape • Step 3 Recognise a half of a quantity • Step 4 Find a half of a quantity • Step 5 Recognise a quarter of an object or a shape • Step 6 Find a quarter of an object or a shape • Step 7 Recognise a quarter of a quantity • Step 8 Find a quarter of a quantity	• Step 1 Describe turns • Step 2 Describe position – left and right • Step 3 Describe position – forwards and backwards • Step 4 Describe position – above and below • Step 5 Ordinal numbers	• Step 1 Count from 50 to 100 • Step 2 Tens to 100 • Step 3 Partition into tens and ones • Step 4 The number line to 100 • Step 5 1 more, 1 less • Step 6 Compare numbers with the same number of tens • Step 7 Compare any two numbers.	• Step 1 Unitising • Step 2 Recognise coins • Step 3 Recognise notes • Step 4 Count in coins	• Step 1 Before and after • Step 2 Days of the week • Step 3 Months of the year • Step 4 Hours, minutes and seconds • Step 5 Tell the time to the hour • Step 6 Tell the time to the half hour.
	Key vocabulary - new	Arrays Row	Quarter Equal parts	Turn Position	Numbers to 100 (numerals and words)	Cheaper Dearer	Second minute

	Essential previously taught vocabulary	Column Multiplication Repeated addition Equal groups Lots of Divide Multiply Multiples of 2, 5, 10 Double Equal Groups Sharing Total	Fraction Complete Split Whole Parts Half	Whole (turn) Half (turn Movement Left Right In front Behind	Numbers to 50 Sort Group Order More than Less than Equal to Fewer Most Least Digit Place Value Numerals Representation Forwards Backwards Before After Ordinal numbers (1st, 2nd, 3rd etc) Compare Comparison symbols > < = Forwards Backwards Partition Part Whole Model	Enough Not enough Value Worth Coins Notes Pounds Pence Silver coins Copper coins How much? Price Change Total Compare Most Least	Hour Half past O'clock Sequence Chronological order Chronological Language – first, last, next, after, before Names of days and months Slow/Slower Quick/Quicker Old/Older Young/Younger New/Newer Early/earlier Later Today Yesterday Tomorrow Morning Afternoon Evening Day Month Year Date Calendar Always Sometimes Never
Autumn		Block 1		Block 2		Block 3	
Year 2	Area of learning	Number: Place Value		Number: Addition and Subtraction		Geometry: Properties of Shape	
	Prior knowledge	• Counting forwards and backwards within 20 • Tens and ones within 20 • Counting forwards and backwards within 50 • Tens and ones within 50 • Compare numbers within 50 • Count in 2s • Count in 5s • Count in 10s		• Add by making 10 • Subtraction – crossing 10 • Find and make number bonds		• Recognise and name 2D/3D shapes. • Sort 2D/3D shapes.	
	New knowledge (National Curriculum)	• Read and write numbers to at least 100 in numerals and in words. • Recognise the place value of each digit in a two digit number (tens, ones) Identify,		• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.		• Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	

		represent and estimate numbers using different representations including the number line. • Compare and order numbers from 0 up to 100; use <, > and = signs. • Use place value and number facts to solve problems. • Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.	• Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers. • Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • 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. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]. • Compare and sort common 2-D and 3-D shapes and everyday objects.
	New knowledge (White Rose Small Steps)	• Step 1 Numbers to 20 • Step 2 Count objects to 100 by making 10s • Step 3 Recognise tens and ones • Step 4 Use a place value chart • Step 5 Partition numbers to 100 • Step 6 Write numbers to 100 in words • Step 7 Flexibly partition numbers to 100 • Step 8 Write numbers to 100 in expanded form • Step 9 10s on the number line to 100 • Step 10 10s and 1s on the number line to 100 • Step 11 Estimate numbers on a number line • Step 12 Compare objects • Step 13 Compare numbers • Step 14 Order objects and numbers • Step 15 Count in 2s, 5s and 10s • Step 16 Count in 3s	• Step 1 Bonds to 10 • Step 2 Fact families - addition and subtraction bonds within 20 • Step 3 Related facts • Step 4 Bonds to 100 (tens) • Step 5 Add and subtract 1s • Step 6 Add by making 10 • Step 7 Add three 1-digit numbers • Step 8 Add to the next 10 • Step 9 Add across a 10 • Step 10 Subtract across 10 • Step 11 Subtract from a 10 • Step 12 Subtract a 1-digit number from a 2-digit number (across a 10) • Step 13 10 more, 10 less • Step 14 Add and subtract 10s • Step 15 Add two 2-digit numbers (not across a 10) • Step 16 Add two 2-digit numbers (across a 10) • Step 17 Subtract two 2-digit numbers (not across a 10) • Step 18 Subtract two 2-digit numbers (across a 10) • Step 19 Mixed addition and subtraction • Step 20 Compare number sentences	• Step 1 Recognise 2-D and 3-D shapes • Step 2 Count sides on 2-D shapes • Step 3 Count vertices on 2-D shapes • Step 4 Draw 2-D shapes • Step 5 Lines of symmetry on shapes • Step 6 Use lines of symmetry to complete shapes • Step 7 Sort 2-D shapes • Step 8 Count faces on 3-D shapes • Step 9 Count edges on 3-D shapes • Step 10 Count vertices on 3-D shapes • Step 11 Sort 3-D shapes • Step 12 Make patterns with 2-D and 3-D shapes

			• Step 21 Missing number problems		
	Key vocabulary - new Essential previously taught vocabulary	Tens One Hundreds Place Value Digit Numeral Less/fewer More/greater Compare Representation Whole part model Partition Comparison symbols < > =	One-digit number Two-digit number Consecutive Inverse Exchange Crossing ten Number bonds Difference between Number sequence Number sentence Fact family Counting on Total Partition Whole Part Model Bar Model Sum Answer Addition symbol Subtraction symbol Equal symbol	Symmetry Symmetrical Line of symmetry Faces Edges Vertices	
Spring		Block 1	Block 2	Block 3	Block 4
Year 2	Area of learning	Measurement: Money	Number: Multiplication and Division	Measurement: Length and Height	Measurement: Mass, Capacity and Temperature
	Prior knowledge	• Recognising coins and notes	• Add equal groups • Make arrays • Make doubles • Make equal groups – sharing • Make equal groups – grouping	• Compare lengths and heights • Measure lengths	• Introduce weight and mass • Measure mass • Introduce capacity and volume • Measure capacity
	New knowledge (National Curriculum)	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • 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.	• Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication	• 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. • Compare and order lengths, mass, volume/capacity and record the results using >, < and =.	• 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. • Compare and order lengths, mass, volume/capacity and record the results using >, < and =.

