Carnforth Community Primary School
Year 3 & 4 Maths Yearly Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Week 1	Place Value, addition and subtraction	Multiplication	Place Value, including decimals	2D shape and sorting	Place Value	2D & 3D shape
Week 2			Multiplication	Addition and subtraction	Addition and subtraction	Place Value
Week 3	Length and perimeter	Division	Division	Position and direction		Statistics
Week 4	Statistics	Time	Fractions	Perimeter and Area	Multiplication and division	Fractions
				Time		
Week 5	Addition and subtraction	3D Shape	Volume, capacity & mass	Statistics		Time
Week 6		Assess and review	Mid-Year recap week	Assess and review	Fractions	Assess and review

Year 3 & 4 Expectations – Sequence of Learning

Autumn 1 – 6 weeks	
Number and Place Value Weeks 1 and 2	Addition and Subtraction
Lesson	Lesson Focus
1	Exchange 10 ones for 1 ten and vice versa Exchange 10 tens for 1 hundred and vice versa Exchange 10 tens for 1 hundred and vice versa using base 10 equipment Exchange 10 hundreds for 1 thousand and vice versa using place value counters
2	Identify and represent numbers up to 1000 using concrete materials such as base 10 apparatus Partition a three-digit number into hundreds, tens and ones Identify and represent numbers up to 10,000 using concrete materials such as base 10 apparatus and place value counters Partition a four-digit number into thousands, hundreds, tens and ones
3	Identify and represent numbers up to 1000 using models such as place value counters and arrow cards. Partition a three-digit number into hundreds, tens and ones Identify and represent numbers with one decimal place using models such as place value counters and arrow cards Partition a number with one decimal place into tens, ones and tenths including in different ways (revisit of Y3 learning)
4	Compare three or more numbers up to 1000 when represented using the same concrete materials saying which numbers are greater or less and use and = correctly. Compare two numbers and order three or more numbers up to 10,000 and numbers with one decimal place when represented using the same concrete materials saying which numbers are greater or less and use and = correctly
5	Identify the multiples of 10 immediately before and after numbers with up to three-digits and round the numbers to the nearest ten. Identify the multiples of 10 and 100 immediately before and after numbers with up to four-digits and round the numbers to the nearest ten and hundred
6	Identify the number ten more/ ten less and one hundred more/ one hundred less than a given number with up to three-digits without crossing any boundaries. Identify the number 1, 10, 100 or 1,000 more or less than a given number with up to fourdigits recognising which digits stay the same and which digits change
7	Add and subtract a three-digit number and tens mentally with no boundaries crossed Recognise calculations that require counting on or back mentally e.g. 243 + 230 (counting on in hundreds and then in tens) and use this strategy where appropriate
8	Identify and describe the rule (addition or subtraction) in a number sequence by calculating the difference between two adjacent numbers Extend number sequences by using the identified rule From given complete sequences, identify whether these are addition/subtraction (constant step size) or multiplication/ division
9	Recognise addition calculations that require mental partitioning e.g. 37 + 25 and use this strategy where appropriate Recognise addition calculations that require mental partitioning e.g. 765 + 231 (no boundaries crossed), 87 + 35 (boundaries crossed) and use this strategy where appropriate
10	Recognise subtraction calculations that require mental partitioning e.g. 42 – 17 and use this strategy where appropriate

	Recognise subtraction calculations that require mental partitioning e.g. 765 – 241 (no boundaries crossed), 122 – 35 (boundaries crossed) and use this strategy where appropriate
Length and Perimeter Week 3	2-D Shape
Lesson	Lesson Focus
1	Accurately draw 2-D shapes including with specific properties using squared and isometric paper Measure and draw lengths as properties of 2-D shapes e.g. a triangle with one side of 82mm
2	Measure lengths in cm and m Add and subtract, including finding the difference between, lengths. Measure lengths in cm and mm, including cm as decimals with one decimal place e.g. 12mm and 1.2cm Compare the length of different objects including numbers to one decimal place
3	Measure lengths in mm Add and subtract, including finding the difference between, lengths Add and subtract, including finding the difference between, lengths
4	Develop an understanding of perimeter using straws Use counting to calculate the perimeter of a polygon drawn on squared cm paper Measure and calculate the perimeter of any rectilinear figure where all the side lengths are given Recognise where sides are the same length in oblong rectangles and square rectangles and use this when measuring and calculating perimeter
5	Use counting to calculate the perimeter of a polygon drawn on squared cm paper Calculate the perimeter of a polygon where the lengths of sides are given Recognise where the sides are the same length in L and T shaped rectilinear figures and use this when measuring and calculating perimeter Calculate the length of missing sides using known dimensions
Statistics – cross curricular opportunities Week 4	
Lesson	Lesson Focus
1	Derive and use addition and subtraction facts for 100 using bead strings, a blank 10 by 10 grid etc. Recognise that when calculating addition facts to 100 the 1s total 10 and the tens total 90 Derive and use addition and subtraction facts for 1 using number lines, bar models and related facts Derive and use addition and subtraction facts for 10 for numbers with one decimal place using number lines, bar models and related facts (recognise that when calculating addition facts to 10 the tenths total 1 and the ones total 9)
2	Collect data in a frequency table and use the data to draw a bar chart with a scale in ones. Present discrete data using bar charts and a scale appropriate to Year 4 counting and place value Choose the appropriate scale when representing data in a bar chart
3	Use data in a frequency table to draw a bar chart with a scale in twos. Answer questions using data contained in a bar chart. Interpret data and solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a bar chart or table

