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| **Block** | **Topic** | **Term** | **RtP Priority/NCETM Priority** | **Retrieval Focus** |
| 1 | [Number and Place Value](#PV) |  | Areas of RtP/NCETM CP are taught within this unit |  |
| 2 | [Addition and Subtraction](#AddSub) |  | Areas of RtP/NCETM CP are taught within this unit |  |
| 3 | [Multiplication and Division](#MultDiv) |  | Areas of RtP/NCETM CP are taught within this unit |  |
| 4 | [Fractions](#Fractions)  |  | Areas of RtP/NCETM CP are taught within this unit |  |
| 5 | [Decimals and Money](#DecMoney) |  | Limited opportunity to tackle areas of RtP/NCETM CP |  |
| 6 | [Geometry](#Geometry) |  | Areas of RtP/NCETM CP are taught within this unit |  |
| 7 | [Statistics](#Statistics) |  | Limited opportunity to tackle areas of RtP/NCETM CP |  |
| 8 | [Measure – Time](#Time) |  | Areas of NCETM CP are taught within this unit |  |
| 9 | [Measure – Length, Perimeter & Area , Mass & Capacity](#Measure) |  | Areas of NCETM CP are taught within this unit |  |

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| **Block 1** |
| **Number and Place Value** |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Count in multiples of 25 and 1,000NB multiples of 6, 7 and 9 will be covered in the multiplication unit. |  | * Can count in multiples of 25 and 100 and explain the link between the two amounts
 | \*Introduction to resources\*Counting in 1,000s \*Composing 4-digit numbers and discussing column value of each digit of these numbers (including the role of 0 in a number)\*Standard and non-standard partitioning\*Recognising that there are 10 hundreds in a thousand, 100 tens in 1,000, 1,000 ones in 1,000 and using this to represent a 4-digit number\*Finding 1,000 more or less than a given number\* Comparing numbers beyond 1,000\*Ordering Numbers beyond 1,000\*Counting in 1,000s, 500s, 100s, 50s and 25s\* Positioning numbers on a blank and scaled number lines with a variety of starting and ending points and a range of increments.\*Substantial problem solving \*Rounding numbers to the nearest 10, 100 and 1,000\*Problem Solving \*Reading and representing numbers on a number line to include negative numbers\* Reading and writing Roman numerals up to 100 |
| Find 1,000 more or less than a given number  |  | * Can find 1,000 more than a given number and explain which digit changes
* Can find 1,000 less than a given number and explain which digit changes
 |
| Count backwards through zero to include negative numbers  |  | * Can count backwards in a range of multiples to include negative numbers and understand the value of the digits
 |
| Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)  | 4NPV–1 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 1004NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning | * Can identify the number of thousands, hundreds, tens and ones in a 4-digit number
 |
| Order and compare numbers beyond 1,000  | 4NPV–3 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.4NPV–4 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 | * Can identify the larger of two 4-digit numbers and explain reasoning
* Can position 4-digit numbers on a number line and explain reasoning about where they are positioned
 |
| Identify, represent and estimate numbers using different representations  | 4NPV–1 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 | * Can use equipment to represent numbers and to explain reasoning about the size of numbers
 |
| Round any number to the nearest 10, 100 or 1,000  | 4NPV–3 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. | * Can round numbers to the nearest 10
* Can round numbers to the nearest 100
* Can round numbers to the nearest 1,000
* Can explain the rules of rounding
 |
| Solve number and practical problems that involve all of the above and with increasingly large positive numbers  |  | * Solve problems involving place value, including word problems and problems linked to money and measure
 |
| 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.  |  | * Can read Roman numerals to 100
* Can understand how the numeral system developed over time
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| **Block 2** |
| **Addition and Subtraction**  |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate  | 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), | * Can use place value to calculate mentally
* Can add and subtract multiples of 1, 10, 100 and 1,000
* Can subtract by finding the difference
* Can calculate mentally by reordering
* Can calculate mentally by compensating
* Can use a written methods to add two 4-digit numbers, including bridging 10 and 100
* Can use a written methods to subtract two 4-digit numbers, including bridging 10 and 100
* Can use a written methods to add and 3 and 4-digit number together, including bridging 10 and 100
* Can use a written methods to subtract a 3-digit number from a 4-digit number, including bridging 10 and 100
* Can reflect on when it is appropriate to use a standard written method in an addition or subtraction calculation with up to 4 digits
 | \*Scaling known facts by 10 and 100 to create related facts\*Adding and Subtracting Using Place Value\*Adding and Subtracting Using Partitioning \*Adding 1 digit to a 3 or 4-digit number using bridging\*Adding a multiple of 10 to a 3 or 4-digit number using bridging\*Adding a multiple of 100 to a 4-digit number using bridging \*Subtracting 1 digit from a 3 or 4-digit number using bridging\*Subtracting a multiple of 10 from a 3 or 4-digit number using bridging\*Subtracting a multiple of 100 from a 4-digit number using bridging\*Using the concept of ‘finding the difference’ within subtraction\*Understanding the inverse relationship between addition and subtraction and generating fact families\*Using inverse operations within addition and subtraction to check calculations\*Adding using partitioning and bridging\*Adding using near doubles\* Compensating \*Reordering calculations to look for known facts and aid efficiency\*Estimation\*Standard written method of addition \*Standard written method of subtraction \*Adjusting (consider which children can grasp and retain this method)\*Reflecting on the most efficient strategy \*Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why. |
| Estimate and use inverse operations to check answers to a calculation  |  | * Can estimate the answer of an addition or subtraction up to 4 digits