			and division facts, including problems in contexts. • Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		
	New knowledge (White Rose Small Steps)	• Step 1 Count money – pence • Step 2 Count money – pounds (notes and coins) • Step 3 Count money – pounds and pence • Step 4 Choose notes and coins • Step 5 Make the same amount • Step 6 Compare amounts of money • Step 7 Calculate with money • Step 8 Make a pound • Step 9 Find change • Step 10 Two-step problems	• Step 1 Recognise equal groups • Step 2 Make equal groups • Step 3 Add equal groups • Step 4 Introduce the multiplication symbol • Step 5 Multiplication sentences • Step 6 Use arrays • Step 7 Make equal groups – grouping • Step 8 Make equal groups – sharing • Step 9 The 2 times-table • Step 10 Divide by 2 • Step 11 Doubling and halving • Step 12 Odd and even numbers • Step 13 The 10 times-table • Step 14 Divide by 10 • Step 15 The 5 times-table • Step 16 Divide by 5 • Step 17 The 5 and 10 times-tables	• Step 1 Measure in centimetres • Step 2 Measure in metres • Step 3 Compare lengths and heights • Step 4 Order lengths and heights • Step 5 Four operations with lengths and heights	• Step 1 Compare mass • Step 2 Measure in grams • Step 3 Measure in kilograms • Step 4 Four operations with mass • Step 5 Compare volume and capacity • Step 6 Measure in millilitres • Step 7 Measure in litres • Step 8 Four operations with volume and capacity • Step 9 Temperature
	Key vocabulary - new Essential previously taught vocabulary	Total Difference Currency Equivalent Cheaper Dearer Enough Not enough Value Worth Coins Notes Pounds Pence Silver coins Copper coins How much?	Equal groups Multiplication facts 2x and 5x Commutative law Distributive law Multiples Multiplication facts 10x Divide Odd and even Halving Doubling Arrays Row Column Multiplication Repeated addition Equal groups Lots of	Centimetre Metre Estimate Longer Shorter	Kilogram (kg) Gram (g) °c Temperature Thermometer Volume Millilitres(ml) Litres (l) Mass Weight Warmer Colder Scales Full More than Heavier Empty

		Price Change Total Compare Most Least	Divide Multiply Multiples of 2, 5, 10 Double Equal Groups Sharing Total Patterns		Less than Lighter Half Full Equal to Half Empty Compare
Summer		Block 1	Block 2	Block 3	Block 4
Year 2	Area of learning	Number: Fractions	Measurement: Time	Statistics	Geometry: Position and Direction
	Prior knowledge	• Recognise, find and name a half and a quarter as equal parts of an object, shape or quantity	• Telling the time to an hour • Telling the time to half an hour • Writing the time		• Describe position
	New knowledge (National Curriculum)	• Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a length, shape, set of objects or quantity. • Write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2.	• 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. • Compare and sequence intervals of time.	• Interpret and construct simple pictograms, tally charts, block diagrams and simple 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 totaling and comparing categorical data.	• Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise). • Order and arrange combinations of mathematical objects in patterns and sequences.
	New knowledge (White Rose Small Steps)	• Step 1 Introduction to parts and whole • Step 2 Equal and unequal parts • Step 3 Recognise a half • Step 4 Find a half • Step 5 Recognise a quarter • Step 6 Find a quarter • Step 7 Recognise a third • Step 8 Find a third • Step 9 Find the whole • Step 10 Unit fractions • Step 11 Non-unit fractions • Step 12 Recognise the equivalence of a half and two-quarters • Step 13 Recognise three-quarters • Step 14 Find three-quarters	• Step 1 O'clock and half past • Step 2 Quarter past and quarter to • Step 3 Tell the time past the hour • Step 4 Tell the time to the hour • Step 5 Tell the time to 5 minutes • Step 6 Minutes in an hour • Step 7 Hours in a day.	• Step 1 Make tally charts • Step 2 Tables • Step 3 Block diagrams • Step 4 Draw pictograms (1–1) • Step 5 Interpret pictograms (1–1) • Step 6 Draw pictograms (2, 5 and 10) • Step 7 Interpret pictograms (2, 5 and 10)	• Step 1 O'clock and half past • Step 2 Quarter past and quarter to • Step 3 Tell the time past the hour • Step 4 Tell the time to the hour • Step 5 Tell the time to 5 minutes • Step 6 Minutes in an hour • Step 7 Hours in a day

		• Step 15 Count in fractions up to a whole			
	Key vocabulary - new Essential previously taught vocabulary	Third Equivalent Non-unit fractions Unit fractions Numerator Denominator Quantity Whole Half Quarter	Quarter to Quarter past Five minute intervals Time Minute Second Hour Day Month Year Date First Next Today Yesterday Tomorrow Morning Afternoon Evening Before After Clock Slow/slower/slowest Quick/quicker/quickest Compare Earlier Later Chronological order	Statistics Tally chart Pictogram Block diagrams Symbol Interpret Result Data Least Popular Most Popular Scale Interval Table Total Altogether Difference More Less Value	Pattern Repeating pattern Rotation Right angle Clockwise Anti-clockwise Direction Quarter (turn) Three Quarter (turn) Up Down Forward Backwards Left Right Position

Autumn		Block 1	Block 2	Block 3
Year 2	Area of learning	Number: Place Value	Number: Addition and Subtraction	Number: Multiplication and Division
	Prior knowledge	• Represent numbers to 100 • Tens and ones using addition • Number line to 100	• Add and subtract ones • Add a two-digit and a one-digit number – crossing 10 • Subtract a one-digit number from two digits – crossing 10 • Add 2 two-digit numbers – crossing 10 (add ones and add tens) • Subtract a two-digit number from two-digits – crossing 10 (subtract tens and subtract ones)	• Multiplication using the symbol • Using arrays • 2-times table • 5-times table • Making equal groups –sharing • Making equal groups – grouping • Divide by 2 • Divide by 5 • Divide by 1
	New knowledge (National Curriculum)	• Identify, represent and estimate numbers using different representations. • 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).	• Add and subtract numbers mentally, including: a three digit number and ones; a three digit number and tens, a three digit number and hundreds. • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.	• Count from 0 in multiples of 4, 8, 50 and 100. • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division