4	Solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a bar chart or table Interpret data and solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a bar chart or table
5	Present and interpret data using pictograms with a symbol representing 1, 2 or 10 (including half symbols). Solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a pictogram Present and interpret data using pictograms with a symbols representing numbers appropriate for Year 4 (including half symbols) Solve one-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in a pictogram
Addition and Subtraction Week 5 and 6	
Lesson	Lesson Focus
1	Add 2 two-digit numbers using formal written methods with exchange from ones into tens Add two numbers with four digits using formal written methods of columnar addition with exchange Use appropriate rounding to estimate the answer to a calculation
2	Add 2 three-digit numbers using formal written methods with exchange from ones into tens Add two numbers with one decimal place using formal written methods of columnar addition with exchange Use appropriate rounding to estimate the answer to a calculation
3	Add 2 three-digit numbers using formal written methods with exchange from ones into tens Add three numbers with four digits using formal written methods of columnar addition with exchange
4	Choose an appropriate strategy for a given addition calculation Choose an appropriate strategy for a given addition calculation
5	Subtract 2 two-digit numbers using formal written methods with exchange from tens into ones Subtract two numbers with four digits using formal written methods of columnar subtraction with exchange Use appropriate rounding to estimate the answer to a calculation
6	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones Subtract two numbers with four digits using formal written methods of columnar subtraction with exchange where the greater number has 0 as a place holder e.g. 3805 – 2588 Use appropriate rounding to estimate the answer to a calculation
7	Subtract 2 three-digit numbers using formal written methods with exchange from tens into ones Subtract two numbers with one decimal place using formal written methods of columnar subtraction with exchange
8	Choose an appropriate strategy for a given subtraction calculation Choose an appropriate strategy for a given subtraction calculation
9	Use a formal written method of addition to make a given criteria, e.g. choose from a set of given numbers to make a total

	Solve problems involving addition and subtraction Represent and solve a problem using structured pictorial representations such as the bar model Use a formal written method of subtraction to make a given criteria, e.g. choose from a set of given numbers to make a difference
Learning Check Up To This Point	
Autumn 2 – 6 weeks	
Multiplication Week 1 and 2	
Lesson	Lesson Focus
1	Use arrays to understand the multiplication facts for the 3 and 4 multiplication tables (including commutativity) Identify relationships within a multiplication square Derive the 4 multiplication table from the 2 multiplication table by using doubling strategies Use arrays to understand the multiplication facts for the 11 and 9 multiplication tables (including commutativity) Identify relationships within a multiplication square Derive the 11 and 9 multiplication tables from the 10 multiplication table by using 10 groups add/subtract 1 group strategy
2	Understand the relationship between arrays and repeated addition Represent multiplication as repeated addition on a number line Use arrays to identify what the term 'factor' means Use arrays to identify all the factor pairs of a given number
3	Derive facts from the 3 and 4 multiplication tables using known facts from the 1, 2, 5 and 10 multiplication tables Recognise that multiplying by 0 gives a product of 0 and that multiplying by 1 does not change the number Understand the effect of multiplying a one- or two-digit number by 10 and 100 Recognise the relationship between a known fact and a related calculation, e.g. 6 × 9 = 54 and 600 × 9 = 5400
4	Extend number sequences by using an identified rule (counting in 3s, 4s, 10s and 100s) Use compensation to multiply T9 by a one-digit number
5	Use single Venn and one criterion Carroll diagrams to compare and sort numbers Use partitioning to mentally multiply TU × U
6	Use partitioning to derive doubles of all numbers to 50 Use partitioning to double any number up to 4 digits (with an answer less than 10,000)
7	Use an array to represent a teens number multiplied by a single digit number and partition the array into tens and ones to support calculating the product Use partitioning to calculate a 1TU × U using the grid method
8	Use partitioning to calculate a teens number multiplied by a single digit number (grid method) Use partitioning to calculate a 1TU × U using the grid method
9	Use partitioning to calculate a teens number multiplied by a single digit number (grid method) Choose an appropriate strategy to solve a calculation based upon the numbers involved
10	To solve routine and non-routine problems involving multiplication To solve problems involving multiplication including in measurement contexts
Division Week 3	
Lesson	Lesson Focus
1	Understand division as sharing and grouping Use knowledge of place value and multiplication facts to divide related greater numbers e.g. 540 ÷ 6

