Dothill Progression Mapping

Mathematics

Respect Happiness Responsibility Creativity HONESTY Enthusiasm Confidence Kindness Cooperation fairness

NB: Text in red font is taken from the RTP criteria

	Year Three	Year Four
Declarative I know that… (facts)	**Number & Place Value** ✓ 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. ✓ I know the previous and next multiple of 10 and 100 for a 3-digit number. ✓ I know that 100 = 2x50=4x25=5x20=10x10 and the related division facts. I know that this fact can be used to read numberline / scales marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	**Number & Place Value** ✓ 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. ✓ I know and can identify the place value of each digit in a four-digit number, and can compose and decompose four-digit numbers using standard and non-standard partitioning. ✓ I know the previous and next multiples of 1,000 and 100 of any four-digit number. ✓ I know what 1,000 divided into 2, 4, 5 and 10 equal parts is, and can read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Number & Place Value** ✓ Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning. ✓ 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. ✓ 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. ✓ Count from 0 in multiples of 4, 8, 50 and 100; ✓ Find 10 or 100 more or less than a given number ✓ Compare and order numbers up to 1000 ✓ Identify, represent and estimate numbers using different representations ✓ Read and write numbers up to 1000 in numerals and in words ✓ Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ✓ solve number problems and practical problems involving these ideas.	**Number & Place Value** ✓ Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning. ✓ 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. ✓ 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. ✓ Count backwards through zero to include negative numbers ✓ Count in multiples of 6, 7, 9, 25 and 1000 ✓ Find 1000 more or less than a given number ✓ Order and compare numbers beyond 1000 ✓ Identify, represent and estimate numbers using different representations ✓ Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value. ✓ Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) ✓ Round any number to the nearest 10, 100 or 1000 ✓ Solve number and practical problems that involve all of the above and with increasingly large positive numbers
Vocabulary	Hundreds Three-digit ten more one hundred more ten less one hundred less Roman numeral Numbers up to one thousand	Thousands Four- digit Negative number One thousand more One thousand less Decimal Decimal place Rounding Place holder Nearest ten Nearest hundred Nearest thousand One place Whole number Integer Tenths

Declarative I know that… (facts)	**Number Facts** ✓ Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. ✓ Secure fluency in addition and subtraction facts that bridge 10, through continued practice. ✓ I know additive and multiplicative fact (scaling facts by 10), eg 3x4=12 so 30x4=120, 8+6=14 so 80-+60=140	**Number Facts** ✓ Recall multiplication and division facts up to 12x12 , and recognise products in multiplication tables as multiples of the corresponding number. ✓ I know that some divisions will result in a quotient and a remainder. ✓ I know and can apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10 or 100), eg 3x4=12, so 30x4=120 and 300x4=1200 and 8+6=14, so 80+60=140 and 800+600=1400.
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Number Facts** ✓ Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).	**Number Facts** ✓ Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. ✓ Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
Vocabulary		
Declarative I know that… (facts)	**Addition & Subtraction** ✓ 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	**Addition & Subtraction** ✓ I know that I can use the inverse operation to check my answers.
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Addition & Subtraction** ✓ Calculate complements to 100. ✓ Add and subtract up to three-digit numbers using columnar methods. ✓ 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 ✓ 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	**Addition & Subtraction** ✓ 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
Vocabulary	Three-digit number Hundreds Estimate Number facts	Two step problems Context Four-digit