		• Compare and order numbers up to 1000. • Read and write numbers up to 1000 in numerals and in words. • Solve number problems and practical problems involving these ideas. • Count from 0 in multiples of 4, 8, 50 and 100.	• 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.	using the multiplication tables they know, including for two digit numbers times one 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 objectives.
	New knowledge (White Rose Small Steps)	• Step 1 Represent numbers to 100 • Step 2 Partition numbers to 100 • Step 3 Number line to 100 • Step 4 Hundreds • Step 5 Represent numbers to 1,000 • Step 6 Partition numbers to 1,000 • Step 7 Flexible partitioning of numbers to 1,000 • Step 8 Hundreds, tens and ones • Step 9 Find 1, 10 or 100 more or less • Step 10 Number line to 1,000 • Step 11 Estimate on a number line to 1,000 • Step 12 Compare numbers to 1,000 • Step 13 Order numbers to 1,000 • Step 14 Count in 50s	• . Step 1 Apply number bonds within 10 • Step 2 Add and subtract 1s • Step 3 Add and subtract 10s • Step 4 Add and subtract 100s • Step 5 Spot the pattern • Step 6 Add 1s across a 10 • Step 7 Add 10s across a 100 • Step 8 Subtract 1s across a10 • Step 9 Subtract 10s across a 100 • Step 10 Make connections • Step 11 Add two numbers (no exchange) • Step 12 Subtract two numbers (no exchange) • Step 13 Add two numbers (across a 10) • Step 14 Add two numbers (across a 100) • Step 15 Subtract two numbers (across a 10) • Step 16 Subtract two numbers (across a 100) • Step 17 Add 2-digit and 3-digit numbers • Step 18 Subtract a 2-digit number from a 3-digit number • Step 19 Complements to 100 • Step 20 Estimate answers • Step 21 Inverse operations • Step 22 Make decisions	• Step 1 Multiplication – equal groups • Step 2 Use arrays • Step 3 Multiples of 2 • Step 4 Multiples of 5 and 10 • Step 5 Sharing and grouping • Step 6 Multiply by 3 • Step 7 Divide by 3 • Step 8 The 3 times-table • Step 9 Multiply by 4 • Step 10 Divide by 4 • Step 11 The 4 times-table • Step 12 Multiply by 8 • Step 13 Divide by 8 • Step 14 The 8 times-table • Step 15 The 2, 4 and 8 times-tables
	Key vocabulary - new Essential previously taught vocabulary	Numbers to 1000 Thousands Place Value Digit Numerals Hundreds, Tens, Ones Less than More than Greater Fewer Symbols of Comparison > < = Representation	Column addition Column subtraction Multiples of 100 Efficient Method Addition Subtraction Equals Multiples of 10 Exchange Estimate Inverse	Multiples Product Scale up Remainder Equal Groups Multiply Lots of Arrays Divide Sharing Inverse Commutative law

		Partition		Distributive law Multiples Product Equal Groups Multiply Lots of Arrays Divide Sharing Inverse Commutative law Distributive law Tens and Ones Exchange

Spring		Block 1	Block 2	Block 3	Block 4
Year 3	Area of learning	Number: Multiplication and Division	Measurement: Length and Perimeter	Number: Fractions	Measurement: Mass, Capacity
	Prior knowledge	• Consolidate 2, 4 and 8-times tables	• Measure length (m) • Compare lengths	• Working with wholes and parts activity • Recap – make equal parts • Recognise a half • Find a half • Recognise a quarter • Find a quarter • Recognise a third • Find a third • Unit fractions • Non-unit fractions • Equivalence of a half and 2 quarters • Count in fractions	• Compare mass • Compare volume • Temperature activity • Temperature
	New knowledge (National Curriculum)	• 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 they know, including for two-digit numbers times one-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	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). • Measure the perimeter of simple 2D shapes.	• 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. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. • Solve problems that involve all of the above.	

		which n objects are connected to m objectives.				
	New knowledge (White Rose Small Steps)	• Step 1 Multiples of 10 • Step 2 Related calculations • Step 3 Reasoning about multiplication • Step 4 Multiply a 2-digit number by a 1-digit number – no exchange • Step 5 Multiply a 2-digit number by a 1-digit number – with exchange • Step 6 Link multiplication and division • Step 7 Divide a 2-digit number by a 1-digit number – no exchange • Step 8 Divide a 2-digit number by a 1-digit number – flexible partitioning • Step 9 Divide a 2-digit number by a 1-digit number – with remainders • Step 10 Scaling • Step 11 How many ways?	• Step 1 Measure in metres and centimetres • Step 2 Measure in millimetres • Step 3 Measure in centimetres and millimetres • Step 4 Metres, centimetres and millimetres • Step 5 Equivalent lengths (metres and centimetres) • Step 6 Equivalent lengths (centimetres and millimetres) • Step 7 Compare lengths • Step 8 Add lengths. • Step 9 Subtract lengths • Step 10 What is perimeter? • Step 11 Measure perimeter • Step 12 Calculate perimeter	• Step 1 Understand the denominators of unit fractions • Step 2 Compare and order unit fractions • Step 3 Understand the numerators of non-unit fractions • Step 4 Understand the whole • Step 5 Compare and order non-unit fractions • Step 6 Fractions and scales • Step 7 Fractions on a number line • Step 8 Count in fractions on a number line • Step 9 Equivalent fractions on a number line • Step 10 Equivalent fractions as bar models	• Step 1 Use scales • Step 2 Measure mass in grams • Step 3 Measure mass in kilograms and grams • Step 4 Equivalent masses (kilograms and grams) • Step 5 Compare mass • Step 6 Add and subtract mass • Step 7 Measure capacity and volume in millilitres • Step 8 Measure capacity and volume in litres and millilitres • Step 9 Equivalent capacities and volumes (litres and millilitres) • Step 10 Compare capacity and volume • Step 11 Add and subtract capacity and volume
	Key vocabulary - new Essential previously taught vocabulary	Remainder Multiples Product Equal Groups Multiply Lots of Arrays Divide Sharing Inverse Commutative law Distributive law Tens and Ones Exchange	Perimeter Length Width Centimetre Metre Add Subtract equivalent	Tenths Eights Decimals Numerator Denominator Equal Unit fractions Non-unit fractions Whole Halves Quarters Thirds	Kilogram (kg) Gram (g) Volume Millilitres(ml) Litres (l) Mass Weight Scales Full More than Empty Less than Equal to Compare Capacity	

Summer		Block 1	Block 2	Block 3	Block 4	Block 5
Year 3	Area of learning	Number: Fractions	Measurement: Money	Measurement: Time	Geometry: Property of Shapes	Statistics
	Prior knowledge		• Count money (pence) • Count money (pounds)	• O'clock and half past • Quarter past and quarter to		• Make tally charts • Draw pictograms • Interpret pictograms
	New knowledge (National Curriculum)	• add and subtract fractions with the same denominator	• Add and subtract amounts of money to give change, using	• tell and write the time from an analogue clock, including using	• draw 2-D shapes and make 3-D shapes using modelling	• Interpret and present data using bar charts, pictograms and tables.

		within one whole [for example, 5/7 + 1/7 = 6/7] • compare and order unit fractions, and fractions with the same denominators • solve problems that involve all of the abov	both £ and p in practical contexts.	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 • 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]	materials; recognise 3-D shapes in different orientations and describe them • recognise angles as a property of shape or a description of a turn • identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 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	• 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.
	New knowledge (White Rose Small Steps)	• Step 1 Add fractions • Step 2 Subtract fractions • Step 3 Partition the whole • Step 4 Unit fractions of a set of objects • Step 5 Non-unit fractions of a set of objects • Step 6 Reasoning with fractions of an amount	• Step 1 Pounds and pence • Step 2 Convert pounds and pence • Step 3 Add money • Step 4 Subtract money • Step 5 Find change	• Step 1 Roman numerals to 12 • Step 2 Tell the time to 5 minutes • Step 3 Tell the time to the minute • Step 4 Read time on a digital clock • Step 5 Use am and pm • Step 6 Years, months and days • Step 7 Days and hours • Step 8 Hours and minutes – use start and end times • Step 9 Hours and minutes - use durations • Step 10 Minutes and seconds • Step 11 Units of time	• Step 1 Turns and angles • Step 2 Right angles • Step 3 Compare angles • Step 4 Measure and draw accurately • Step 5 Horizontal and vertical • Step 6 Parallel and perpendicular • Step 7 Recognise and describe 2-D shapes • Step 8 Draw polygons • Step 9 Recognise and describe 3-D shapes • Step 10 Make 3-D shapes	• Step 1 Interpret pictograms • Step 2 Draw pictograms • Step 3 Interpret bar charts • Step 4 Draw bar charts • Step 5 Collect and represent data • Step 6 Two-way tables