Can use addition and subtraction to calculate the inverse |
| Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. |  | * Can identify whether a word problem needs to be solved using addition, subtraction or combination of both
* Can identify the most appropriate method of calculation to use to solve a problem
* Can use a calculation skill in a problem using units of measure (km, m, cm, mm, kg, g, l, ml, hours, minutes and seconds)
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| **Block 3** |
| **Multiplication and Division**  |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Recall multiplication and division facts for multiplication tables up to 12 × 12   | 4NF–1 Recall multiplication and division facts up to 12x12 and recognise products in multiplication tables as multiples of the corresponding number. | * Can explain how to use known facts to derive others
* Can recall the 2x 5x 10x tables from Year 2
* Can recall the 3x 4x 8x tables from Year 3
* Can recall the 6x table
* Can recall the 7x table
* Can recall the 9x table
* Can recall the 11x table
* Can recall the 12x table
* Can derive related division facts
* Understands that division cannot be done in any order
 | \*Recap 2, 5 and 10 times tables including patterns and generalisations \*Recap 4, 8 and 3 times tables including patterns and generalisations\*Teach 6, 12, 9, 11 and 7 times tables\*Links and the development of multiplication\*Commutative, inverse and fact families. Solve missing box calculations using known facts and inverse operations\*Multiplying by 10 and 100 \*Dividing by 1, 10 and 100\*Using scaling numbers by 10 and 100 to solve calculations using known facts\*Doubling and halving \*Compensating \*Distributive Law\*Multiplying 3 numbers using the most efficient strategy\*Additional mental strategies \*Find factors of numbers using a systematic approach\*Factorising\*Solving problems including using scaling and correspondence \*Written strategy for multiplication (Check school calculation policy)\* Division if stated in school calculation policy\*Solve a range of problems using multiplication and division using an efficient strategy.\*Solve multi-step problems involving all 4 operations. Choose an efficient method for calculating and explain which methods have been used. |
| 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  | 4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)4MD–1 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.4MD–3 Understand and apply the distributive property of multiplication | * Understands how a multiplication fact can be used to multiply by a multiple of 10
* Understands how a multiplication fact can be used to multiply by a multiple of 100
* Understands how to multiply 3 one-digit numbers together
* Understands the effect of multiplying by 1 and 0
* Understands the effect of dividing by 1
* Understands how a multiplication fact can be used to solve a division calculation
 |
| Recognise and use factor pairs and commutativity in mental calculations  | 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. | * Can identify factors of a 2-digit number
* Understands that multiplication can be done in any order
 |
| Multiply two-digit and three-digit numbers by a one-digit number using formal written layout  | 4MD–1 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. | * Can use a formal written method to multiply TU by O
* Can use a formal written method to multiply HTO by O
 |
| 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. | 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders | * Can solve word problems involving multiplication
* Can solve word problems involving division
* Can solve scaling problems involving measures
* Can solve correspondence problems *e.g. There are 3 starters, mains and desserts on a menu, how many possible meals could you have?*