Declarative I know that… (facts)	**Multiplication & Division** ✓ I know that multiplying by a number by 10 moves the digits left once on the place value chart ✓ I know that dividing a 3-digit multiple of 10 will result in a 2-digit number. ✓ I know that multiplication and division have an inverse relationship. ✓ I know that multiplication is commutative.	**Multiplication & Division** ✓ I know and can use place value knowledge to multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to scaling a number by 10 or 100. ✓ I know and can recall multiplication and division facts up to 12x12 and recognise products in multiplication tables as multiples of the corresponding number. ✓ I know multiples of 10, 100 and 1000. ✓ I know and can apply place value knowledge to know additive and multiplicative number facts. ✓ I know the multiplication and division are inverse operations and can use this to manipulate multiplication and division equations. ✓ I know that multiplication is distributive, so 3 × (2 + 4) = 3×2 + 3×4 , but division is not. ✓ I know that multiplication is associative so (3 x 4) x 5 = 3 x (4 x 5) ✓ I know that multiplication is commutative, but division is not.
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Multiplication & Division** ✓ Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division. ✓ *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 using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Written Methods) ✓ Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods) ✓ *Estimate the answer to a calculation and use inverse operations to check answers* (copied from Addition and Subtraction) ✓ Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	**Multiplication & Division** ✓ 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. ✓ Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. ✓ Understand and apply the distributive property of multiplication. ✓ *Count in multiples of 6, 7, 9, 25 and 1000* ✓ Recall 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 (appears also in Properties of Numbers) ✓ Multiply two-digit and three-digit numbers by a one-digit number using formal written layout ✓ Recognise and use factor pairs and commutativity in mental calculations (repeated) ✓ *Estimate and use inverse operations to check answers to a calculation* (copied from Addition and Subtraction) ✓ 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 ✓ I know how to divide powers of 10 into 2, 4, 5 and 10 equal parts.
Vocabulary	Missing number problem Estimate Inverse Formal written method Mathematical statement Recall Integer Two- digit	Derived facts Factors Factor pairs Scaling problems Three-digit
Declarative I know that… (facts)	**Fractions** ✓ I know what a unit fraction is. ✓ I know what a non-unit fraction is. ✓ I know that the denominator is the number of equal parts the whole is divided by. ✓ I know that the numerator is the number of equal parts of the whole that are 'taken'. ✓ I know that ten tenths is equal to one.	**Fractions** ✓ I know that one hundred hundredths is equal to one. ✓ I know that the numerator is the number of unit fractions in a non-unit fraction (for example, know that there are 3 one-fifths in three-fifths). ✓ I know that there a *n* parts in the whole, when the denominator is *n* ✓ I know that fractions can be equivalent eg $\frac{1}{2}$ = 3/6

Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Fractions** ✓ Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts. ✓ Find unit fractions of quantities using known division facts (multiplication tables fluency). ✓ Reason about the location of any fraction within 1 in the linear number system. ✓ Add and subtract fractions with the same denominator, within 1. ✓ Count up and down in tenths ✓ Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators ✓ 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 ✓ Compare and order unit fractions, and fractions with the same denominators ✓ Recognise and show, using diagrams, equivalent fractions with small denominators ✓ Add and subtract fractions with the same denominator within one whole (e.g. $^{5}/_{7} + {}^{1}/_{7} = {}^{6}/_{7}$) ✓ Solve problems that involve all of the above	**Fractions** ✓ Reason about the location of mixed numbers in the linear number system. ✓ Convert mixed numbers to improper fractions and vice versa. ✓ Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers. ✓ Count up and down in hundredths ✓ Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten ✓ 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 show, using diagrams, families of common equivalent fractions ✓ Recognise and write decimal equivalents of any number of tenths or hundredths ✓ Recognise and write decimal equivalents to $^{1}/_{4}$; $^{1}/_{2}$; $^{3}/_{4}$ ✓ Add and subtract fractions with the same denominator ✓ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths ✓ 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 ✓ Solve simple measure and money problems involving fractions and decimals to two decimal places.
Vocabulary	Tenths Unit fractions Non- unit fractions Numerator Denominator Compare Order Add Subtract Solve problems	Hundredths Decimal Decimal place One decimal place Two decimal places Round decimals Whole number Common equivalent fractions Decimal equivalents Dividing Ones Tenths Hundredths Money problems
Declarative I know that… (facts)	**Geometry** ✓ I know that a polygon is a shape with at least 3 sides. ✓ I know the length can be measured in metres and centimetres. ✓ I know that angles are a measure of turn. ✓ I know that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; ✓ I know whether angles are greater than or less than a right angle ✓ I know that angles are a property of a shape	**Geometry** ✓ I know that polygons can be composed from smaller shapes ✓ I know that acute angles are between 0 and 90°, obtuse angles are between 90 and 180° and that right angles are 90° ✓ I know that symmetry is the same on both sides. ✓ I know what the first quadrant is. ✓ I know that coordinates are described as (x,y) ✓ I know that a shape could have more than one line of symmetry.
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Geometry** ✓ 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. ✓ Draw polygons by joining marked points, and identify parallel and perpendicular sides. ✓ Draw 2-D shapes and make 3-D shapes using modelling 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 two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle ✓ Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	**Geometry** ✓ 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. ✓ 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 ✓ Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes ✓ Identify acute and obtuse angles and compare and order angles up to two right angles by size ✓ Describe positions on a 2-D grid as coordinates in the first quadrant ✓ Describe movements between positions as translations of a given unit to the left/right and up/down ✓ Plot specified points and draw sides to complete a given polygon