				• Step 12 Solve problems with time		
	Key vocabulary - new Essential previously taught vocabulary	Numerator Denominator Equal Unit fractions Non-unit fractions Whole Halves Quarters Thirds Tenths Eights Add Subtract Equivalent Compare	Ascending Descending Over-estimate Under-estimate Round up Round Down Money Pounds Pence Currency Change Equivalent Estimate	Duration Quarter to Quarter past Five minute intervals Time Minute Second Hour Day Month Year	Greater/less than ninety degrees Horizontal Vertical Parallel Perpendicular Orientation	Bar charts Frequency Carroll Diagram Venn Diagram Statistics Interval Pictogram Tally Chart Most Popular Least Popular Interpret Value Symbol Data Result Table

Autumn		Block 1	Block 2	Block 3	Block 4
Year 4	Area of learning	Number: Place Value	Number: Addition and Subtraction	Measurement: Area	Number: Multiplication and Division
	Prior knowledge	Represent numbers to 1000 100s, 10s and 1s Number line to 1000 Find 1, 10, 100 more or less	Add two 3-digit numbers – not crossing 10 or 100 Add two 3-digit numbers – crossing 10 or 100 Subtract a 3-digit number from a 3-digit number – no exchange Subtract a 3-digit number from a 3-digit number – exchange		Multiply and divide by 3 The 3 times table
	New knowledge (National Curriculum)	• Count in multiples of 6, 7, 9. 25 and 1000. • Find 1000 more or less than a given number. • Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones). • Order and compare numbers beyond 1000. • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10, 100 or 1000. • Solve number and practical problems that involve all of the above and with	• Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. • Estimate and use inverse operations to check answers to a calculation. • Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.	• Find the area of rectilinear shapes by counting squares.	• Recall and use multiplication and division facts for multiplication tables up to 12 × 12. • Count in multiples of 6, 7, 9. 25 and1000. • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems

		increasingly large positive numbers. • Count backwards through zero to include negative numbers.			such as n objects are connected to m objects.
	New knowledge (White Rose Small Steps)	• Step 1 Represent numbers to 1,000 • Step 2 Partition numbers to 1,000 • Step 3 Number line to 1,000 • Step 4 Thousands • Step 5 Represent numbers to 10,000 • Step 6 Partition numbers to 10,000 • Step 7 Flexible partitioning of numbers to 10,000 • Step 8 Find 1, 10, 100, 1,000 more or less • Step 9 Number line to 10,000 • Step 10 Estimate on a number line to 10,000 • Step 11 Compare numbers to 10,000 • Step 12 Order numbers to 10,000 • Step 13 Roman numerals • Step 14 Round to the nearest 10 • Step 15 Round to the nearest 100 • Step 16 Round to the nearest 1,000 • Step 17 Round to the nearest 10, 100 or 1,000	• Step 1 Add and subtract 1s, 10s, 100s and 1,000s • Step 2 Add up to two 4-digit numbers – no exchange • Step 3 Add two 4-digit numbers – one exchange • Step 4 Add two 4-digit numbers – more than one exchange • Step 5 Subtract two 4-digit numbers – no exchange • Step 6 Subtract two 4-digit numbers – one exchange • Step 7 Subtract two 4-digit numbers – more than one exchange • Step 8 Efficient subtraction • Step 9 Estimate answers • Step 10 Checking strategies	• Step 1 What is area? • Step 2 Count squares • Step 3 Make shapes • Step 4 Compare areas	• Step 1 Multiples of 3 • Step 2 Multiply and divide by 6 • Step 3 6 times-table and division facts • Step 4 Multiply and divide by 9 • Step 5 9 times-table and division facts • Step 6 The 3, 6 and 9 times-tables • Step 7 Multiply and divide by 7 • Step 8 7 times-table and division facts • Step 9 11 times-table and division facts • Step 10 12 times-table and division facts • Step 11 Multiply by 1 and 0 • Step 12 Divide a number by 1 and itself • Step 13 Multiply three numbers
	Key vocabulary - new Essential previously taught vocabulary	Thousand more/less Negative numbers Count through zero Roman Numerals Rounding Place Value Digit Numerals Thousands, Hundreds, Tens, Ones Less than More than Greater	Addition Subtraction Equals Column Method Method Efficient Rounding Exchange Sum Inverse Operations	Area Rectilinear Compound Surface 2DShape Square Corners Sides Right Angles Perpendicular	Multiplication facts (12 x12) Factors Equal Groups Repeated Addition Multiply Lots Of... Arrays Product Commutative Law Sharing Grouping Division Facts Divide

		Fewer Symbols of Comparison > < = Representation Partition Compare Multiples			Sharing Grouping Inverse Distributive Law Multiples Fact Family
Spring		Block 1	Block 2	Block 3	Block 4
Year 4	Area of learning	Number: Multiplication and Division	Measurement: Length and Perimeter	Number: Fractions	Number: Decimals
	Prior knowledge	Multiply 2-digits by 1-digit Divide 2-digits by 1-digit (1) Divide 2-digits by 1-digit (2)	Equivalent lengths – m and cm Equivalent lengths – mm and cm Add lengths Subtract lengths Measure perimeter	Unit and non-unit fractions Tenths Count in Tenths Equivalent fractions (1) Equivalent fractions (2) Add fractions Subtract fractions Fraction of a set of objects (1) Fraction f a set of objects (2)	
	New knowledge (National Curriculum)	• Recall and use multiplication and division facts for multiplication tables up to 12 × 12. • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. • Recognise and use factor pairs and commutativity in mental calculations. • Multiply two digit and three digit numbers by a one digit number using formal written layout. • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.	• Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. • Convert between different units of measure [for example, kilometre to metre].	• Recognise and show, using diagrams, families of common equivalent fractions. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. • Add and subtract fractions with the same denominator.	• Recognise and write decimal equivalents of any number of tenths or hundredths. • Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths. • Solve simple measure and money problems involving fractions and decimals to two decimal places. • Convert between different units of measure [for example, kilometre to metre].
	New knowledge (White Rose Small Steps)	• Step 1 Factor pairs • Step 2 Use factor pairs • Step 3 Multiply by 10 • Step 4 Multiply by 100 • Step 5 Divide by 10	• Step 1 Measure in kilometres and metres • Step 2 Equivalent lengths (kilometres and metres) • Step 3 Perimeter on a grid	• Step 1 Understand the whole • Step 2 Count beyond 1 • Step 3 Partition a mixed number	• Step 1 Tenths as fractions • Step 2 Tenths as decimals • Step 3 Tenths on a place value chart