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| **Block 4** |
| **Fractions**  |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Recognise and show, using diagrams, families of common equivalent fractions | 4F–1 Reason about the location of mixed numbers in the linear number system4F–2 Convert mixed numbers to improper fractions and vice versa. | * Can use multiplication to generate equivalent fractions.
* Can simplify fractions using common factors
 | \*Recapping children’s prior knowledge of fractions \*Investigating using pictorial or practical resources how to make a whole\*Placing fractions on a 0-1 number line\*Placing mixed numbers and improper fractions on a number lineConverting mixed numbers and improper fractions\*Equivalent fractions using multiplication\*Finding fractions of an amount (unit and non-unit fractions)\*Adding fractions with the same denominator (total may exceed one whole)\*Subtracting fractions with the same denominator (start number may be more than one whole) |
| 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 |  | * Can use unit fractions to solve a problem.
* Can use non-unit fractions to solve a problem.
 |
| Add and subtract fractions with the same denominator | 4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers | * Can add and subtract fractions with a common denominator
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| **Block 5** |
| **Decimals and Money** |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. |  | * Understands hundredths are dividing an object or a number into 100 equal parts.
* Understand tenths are dividing an object or a number into 10 equal parts.
* Understands hundredths can be made by dividing tenths into 10 equal parts.
* Can find and place hundredths on a number line.
* Can use hundredths in money and measure
* Can compare and order numbers to 2dp
 | \*Recap year 3 decimals unit and look at counting in tenths\*Using money, base 10 or a bead string investigate a hundredth as a fraction and a decimal (1 out of 100 beads is $\frac{1}{100}$ or 0.01 because we have 1 in the hundredth column\*Count up and down in hundredths\*Compare and order decimals \*Positioning hundredths on a number line and using this to order and compare decimals to 2 dp\*Rounding Decimals\*Dividing a 1 or 2-digit number by 10 or 100 and reading the answer as ones, tenths and hundredths\*Identifying where 0.5, 0.25 and 0.75 would be on a number line and discussing that these are positioned at $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$\*Solve problems involving money |
| Recognise and write decimal equivalents of any number of tenths or hundredths |  | * Can identify and calculate $\frac{1}{10} $as a decimal
* Can identify the pattern when finding other tenths.
* Can identify and calculate $\frac{1}{100}$as a decimal
* Can identify the pattern when finding other hundredths.
 |
| Recognise and write decimal equivalents to ¼, ½ and ¾ |  | * Can recall decimal equivalent to $\frac{1}{2}$
* Can recall decimal equivalent to $\frac{1}{4}$
* Can recall decimal equivalent to $\frac{3}{4}$
 |
| 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 | 4MD–1 Multiply and divide wholenumbers by 10 and 100 (keeping to whole number quotients);understand this as equivalent tomaking a number 10 or 100 times the size. | * Can explain the effect of dividing a one-digit number by 10
* Can explain the effect of dividing a two-digit number by 10
* Can explain the effect of dividing a one-digit number by 100
* Can explain the effect of dividing a two-digit number by 100
 |
| Round decimals with one decimal place to the nearest whole number |  | * Can identify the nearest whole number to a one decimal place number.
 |
| Compare numbers with the same number of decimal places up to two decimal places |  | * Can compare and order 1 dp numbers on a number line.