Vocabulary	Angle Turn Right angles Quarter of a turn Half-turn Three quarters of a turn Complete turn Horizontal lines Vertical lines Perpendicular lines Parallel lines	Co-ordinates Quadrant Grid Translate Translation Axis X- axis Y-axis Spaces Unit Plot Point Polygon Lines of symmetry Symmetric figure Classify Geometric shapes Quadrilaterals Acute angle Obtuse angle
Declarative I know that… (facts)	**Ratio & Proportion**	**Ratio & Proportion**
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Ratio & Proportion**	**Ratio & Proportion**
Vocabulary		
Declarative I know that… (facts)	**Measurement** ✓ I know the appropriate units of measurements **lengths** (m/cm/mm); **mass** (kg/g); **volume/capacity** (l/ml) ✓ I know that perimeter is the total length around the outside of a 2D shape ✓ I know that perimeter of a rectangle is 2 x (width + length) ✓ I know that 100p is equal to £1 ✓ I know the number of seconds in a minute and the number of days in each month, year and leap year ✓ I know vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time) ✓ I know Roman numerals from I to XII and know why have these.	**Measurement** ✓ I know that the area is the space that a 2D shape takes up. ✓ I know the conversion rates for units of measurement (g in Kg, cm in m, m in Km, seconds in a minute etc.

<table>
<tr><td>Procedural
I know how to…

(methods)

In addition to Dothill Calculation Policy</td><td><u>Measurement</u>
✓ Compare durations of events, for example to calculate the time taken by particular events or tasks
✓ Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Telling the Time)
✓ Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
✓ Measure the perimeter of simple 2-D shapes
✓ Add and subtract amounts of money to give change, using both £ and p in practical contexts
✓ 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, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight (appears also in Comparing and Estimating)
✓ Know the number of seconds in a minute and the number of days in each month, year and leap year</td><td><u>Measurement</u>
✓ Estimate, compare and calculate different measures, including money in pounds and pence (also included in Measuring)
✓ Estimate, compare and calculate different measures, including money in pounds and pence
✓ (appears also in Comparing)
✓ Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres
✓ Find the area of rectilinear shapes by counting squares
✓ Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)
✓ Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Converting)
✓ Convert between different units of measure (e.g. kilometre to metre; hour to minute)
✓ Read, write and convert time between analogue and digital 12 and 24-hour clocks (appears also in Converting)
✓ Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days (appears also in Telling the Time)</td></tr>
<tr><td>Vocabulary</td><td>Duration
Time taken
Nearest minute
Record
Seconds
a.m.
p.m.
noon
midnight
kilometre
millimetres
perimeter
simple 2-D shapes
analogue
clock
roman numerals
12-hour
24-hour
Leap year</td><td>Estimate
Rectilinear
figure
Area
Rectilinear shapes
Convert</td></tr>
<tr><td>Declarative

I know that…

(facts)</td><td><u>Statistics</u>
✓ I know that the pictures represent number / quantity in a pictogram
✓ I know that data can be presented in different ways.</td><td><u>Statistics</u>
✓ I know that data can be presented in different ways depending on the type of data.
✓ I know that scales should be consistent.
✓ I know the term 'first quadrant'.
✓ I know that coordinates are in the form (x,y).</td></tr>
<tr><td>Procedural
I know how to…