		• Step 6 Divide by 100 • Step 7 Related facts – multiplication and division • Step 8 Informal written methods for multiplication • Step 9 Multiply a 2-digit number by a 1-digit number • Step 10 Multiply a 3-digit number by a 1-digit number • Step 11 Divide a 2-digit number by a 1-digit number (1) • Step 12 Divide a 2-digit number by a 1-digit number (2) • Step 13 Divide a 3-digit number by a 1-digit number • Step 14 Correspondence problems • Step 15 Efficient multiplication	• Step 4 Perimeter of a rectangle • Step 5 Perimeter of rectilinear shapes • Step 6 Find missing lengths in rectilinear shapes • Step 7 Calculate perimeter of rectilinear shapes • Step 8 Perimeter of regular polygons • Step 9 Perimeter of polygons	• Step 4 Number lines with mixed numbers • Step 5 Compare and order mixed numbers • Step 6 Understand improper fractions • Step 7 Convert mixed numbers to improper fractions • Step 8 Convert improper fractions to mixed numbers • Step 9 Equivalent fractions on a number line • Step 10 Equivalent fraction families • Step 11 Add two or more fractions • Step 12 Add fractions and mixed numbers • Step 13 Subtract two fractions • Step 14 Subtract from whole amounts • Step 15 Subtract from mixed numbers	• Step 4 Tenths on a number line • Step 5 Divide a 1-digit number by 10 • Step 6 Divide a 2-digit number by 10 • Step 7 Hundredths as fractions • Step 8 Hundredths as decimals • Step 9 Hundredths on a place value chart • Step 10 Divide a 1- or 2-digit number by 100
	Key vocabulary - new Essential previously taught vocabulary	Factor Pairs Multiplication facts (12 x12) Equal Groups Repeated Addition Multiply Lots Of... Arrays Product Commutative Law Sharing Grouping Division Facts Divide Sharing Grouping Inverse Distributive Law Multiples Fact Family	Dimensions Grid Perimeter Length Width Centimetre Metre Add Subtract Equivalent Rectilinear	Proper fractions Improper fractions Mixed fractions Equivalent Fractions Numerator Denominator Equivalent Fractions Unit Fractions Non-unit fractions	Hundredths Decimal point Decimal place Tenths Decimal Number Equivalent Intervals Compare Order Ascending Descending

Summer		Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Year 4	Area of learning	Number: Decimals	Measurement: Money	Measurement: Time	Geometry: Property of Shape	Statistics	Geometry: Position and Direction

	Prior knowledge	Bonds to 10 and 100	Convert pounds and pence Add money Subtract money Find change	Telling the time to 5 minutes Telling the time to a minute Using a.m and p.m. 24 hour clock	Turns and angles Right angles in shapes Compare angles Describe and recognise 2D shapes Horizontal and vertical		
	New knowledge (National Curriculum)	• Compare numbers with the same number of decimal places up to two decimal places • Round decimals with one decimal place to the nearest whole number. • Recognise and write decimal equivalents to ¼, ½ and ¾. • Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	• Estimate, compare and calculate different measures, including money in pounds and pence. • Solve simple measure and money problems involving fractions and decimals to two decimal places.	• Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems Involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	• Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. • Identify lines of symmetry in 2-D shapes presented in different orientations. • Complete a simple symmetric figure with respect to a specific line of symmetry.	• 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.	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Plot specified points and draw sides to complete a given polygon. • Describe movements between positions as translations of a given unit to the left/ right and up/ down.
	New knowledge (White Rose Small Steps)	• Step 1 Make a whole with tenths • Step 2 Make a whole with hundredths • Step 3 Partition decimals • Step 4 Flexibly partition decimals • Step 5 Compare decimals • Step 6 Order decimals	• Step 1 Write money using decimals • Step 2 Convert between pounds and pence • Step 3 Compare amounts of money • Step 4 Estimate with money • Step 5 Calculate with money	• Step 1 Years, months, weeks and days • Step 2 Hours, minutes and seconds • Step 3 Convert between analogue and digital times • Step 4 Convert to the 24-hour clock	• Step 1 Understand angles as turns • Step 2 Identify angles • Step 3 Compare and order angles • Step 4 Triangles • Step 5 Quadrilaterals • Step 6 Polygons • Step 7 Lines of symmetry	• Step 1 Interpret charts • Step 2 Comparison, sum and difference • Step 3 Interpret line graphs • Step 4 Draw line graphs	• Step 1 Describe position using coordinates • Step 2 Plot coordinates • Step 3 Draw 2-D shapes on a grid • Step 4 Translate on a grid • Step 5 Describe translation on a grid

		• Step 7 Round to the nearest whole number • Step 8 Halves and quarters as decimals.	• Step 6 Solve problems with money.	• Step 5 Convert from the 24-hour clock..	• Step 8 Complete a symmetric figure		
	Key vocabulary - new Essential previously taught vocabulary	Hundredths Decimal point Decimal place Value Digit Tenths Decimal Number Equivalent Intervals Compare Order Ascending Descending Round	Money Pounds Convert Currency Decimal Point Equivalent Pence Partitioned Order Ascending Descending Estimate Underestimate Overestimate Approximately Round down Round up Order	Analogue Digital Seconds Minutes Hours Days Weeks Months Year	Right angle Acute angle Obtuse angle Classify Isosceles Scalene Equilateral 2-D Shape 3-D Shape Sides Vertex/Vertices Corner Symmetrical Non-symmetrical Faces Edges Sorting Horizontal Line Vertical Line Perpendicular Line	Line graphs Axis Discrete Data Comparison Statistics Key (Pictogram) Interval Pictogram Bar Chart Most Popular Value Interpret Least Popular Symbol Data Tally Chart Result Scale Table Information Comparison Sum Difference	Coordinates Translation Translate First quadrant x-axis y-axis plot Position Direction Up Down Forward Backward Up Down Left Right Vertex/vertices

Autumn		Block 1	Block 2	Block 3	Block 4
Year 5	Area of learning	Number: Place Value	Number: Addition and Subtraction	Number: Multiplication and Division	Number: Fractions
	Prior knowledge	1000s, 100s, 10 and 1s Rounding to the nearest 10 Rounding to the nearest 100	Add two 4-diigt numbers – one exchange Add two 4-diigit numbers – more than one exchange Subtract two 4-diigt numbers – one exchange Subtract two 4-diigit numbers – more than one exchange	Multiply by 10 Multiply by 100 Divide by 10 Divide by 100	What is a fraction? Equivalent fractions Fractions greater than 1 Calculate fractions of a quantity
	New knowledge (National Curriculum)	• Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1000000.	• Add and subtract numbers mentally with increasingly large numbers. • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction).	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers. • Know and use the vocabulary of prime numbers, prime	• Compare and order fractions whose denominators are multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually

		• Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000. • Solve number problems and practical problems that involve all of the above. • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	• Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. • Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why.	factors and composite (non prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. • Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for two digit numbers. • Multiply and divide numbers mentally, drawing upon known facts. • Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000. • Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}). • Solve problems involving multiplication and division, including using their knowledge of factors and multiples squares and cubes. • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$]. • Add and subtract fractions with the same denominator and denominators that are multiples of the same number.
	New knowledge (White Rose Small Steps)	• Step 1 Roman numerals to 1,000 • Step 2 Numbers to 10,000 • Step 3 Numbers to 100,000 • Step 4 Numbers to 1,000,000	• Step 1 Mental strategies • Step 2 Add whole numbers with more than four digits	• Step 1 Multiples • Step 2 Common multiples • Step 3 Factors • Step 4 Common factors • Step 5 Prime numbers	• Step 1 Find fractions equivalent to a unit fraction • Step 2 Find fractions equivalent to a non-unit fraction

		• Step 5 Read and write numbers to 1,000,000 • Step 6 Powers of 10 • Step 7 10/100/1,000/10,000/100,000 more or less • Step 8 Partition numbers to 1,000,000 • Step 9 Number line to 1,000,000 • Step 10 Compare and order numbers to 100,000 • Step 11 Compare and order numbers to 1,000,000 • Step 12 Round to the nearest 10, 100 or 1,000 • Step 13 Round within 100,000 • Step 14 Round within 1,000,000	• Step 3 Subtract whole numbers with more than four digits • Step 4 Round to check answers • Step 5 Inverse operations (addition and subtraction) • Step 6 Multi-step addition and subtraction problems • Step 7 Compare calculations • Step 8 Find missing numbers	• Step 6 Square numbers • Step 7 Cube numbers • Step 8 Multiply by 10, 100 and 1,000 • Step 9 Divide by 10, 100 and 1,000 • Step 10 Multiples of 10, 100 and 1,000	• Step 3 Recognise equivalent fractions • Step 4 Convert improper fractions to mixed numbers • Step 5 Convert mixed numbers to improper fractions • Step 6 Compare fractions less than 1 • Step 7 Order fractions less than 1 • Step 8 Compare and order fractions greater than 1 • Step 9 Add and subtract fractions with the same denominator • Step 10 Add fractions within 1 • Step 11 Add fractions with total greater than 1 • Step 12 Add to a mixed number • Step 13 Add two mixed numbers • Step 14 Subtract fractions • Step 15 Subtract from a mixed number • Step 16 Subtract from a mixed number – breaking the whole • Step 17 Subtract two mixed numbers

	Key vocabulary - new Essential previously taught vocabulary	Powers of 10 Million Ten thousands Hundred thousands Digit Place value Thousands, Hundreds, Tens and Ones Sequence Compare Numeral Integers Representation Strategy Partition Negative numbers Powers of ten Exchange Roman Numerals Estimate Approximate Round/Rounding Multiples Ascending Descending	Efficient written method Addition Subtraction Column method Equals Place holder Estimate Exchange Sum Total Inverse	Composite numbers Prime numbers Prime factors Factor Pairs Square numbers Cubed numbers Multiplication Facts Division Equals Arrays Multiplier Place Value Chart	Proper fractions Improper fractions Mixed numbers/fractions Fraction Numerator Denominator Unit fraction Non-Unit fraction Fraction Wall Amount Quantity Equivalent Common denominator	
Spring		Block 1	Block 2	Block 3	Block 4	Block 5
Year 5	Area of learning	Number: Multiplication and Division	Number: Fractions	Number: Decimals and Percentages	Measurement: Perimeter and Area	Statistics
	Prior knowledge	Multiply 2-digits by 1-digit Multiply 3-digits by 1-digit Divide 2-digits by 1-digit (1) Divide 2-diigts by 1-diigt (2) Divide 3-digits by 1 digit	What is a fraction? Equivalent fractions Fractions greater than 1 Calculate fractions of a quantity		Perimeter on a grid Perimeter of rectangles Perimeter of rectilinear shapes Counting squares	Interpret charts Comparison, sum and difference Introduce line graphs
	New knowledge (National Curriculum)	• Multiply and divide numbers mentally drawing upon known facts. • Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. • Divide numbers up to 4 digits by a one digit	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Read and write decimal numbers as fractions [for example 0.71 = $^{71}/_{100}$]. • Solve problems involving multiplication and division, including	• Read, write, order and compare numbers with up to three decimal places. • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • Round decimals with two decimal places to the nearest whole	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square	• Solve comparison, sum and difference problems using information presented in a line graph. • Complete, read and interpret information in tables including timetables.

		number using the formal written method of short division and interpret remainders appropriately for the context. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.	scaling by simple fractions and problems involving simple rates.	number and to one decimal place. • Solve problems involving number up to three decimal places. • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those fractions with a denominator of a multiple of 10 or 25.	metres (m^2), and estimate the area of irregular shapes.	
	New knowledge (White Rose Small Steps)	• Step 1 Multiply up to a 4-digit number by a 1-digit number • Step 2 Multiply a 2-digit number by a 2-digit number (area model) • Step 3 Multiply a 2-digit number by a 2-digit number • Step 4 Multiply a 3-digit number by a 2-digit number • Step 5 Multiply a 4-digit number by a 2-digit number • Step 6 Solve problems with multiplication • Step 7 Short division • Step 8 Divide a 4-digit number by a 1-digit number • Step 9 Divide with remainders	• Step 1 Multiply a unit fraction by an integer • Step 2 Multiply a non-unit fraction by an integer • Step 3 Multiply a mixed number by an integer • Step 4 Calculate a fraction of a quantity • Step 5 Fraction of an amount • Step 6 Find the whole • Step 7 Use fractions as operators	• Step 1 Decimals up to 2 decimal places • Step 2 Equivalent fractions and decimals (tenths) • Step 3 Equivalent fractions and decimals (hundredths) • Step 4 Equivalent fractions and decimals • Step 5 Thousandths as fractions • Step 6 Thousandths as decimals • Step 7 Thousandths on a place value chart • Step 8 Order and compare decimals (same number of decimal places) • Step 9 Order and compare any decimals with up to 3 decimal places	• Step 1 Perimeter of rectangles • Step 2 Perimeter of rectilinear shapes • Step 3 Perimeter of polygons • Step 4 Area of rectangles • Step 5 Area of compound shapes • Step 6 Estimate area	• Step 1 Draw line graphs • Step 2 Read and interpret line graphs • Step 3 Read and interpret tables • Step 4 Two-way tables • Step 5 Read and interpret timetables

		• Step 10 Efficient division • Step 11 Solve problems with multiplication and division		• Step 10 Round to the nearest whole number • Step 11 Round to 1 decimal place • Step 12 Understand percentages • Step 13 Percentages as fractions • Step 14 Percentages as decimals • Step 15 Equivalent fractions, decimals and percentages		
	Key vocabulary - new Essential previously taught vocabulary	Formal written method Short division Quotient Divisor Dividend Short Multiplication Long Multiplication Remainder Integer Multiplication facts Division facts Product Place Holder	Proper fractions Improper fractions Mixed numbers/fractions Fraction Numerator Denominator Unit fraction Non-Unit fraction Fraction Wall Amount Quantity Equivalent Common denominator	Thousandths Percentage Equivalent Decimal number decimal point decimal places tenths hundredths integers partition exchange convert numerator denominator	Regular Irregular Compound composite Length Width Area Perimeter Rectilinear dimensions formula for area	Line graph Intervals Statistics Pictogram Bar chart Tally chart Frequency Scale Table x-axis y-axis data