Can compare 2dp numbers on a number line |
| Estimate, compare and calculate different measures, including money in pounds and pence  |  | * Can use decimal place value knowledge to compare different measures.
* Can calculate with measures
 |
| Solve simple measure and money problems involving fractions and decimals to two decimal places. |  | * Knows how many 10ps are in a £1
* Knows how many 1ps are in a £1
* Knows how many centimetres are in a metre.
* Can solve problems involving money to 2dp
* Can solve problems involving length to 2dp
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| **Block 6** |
| **Geometry**  |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Compare and classify geometric shapes, including quadrilaterals and triangles**,** based on their properties and sizes  | 4G–2 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. | Can recall and recognise in a variety of shapes that:* an equilateral triangle has three equal sides and three equal angles
* isosceles triangles have two equal sides and two equal angles
* right angled triangles have one right angle
* scalene triangles have no equal sides and no equal angles
* triangles cannot have more than one obtuse angle
* squares have four equal sides and four right angles
* rectangles have two pairs of equal and parallel sides and four right angles
* parallelograms have two pairs of equal and parallel sides
* rhombuses have four equal sides, two pairs of parallel sides
* trapeziums have one pair of parallel sides
* kites have two pairs of equal sides which are adjacent, two equal angles
* Can recall the names of other polygons and their associated numbers of sides
 | \*Recap 2D shape – names and properties of shapes (regular and irregular shapes)\*Recognising angles (obtuse, acute and right angles)\*Comparing angles\*Identifying angles in shapes\*Investigating triangles, classifying and sorting\*Investigating quadrilaterals, classifying and sorting \*Investigating symmetrical patterns (one line of symmetry, 2 lines of symmetry, line of symmetry parallel to gridlines, line of symmetry at an angle to the gridlines)\*Exploring symmetry in shapes\*Complete a simple symmetric figure with respect to a specific line of symmetry\*Using coordinates to position points and to read the position of points using the language of x and y axis\*Can use knowledge of properties of shapes to plot a missing coordinate of a given polygon\*Can use the language of coordinates and positional language to describe how a shape has been translated\*Can translate a shape when given coordinates and positional language \*Substantial problem solving |
| Identify acute and obtuse angles and compare and order angles up to two right angles by size  |  | * Can identify acute angles on their own and within shapes
* Can identify obtuse angles on their own and within shapes
* Can compare two or more angles up to 180°
 |
| Identify lines of symmetry in 2-D shapes presented in different orientations  | 4G–3 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. | * Can recall and recognise in different shapes that:
* A square has four lines of symmetry
* A rectangle has two lines of symmetry
* A rhombus has two lines of symmetry
* A parallelogram has no lines of symmetry
* A trapezium may or may not have a line of symmetry
* A kite has one line of symmetry
* An equilateral triangle has three lines of symmetry
* An isosceles triangle has one line of symmetry
* A regular polygon has the same of lines of symmetry as it has sides
 |
| Complete a simple symmetric figure with respect to a specific line of symmetry | Can complete a pattern drawn on a square grid with:* one line of symmetry drawn parallel to the gridlines
* one line of symmetry drawn at an angle to the gridlines
* two lines of symmetry
 |
| Describe positions on a 2-D grid as coordinates in the first quadrant  |  | * Can distinguish between the x and y axis.
* Can draw a pair of axes in one quadrant with equal scales and integer labels.
 |
| Describe movements between positions as translations of a given unit to the left/right and up/down  | 4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant | * Can describe position of a vertex of a 2D shape in the first quadrant using a pair of coordinates.
* Can translate a shape using left/right and up/down
 |
| Plot specified points and draw sides to complete a given polygon | * Can use properties of shape to complete the vertices of a simple shape.
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| **Block 7** |
| **Statistics** |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.  | No specific Ready to Progress statements for statistics but use the opportunity to consolidate prior statements as appropriate e.g 4NPV–4 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 | * Understands which is the best method of recording data *e.g. compare data presented in a bar chart and line graph and reason as to which is the most effective*
* Can use an appropriate scale when representing data
* Can answer questions from a range of different graphs *e.g. In which months was the temperature below 10˚C?*
 | \*Draw and interpret pictograms \*Draw and interpret bar charts\*Answer questions from a range of different graphs – using discrete data\*Solve comparison, sum and difference problems using information presented in charts \*Introduce continuous data and discuss how this is different to discreet\*Represent continuous data as a line graph (link to science/topic)\*Read and interpret a range of line graphs and answer questions on the data\* Answer questions from a range of different graphs – using discrete data\*Collect continuous data and choose how to present this and with what scale\*Problem solving  |
| Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.  | * Can answer questions from a bar chart that involve comparison, sum and difference
* Can answer questions from a pictogram that involve comparison, sum and difference
* Can answer questions from a table that involve comparison, sum and difference
* Can answer questions from a line graph that involve comparison, sum and difference
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| **Block 8** |
| **Measure – Time** |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Convert between different units of measure [for example, kilometre to metre; hour to minute]  |  | * Knows and understands the relationships between familiar units of measurement
* Can use multiplication and division to aid conversion
* Can convert an hour into minutes and vice versa
* Can suggest the most appropriate unit of measure
 | \*Reading and writing time on analogue clocks\*Reading and writing time on digital clocks and converting time between analogue and digital 12-hour clocks\*Reading and writing time on 24-hour clocks and converting from 12-hour to 24-hour digital clocks and analogue clocks\*Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days\*Making links and consolidation |
| Read, write and convert time between analogue and digital 12- and 24-hour clocks  | * Can read and understand 24-hour time
* Can relate 24 hr notation to am and pm