(methods)

In addition to Dothill Calculation Policy</td><td><u>Statistics</u>
✓ Interpret and present data using bar charts, pictograms and tables
✓ Solve one-step and two-step questions [e.g. 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.</td><td><u>Statistics</u>
✓ 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.</td></tr>
<tr><td>Vocabulary</td><td>Present
Presented
Graph
Statistics
Bar charts
Tables
Solve One- step questions
Two- step questions
Information</td><td>Time graphs
Comparison
Problems</td></tr>
</table>

Declarative I know that… (facts)	**Algebra**	**Algebra**
Procedural I know how to… (methods) In addition to Dothill Calculation Policy	**Algebra** ✓ Solve problems, *including **missing number** problems, using number facts, place value, and more complex addition and subtraction.* (copied from Addition and Subtraction) ✓ *Solve problems, including **missing number** problems, involving multiplication and division, including integer scaling* (copied from Multiplication and Division)	**Algebra** ✓ *Perimeter can be expressed algebraically as 2(a + b) where a and b are the dimensions in the same unit. (Copied from NSG measurement)*
Vocabulary		Perimeter Algebra Algebraically
Conditional I know when…& I know why… (strategies)	**Addition & Subtraction** ✓ I know when a problem requires me to find a missing number ✓ I know why I have to find a missing number ✓ I know when to use number facts or place value to solve a problem ✓ I know why I have decided to use number facts or place value to solve a problem ✓ I know when to use addition and subtraction or solve a more complication problem ✓ I know why I have chosen to use addition or subtraction to solve my more complication problem **Multiplication & Division** ✓ I know when a problem requires me to find a missing number ✓ I know why I have to find a missing number ✓ I know when to use a mental calculation or written method to solve multiplication or division ✓ I know why I have chosen to a mental calculation or written method to solve multiplication or division **Fractions** ✓ I know when to use my fraction knowledge to solve a problem ✓ I know why I have selected to use fractions to solve a problem. ✓ I know when to interpret bar charts, pictograms and tables to gain data to solve a problem **Statistics** ✓ I know why I am interpreting bar charts, pictograms and tables to gain data to solve a problem ✓ I know when to present bar charts, pictograms, and tables to gain data to solve a problem ✓ I know why I am presenting bar charts, pictograms and tables to gain data to solve a problem	**Addition & Subtraction** ✓ I know when a problem has two parts that I am required to work out. ✓ I know why a problem is a two-step problem ✓ I know when to use an effective written or mental calculation to solve a problem ✓ I know why I have selected a specific written or mental calculation to solve a problem. ✓ I know when to use certain method for solving addition an subtraction problems ✓ I know why I have selected methods to solve my problem **Multiplication & Division** ✓ I know when a problem requires me to use multiplication and/ or addition ✓ I know why I have to use multiplication and/ or addition to solve a problem ✓ I know when to use distribution law to multiply two-digit numbers by a 1-digit number ✓ I know why I have selected to use distribution law to multiply two-digit numbers by a 1-digit number ✓ I know when to use a mental calculation or written method to solve more challenging problems ✓ I know why I have chosen to a mental calculation or written method to solve more challenging problems **Fractions** ✓ I know when to use my fraction knowledge to solve a problem with increasing difficulty ✓ I know why I have selected to use fractions to solve a problem. ✓ I know when I need to use fractions to calculate quantities and fractions to divide quantities ✓ I know why I need to use fractions to calculate quantities and fractions to divide quantities **Statistics** ✓ I know when to interpret continuous and discrete data in a bar chart or time graph to solve a problem ✓ I know why I am interpreting continuous and discrete data in a bar chart or time graph to solve a problem ✓ I know when to present continuous and discrete data in a bar chart or time graph to solve a problem ✓ I know why I am presenting continuous and discrete data in a bar chart or time graph to solve a problem