Summer	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
	Area of learning	Geometry: Properties of Shape	Geometry: Position and Direction	Number: Decimals	Number: Negative Numbers	Measurements: Converting Units	Measurement: Volume
	Prior knowledge	Identify angles Compare and order angles Triangles Quadrilaterals	Describe position Draw on a grid Lines of symmetry Complete a symmetric figure			Kilometres	
	New knowledge (National Curriculum)	• Identify 3D shapes, including cubes and other cuboids, from 2D representations. • Use the properties of rectangles to deduce related facts and find missing lengths and angles.	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	• Solve problems involving number up to three decimal places. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Use all four operations to solve problems	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. •	• Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]. • Understand and use approximate equivalences between metric units and common imperial	• Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. • Use all four operations to solve problems

		• Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees. • Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°.		involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.		units such as inches, pounds and pints. • Solve problems involving converting between units of time.	involving measure.
	New knowledge (White Rose Small Steps)	• Step 1 Understand and use degrees • Step 2 Classify angles • Step 3 Estimate angles • Step 4 Measure angles up to 180° • Step 5 Draw lines and angles accurately • Step 6 Calculate angles around a point • Step 7 Calculate angles on a straight line • Step 8 Lengths and angles in shapes	• Step 1 Read and plot coordinates • Step 2 Problem solving with coordinates • Step 3 Translation • Step 4 Translation with coordinates • Step 5 Lines of symmetry • Step 6 Reflection in horizontal and vertical lines	• Step 1 Use known facts to add and subtract decimals within 1 • Step 2 Complements to 1 • Step 3 Add and subtract decimals across 1 • Step 4 Add decimals with the same number of decimal places • Step 5 Subtract decimals with the same number of decimal places • Step 6 Add decimals with different	• Step 1 Understand negative numbers • Step 2 Count through zero in 1s • Step 3 Count through zero in multiples • Step 4 Compare and order negative numbers • Step 5 Find the difference	• Step 1 Kilograms and kilometres • Step 2 Millimetres and millilitres • Step 3 Convert units of length • Step 4 Convert between metric and imperial units • Step 5 Convert units of time • Step 6 Calculate with timetables	• Step 1 Cubic centimetres • Step 2 Compare volume • Step 3 Estimate volume • Step 4 Estimate capacity

		• Step 9 Regular and irregular polygons • Step 10 3-D shapes		numbers of decimal places • Step 7 Subtract decimals with different numbers of decimal places • Step 8 Efficient strategies for adding and subtracting decimals • Step 9 Decimal sequences • Step 10 Multiply by 10, 100 and 1,000 • Step 11 Divide by 10, 100 and 1,000 • Step 12 Multiply and divide decimals – missing values			
	Key vocabulary - new Essential previously taught vocabulary	Reflex angle Regular polygons Irregular polygons Protractor Angles around a point Angles in a straight line Degrees Measurement of a turn 3d shapes 2d shapes Nets Representation Lengths dimensions Angles Acute, Right, Obtuse angles	Reflection Translation Position Direction Left Right Grid Coordinates x-axis y-axis first quadrant vertices mirror line horizontal vertical	Decimal number decimal point decimal places tenths hundredths thousandths integers place value column addition/subtraction multiplication division place holders	Place Value Number line Digit Order Zero Negative numbers	Imperial units Matric units millimetres Length Weight Height Approximate Estimate Ascending Descending Compare Convert Abbreviations Millimetres Metres Centimetres Kilometres Litres Grams Kilograms	Volume Cubic centimetre Capacity
Autumn		Block 1	Block 2	Block 3		Block 4	Block 5

Year 6	Area of learning	Number: Place Value	Number: Addition, Subtraction, Multiplication and Division	Number: Fractions	Number: Fractions	Measurement: Converting Units
	Prior knowledge	Numbers to 10,000 Numbers to 100,000 Numbers to a million Round numbers to 10, 100 and 1000	Add whole numbers with more than 4 digits Subtract whole numbers with more than 4 digits Inverse Operations (+&-) Multi-step addition and subtraction problems Multiply 4-digits by 1-diigt Multiply 2-digits (area model) Multiply 2-digts by 2-digits Multiply 3-digits by 2-digits Divide 4-digits by 1-digit Divide with remainders Factors	Equivalent fractions Improper fractions to mixed numbers Mixed numbers to improper fractions Add mixed numbers Subtract mixed numbers	Multiply unit fractions by an integer. Multiply non-unit fractions by an integer. Multiply mixed numbers by integers. Fractions of amounts	
	New knowledge (National Curriculum)	• Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit. • Round any whole number to a required degree of accuracy. • Use negative numbers in context, and calculate intervals across zero. • Solve number and practical problems that involve all of the above.	• Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why • Multiply multi digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication. • Divide numbers up to 4 digits by a 2 digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. • Divide numbers up to 4 digits by a 2 digit number using the formal written method of short division, interpreting	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. • Compare and order fractions, including fractions >1. • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions. • Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8). • Divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6). • Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8).	• Multiply one digit numbers with up to two decimal places by whole numbers. • Use written division methods in cases where the answer has up to two decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to 3 d.p. • Convert between miles and kilometres.

			remainders according to the context. • Perform mental calculations, including with mixed operations and large numbers. • Identify common factors, common multiples and prime numbers. • Use their knowledge of the order of operations to carry out calculations involving the four operations. • Solve problems involving addition, subtraction, multiplication and division. • Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy.	• Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places.		
	New knowledge (White Rose Small Steps)	• Step 1 Numbers to 1,000,000 • Step 2 Numbers to 10,000,000 • Step 3 Read and write numbers to 10,000,000 • Step 4 Powers of 10 • Step 5 Number line to 10,000,000 • Step 6 Compare and order any integers • Step 7 Round any integer • Step 8 Negative numbers	• Step 1 Add and subtract integers • Step 2 Common factors • Step 3 Common multiples • Step 4 Rules of divisibility • Step 5 Primes to 100 • Step 6 Square and cube numbers • Step 7 Multiply up to a 4-digit number by a 2-digit number • Step 8 Solve problems with multiplication • Step 9 Short division • Step 10 Division using factors • Step 11 Introduction to long division	• Step 1 Equivalent fractions and simplifying • Step 2 Equivalent fractions on a number line • Step 3 Compare and order (denominator) • Step 4 Compare and order (numerator) • Step 5 Add and subtract simple fractions • Step 6 Add and subtract any two fractions • Step 7 Add mixed numbers • Step 8 Subtract mixed numbers • Step 9 Multi-step problems	• Step 1 Multiply fractions by integers • Step 2 Multiply fractions by fractions • Step 3 Divide a fraction by an integer • Step 4 Divide any fraction by an integer • Step 5 Mixed questions with fractions • Step 6 Fraction of an amount • Step 7 Fraction of an amount – find the whole	• Step 1 Metric measures • Step 2 Convert metric measures • Step 3 Calculate with metric measures • Step 4 Miles and kilometres • Step 5 Imperial measures