Can covert 12 hr into 24 hour and vice versa |
| Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days | * Can solve problems involving familiar conversions

Can interpret the answer in more than one measure |

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| **Block 9** |
| **Measure – Length, Perimeter, Area, Capacity & Mass** |
| **Substantive Knowledge****National Curriculum** | **Ready to Progress** | **Key Performance Indicators** | **Sequence of learning****Detailed in Planning Overview** |
| Convert between different units of measure [for example, kilometre to metre; hour to minute]  | No specific Ready to Progress statements for Length and Perimeter but use the opportunity to consolidate prior statements as appropriate e.g. 4NPV–3 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.NPV–4 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 parts4MD–1 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. | * Knows and understands the relationships between familiar units of measurement
* Can use multiplication and division to aid conversion.
* Can convert km into m and vice versa.
* Can convert l into ml and vice versa.
* Can convert g into kg and vice versa
* Can suggest the most appropriate unit of measure.
 | \*Recap tools and language of measure.\*Recap units of measure and which units are used to measure different things.\*Convert between different units of measure [for example, kilometre to metre, mm to cm]\*Convert between different units of measure [g to kg]\*Convert between different units of measure [l to ml]\*Estimate, compare and calculate different measures\*Problem solving around the concepts covered\*Calculate the perimeter of a regular shape\*Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. \*Find the area of rectilinear shapes by counting squares |
| Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.  | * Can measure sides of a rectangle to calculate the perimeter.
* Can generalise about the perimeter of a rectangle using words and symbols.
* Can use the formulae 2(L+W) to calculate perimeter of a rectangle.

Can work out the perimeter of irregular shapes. |
| Find the area of rectilinear shapes by counting squares | * Can relate area to arrays and multiplication.
* Can find the area of a rectangle by counting squares.

Can generalise about the area of a rectangle using words and symbols. |
| Estimate, compare and calculate different measures, including money in pounds and pence  |  | * Can use decimal place value knowledge to compare different measures.
* Can calculate with measures

**This is covered within Decimals & Money Block** |