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Number & Place Value One more One less Place Order Number Count Numbers up to twenty Number line Pictorial Answer Equals Read Write **Addition & Subtraction** Add Subtract Addition Subtraction Adding Subtracting Number Number line Single digit Count on Count back Answer Doubling Halving Sharing Numbers to twenty Check **Multiplication & Division** sharing doubling halving number pattern **Measurement** Measure Measurement Size Weight Capacity Compare Solve Problems Object Time **Geometry** Position	**Number & Place Value** Forwards Backwards Numerals Words Multiples Equal to More than Less than Fewer Most Least Identify Represent Digit Calculate Odd Even Pattern Numbers up to one hundred **Addition & Subtraction** One step problem Concrete object Pictorial representation Missing number Problem Read Write Interpret Equals = Signs One-digit Two-digit Ones Mental Mentally **Multiplication & Division** Multiples Twos Fives Tens Number Multiply Divide Multiplication Division One step problem Answer Concrete object Pictorial representation Arrays	**Number & Place Value** Ones Tens Two- digit Estimate Place Value Solve Problems Greater than >* Less than <* Nearest ten Number facts Partition Count in steps Zero Compare Determine Value **Addition & Subtraction** Columnar addition Columnar Subtraction Tens Order Inverse Relationship Calculation Solve problems Missing number problems Quantities Measures Formal Written method Mental method Operation Apply Whole number **Multiplication & Division** Multiplication facts Division facts Multiplication tables Odd numbers Even numbers Share Equally Repeated division Calculate **Measurement** Greater than >* Less than <* Equals = Intervals Standard units Estimate Direction	**Number & Place Value** Hundreds Three-digit ten more one hundred more ten less one hundred less Roman numeral Numbers up to one thousand **Addition & Subtraction** Three-digit number Hundreds Estimate Number facts **Multiplication & Division** Missing number problem Estimate Inverse Formal written method Mathematical statement Recall Integer Two- digit **Measurement** Duration Time taken Nearest minute Record Seconds a.m. p.m. noon midnight kilometre add subtract millimetres perimeter simple 2-D shapes analogue clock roman numerals 12-hour 24-hour Leap year **Geometry** Angle Turn Right angles Quarter of a turn Half-turn Three quarters of a turn Complete turn Horizontal lines Vertical lines Perpendicular lines Parallel lines **Fractions, Decimals & Percentages**	**Number & Place Value** Thousands Four- digit Negative number One thousand more One thousand less Decimal Decimal place Rounding Place holder Nearest ten Nearest hundred Nearest thousand One place Whole number Integer Tenths Hundredths **Addition & Subtraction** Two step problems Context Four-digit **Multiplication & Division** Derived facts Factors Factor pairs Scaling problems Three-digit **Measurement** Estimate Rectilinear figure Area Rectilinear shapes Convert **Geometry** Co-ordinates Quadrant Grid Translate Translation Axis X- axis Y-axis Spaces Unit Plot Point Polygon Lines of symmetry Symmetric figure Classify Geometric shapes	**Number & Place Value** Ten thousands Hundred thousands Millions Context Steps of powers Decimal equivalents Two decimal places Thousandths Numbers up to one million **Addition & Subtraction** Increasingly large numbers More than 4 digits Rounding Determine Context Multi-step problems **Multiplication & Division** Decimals Four-digit Long multiplication Short division Remainders Context Common factors Common Multiples Prime numbers Prime factors Composite numbers Square number Cube number Notation Squares Cubes **Measurement** Square centimetres (cm2) Square metres (m2) Irregular shapes Volume (cm3) Cubes Cuboids Square numbers Cube numbers Metric measure Metric units Imperial units Inches Pounds Pints **Geometry** Reflection Angles	**Number & Place Value** Intervals across zero Three decimal places Hundredths Thousandths Ten thousandths Numbers up to ten million **Addition & Subtraction** Estimation Mixed operations **Multiplication & Division** Scale factor Long division Whole number remainders Fractions Rounding Mixed operations **Measurement** Decimal notation Cubic centimetres (cm3) Cubic metres (m3) Cubic millimetre (mm3) Cubic kilometre (Km3) Decimal places formulae Miles **Geometry** Four quadrants Radius Diameter Circumference Nets **Fractions, Decimals & Percentages** Common factors Common multiples Decimal fraction equivalents Simplest form **Statistics** Pie chart Calculate Mean Average **Algebra** Missing number Problem Pairs