			• Step 12 Long division with remainders • Step 13 Solve problems with division • Step 14 Solve multi-step problems • Step 15 Order of operations • Step 16 Mental calculations and estimation • Step 17 Reason from known facts			
	Key vocabulary - new Essential previously taught vocabulary	Numbers to 10 million Digit Place value Millions, Hundred Thousands, Ten Thousands, Thousands, Hundreds, Tens and Ones Sequence Compare Numeral Integers Representation Strategy Partition Negative numbers Powers of ten Exchange Roman Numerals Estimate Approximate Round/Rounding Multiples Ascending Descending	Order of Operations Common factors Common multiples Long Division Addition - column Subtraction - column Multiplication – short and long Division - short Four Operations Multiples Factors Primes Squared Cubed Composite Numbers Quotient Divisor Dividend	Simplify Fraction Numerator Denominator Proper Fraction Improper Fraction Unit fraction Non-Unit fraction Mixed Fraction Mixed Number Fraction Wall Amount Quantity Equivalent Common denominator	Simplify Fraction Numerator Denominator Proper Fraction Improper Fraction Unit fraction Non-Unit fraction Mixed Fraction Mixed Number Fraction Wall Amount Quantity Equivalent Common denominator	Imperial Miles Length Weight Height Approximate Estimate Ascending Descending Compare Convert Abbreviations Millimetres Metres Centimetres Kilometres Litres Grams Kilograms Metric	
Spring		Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
Year 6	Area of learning	Number: Ratio	Number: Algebra	Number: Decimals	Number: Percentages	Measurement: Perimeter, Area and Volume	Statistics
	Prior knowledge			Decimals to 2 d.p. Understand thousandths	Understand percentages	What is volume?	
	New knowledge (National Curriculum)	• Solve problems involving the relative sizes of two quantities	• Use simple formulae. • Generate and describe linear	• Identify the value of each digit in numbers given to 3 decimal places	• Solve problems involving the calculation of percentages [for	• Recognise that shapes with the same areas can have different	• Illustrate and name parts of circles, including radius, diameter

		where missing values can be found by using integer multiplication and division facts. • Solve problems involving similar shapes where the scale factor is known or can be found. • Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.	number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfy an equation with two unknowns. • Enumerate possibilities of combinations of two variables.	and multiply numbers by 10,100 and 1,000 giving answers up to 3 decimal places. • Multiply one digit numbers with up to 2 decimal places by whole numbers. • Use written division methods in cases where the answer has up to 2 decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy.	example, of measures and such as 15% of 360] and the use of percentages for comparison. • Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.	perimeters and vice versa. • Recognise when it is possible to use formulae for area and volume of shapes. • Calculate the area of parallelograms and triangles. • Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm3, m3 and extending to other units (mm3, km3).	and circumference and know that the diameter is twice the radius. • Interpret and construct pie charts and line graphs and use these to solve problems. • Calculate the mean as an average.
	New knowledge (White Rose Small Steps)	• Step 1 Add or multiply? • Step 2 Use ratio language • Step 3 Introduction to the ratio symbol • Step 4 Ratio and fractions • Step 5 Scale drawing • Step 6 Use scale factors • Step 7 Similar shapes • Step 8 Ratio problems • Step 9 Proportion problems • Step 10 Recipes	• Step 1 1-step function machines • Step 2 2-step function machines • Step 3 Form expressions • Step 4 Substitution • Step 5 Formulae • Step 6 Form equations • Step 7 Solve 1-step equations • Step 8 Solve 2-step equations • Step 9 Find pairs of values • Step 10 Solve problems with two unknowns	• Step 1 Place value within 1 • Step 2 Place value – integers and decimals • Step 3 Round decimals • Step 4 Add and subtract decimals • Step 5 Multiply by 10, 100 and 1,000 • Step 6 Divide by 10, 100 and 1,000 • Step 7 Multiply decimals by integers • Step 8 Divide decimals by integers • Step 9 Multiply and divide decimals in context	• Step 1 Decimal and fraction equivalents • Step 2 Fractions as division • Step 3 Understand percentages • Step 4 Fractions to percentages • Step 5 Equivalent fractions, decimals and percentages • Step 6 Order fractions, decimals and percentages • Step 7 Percentage of an amount – one step • Step 8 Percentage of an	• Step 1 Shapes – same area • Step 2 Area and perimeter • Step 3 Area of a triangle – counting squares • Step 4 Area of a right-angled triangle • Step 5 Area of any triangle • Step 6 Area of a parallelogram • Step 7 Volume – counting cubes • Step 8 Volume of a cuboid	• Step 1 Line graphs • Step 2 Dual bar charts • Step 3 Read and interpret pie charts • Step 4 Pie charts with percentages Step 5 Draw pie charts Step 6 The mean

					amount – multi-step • Step 9 Percentages – missing values		
	Key vocabulary - new Essential previously taught vocabulary	Scale Scale Factor Ratio Proportion For every Out of Comparison Quotient Fraction Larger Smaller Enlarge Reduce dimension	Linear sequence Substitute Variable Symbol Known values Unknown values Algebra Equation Function Operator Input Output Value	Degree of accuracy Decimal number decimal point decimal places tenths hundredths thousandths integers partition exchange simplify convert numerator denominator	simplify convert numerator denominator order	Compound Names of shapes Formulae Calculate Perpendicular Base Height Depth Width	Mean Average Pie chart Construct Circumference Radius Diameter Read Interpret Line Graphs x-axis y-axis intervals frequency scale data double half percentage fraction segment total divide
Summer		Block 1		Block 2			
Year 6	Area of learning	Geometry: Properties of Shapes		Geometry: Position and Direction		Investigations and Problem Solving	
	Prior knowledge	Draw lines accurately Angles in a straight line Angles around a point					
	New knowledge (National Curriculum)	• Draw 2 D shapes using given dimensions and angles. • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.		• Describe positions on the full coordinate grid (all four quadrants). • Draw and translate simple shapes on the coordinate plane, and reflect them in the axis.		Various Objectives Across the Curriculum	
	New knowledge (White Rose Small Steps)	• Step 1 Measure and classify angles • Step 2 Calculate angles • Step 3 Vertically opposite angles • Step 4 Angles in a triangle		• Step 1 The first quadrant • Step 2 Read and plot points in four quadrants • Step 3 Solve problems with coordinates • Step 4 Translations			

		• Step 5 Angles in a triangle – special cases • Step 6 Angles in a triangle – missing angles • Step 7 Angles in a quadrilateral • Step 8 Angles in polygons • Step 9 Circles • Step 10 Draw shapes accurately • Step 11 Nets of 3-D shapes	• Step 5 Reflections	
	Key vocabulary - new Essential previously taught vocabulary	Vertically opposite angles Acute, Right, Obtuse, Reflex angles Protractor Measurement of turn Degrees Straight Line Right angle Full turn Anti-clockwise Clockwise Equal Origin Vertices Equilateral, Isosceles, Scalene triangles	Four quadrants Congruent Position Direction Grid Coordinate – positive and negative Plot x-axis y-axis origin symmetry mirror line reflection translation horizontal vertical vertices	