	Distance Direction Move Movement Patterns Shape Square Rectangle Circle Triangle Sides Straight side Curved side	Count Equals Write **Measurement** Length Height Long Short Longer Shorter Tall Double Half Mass Heavy Light Heavier than Lighter than Volume Full Empty More than Less than Half Half full Quarter Quicker Slower Earlier Later Sequence events Chronological order Before After Next First Today Yesterday Tomorrow Morning Afternoon Evening Record Hours Minutes Hour Half past O clock Hands Clock face Seconds Coins Notes Dates Days Weeks	Temperature Unit Scales Rulers Thermometers Measuring vessels Metres Centimetres Kilograms Grams Degrees Celsius Litres Millilitres Symbols Money Pounds (£) Pence (p) Different combinations Change Five past Ten past Quarter past Twenty past Twenty-five past Half past Twenty-five to Twenty to Quarter to Ten to Five to **Geometry** Rotation Right angle Clockwise Anti-clockwise Order Arrange Sequence Properties Compare Common Line symmetry Vertical line Edges Faces Vertices Pentagon Hexagon Heptagon Octagon Nonagon Decagon Kite Rhombus	Tenths Unit fractions Non- unit fractions Numerator Denominator Compare Order Add Subtract Solve problems **Statistics** Present Presented Graph Statistics Bar charts Tables Solve One- step questions Two- step questions Information	Quadrilaterals Acute angle Obtuse angle **Fractions, Decimals & Percentages** Hundredths Decimal Decimal place One decimal place Two decimal places Round decimals Whole number Common equivalent fractions Decimal equivalents Dividing Ones Tenths Hundredths Simple measure Money problems **Statistics** Time graphs Comparison Problems **Algebra** Perimeter Algebra Algebraically	Measure Degrees Missing lengths Missing angles Regular polygons Irregular polygons Degrees Estimate compare Reflex angle Point Straight line Multiples **Fractions, Decimals & Percentages** Thousandths Multiples Three decimal places Per cent Number of parts per hundred Percentages Decimal fraction Mixed numbers Improper fraction Proper fraction Convert Mathematical statements Multiply Percentage and decimal equivalents **Statistics** Timetables Line graph **Algebra** Properties Rectangles Deduce Related facts Missing lengths Missing angles	Number sentence Variables Combination Possibility Enumerate Equation Formulae Generate Linear number sequence **Ratio & Proportion** Ratio Proportion Size Quantity Missing value Integer Multiplication Division Multiply Divide Solve Problem Calculate Percentage Comparison Unequal sharing Grouping Fractions Multiples

		Months **Geometry** Half turn Quarter turn Three-quarter turn Left Right Up Down 2-D Shapes 3-D Shapes Two-dimensional Three-dimensional Cuboid Cube Pyramid Cone Cylinder Sphere **Fractions, Decimals & Percentages** Fraction Half Equal parts One whole Object Shape Quantity Quarter **Algebra** Solve One -step problem Missing number Check Calculate problem Sequence Chronological	Polygon Square-based pyramid Triangular pyramid Triangular prism Rectangular prism Pentagonal prism Hexagonal prism Octagonal prism Octahedron Dodecahedron Tetrahedron Rectangular pyramid Pentagonal pyramid Hexagonal pyramid Octagonal pyramid **Fractions, Decimals & Percentages** Simple fractions Equivalent equivalence Count **Statistics** Interpret Construct Pictogram Tally chart Block diagrams Horizontal Vertical x- axis & y-axis key title chart title Simple tables Ask Answer Questions Counting Objects Category Sort Quantity Total Compare Data **Algebra** Inverse Relationship Compare Order Arrange				

			Pattern				