2	Use concrete or pictorial representations to derive the division facts related to the multiplication facts that they know Divide two digit numbers (beyond the multiplication facts) by a single digit number using the chunking method where there is no remainder
3	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know Divide two digit numbers (beyond the multiplication facts) by a single digit number using the chunking method where there is a remainder
4	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor Recognise that dividing a number by 1 does not change the number Use concrete materials to model and describe the effect of dividing a 2-digit number by 10
5	Use concrete materials to show division as repeated subtraction for numbers beyond the multiplication facts that they know including those that have a remainder Solve problems involving division including interpreting remainders in a given context
Time Week 4	
Lesson	Lesson focus
1	Tell and write time on an analogue clock to o'clock, quarter past (15 minutes past), half past (30 minutes past) and quarter to (15 minutes to) Tell and write the time on an analogue clock to 5 minutes – past and to Tell and write the time on an analogue clock to the nearest minute – past and to
2	Tell and write the time on an analogue clock to 5 minutes – past and to Tell, write and match analogue and digital times (12-hour clock)
3	Tell and write the time on an analogue clock to the nearest minute – past Know that 24-hour clock times are written using four digits Understand how times on a digital 24-hour clock are before or after midday Calculate the analogue time from a given 24-hour clock time when the hour value is greater than 12
4	Tell and write the time on an analogue clock to the nearest minute – to Tell the time on a 24-hour clock, e.g. 16:27 is 27 minutes past 4 in the afternoon
5	Know that there are 60 seconds in a minute Record time in seconds and minutes Compare two time intervals which are in the same unit Solve problems involving converting between different units of time
3D Shape Week 5	
Lesson	Lesson focus
1	Identify and describe the properties of 3-D shapes, including the number of edges, faces and vertices Identify, name and describe 2-D shapes according to the properties of their sides and vertices
2	Use construction materials such as Clixi or Polydron to make 3-D shapes Identify and name different prisms according to their properties Describe the properties of prisms: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices
3	Make the skeletons of 3-D shapes using straws and Playdoh Identify and name different pyramids according to their properties

	Describe the properties of pyramids: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices
4	Identify horizontal and vertical lines Identify and describe the properties of 3-D shapes: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices
5	Use single Venn and one criterion Carroll diagrams to compare and sort 3-D shapes Use Venn and Carroll diagrams to compare and sort 3-D shapes
Learning Check up to this point ASSESS AND REVIEW IN WEEK 6	

Spring 1 – 6 weeks	
Number and Place Value, decimal place value Week 1	
Lesson	Lesson focus
1	Identify the multiples of 100 immediately before and after a given number Round numbers with up to three-digits to the nearest hundred, e.g. 356 rounds to 400 Identify the multiples of 1000 immediately before and after a given number Round numbers with up to four digits to the nearest thousand, e.g. 3567 rounds to 4000
2	Correctly place any number on a number line with multiples of 100 marked but not labelled Correctly place any number on a number line with multiples of 100 marked but not labelled with a variety of start and end points Correctly place any number on a number line with multiples of 1000 marked but not labelled Correctly place any number on a number line with multiples of 1000 marked but not labelled with a variety of start and end points
3	Use concrete representations, e.g. straws, to understand the relationship between fractional tenths and decimal tenths Identify the value of each digit to one decimal place Know the decimal point separates whole numbers and decimal fractions Make a number with 2 decimal places using straws and place value counters Use pictorial representations such as a 10 x 10 grid to show that 1/100 of an object can be found by dividing the object into one hundred equal parts Identify the value of each digit to two decimal places in a variety of ways e.g. the value of the digit 7 in 53.27 is seven hundredths, 7/100 or 0.07
4	Use concrete representations, e.g. place value counters, to understand the relationship between fractional tenths and decimal tenths Use pictorial representations such as a 10 x 10 grid to recognise that 1 100 of an object can be found by dividing 1/10 of the object into ten equal parts Recognise that 10/100 is equivalent to 1/10 or 0.1 Recognise that 20/100 is equivalent to 2/10 or 0.2 and so on Write any number of hundredths in fraction and decimal form e.g. 47/100 is 0.47
5	Divide a one-digit number by 10 and describe the effect using a place value chart. Recognise how place value columns relate to money notation i.e. units/ones column relates to the number of £1 coins; tenths column relates to the number of equivalent 10p coins; hundredths column relates to the number of equivalent 1p coins Recognise that one hundred 1p coins equal £1

	Recognise that each 1p coin is 1 100 of £1, hence 1p being written as £0.01 which is consistent with the columns in a place value chart
Multiplication Week 2	
Lesson	Lesson focus
1	Use arrays to understand the multiplication and division facts for the 8 multiplication table Derive the 8 multiplication table from the 4 multiplication table Recall and use multiplication and division facts for the 7 multiplication table Recall and use multiplication and division facts for the 12 multiplication table
2	Use partitioning to derive doubles of all numbers to 100. Use partitioning to double a number with ones and tenths, e.g. double 6.8
3	Use concrete materials to model the effect of multiplying a two-digit number by 10 Describe the effect of multiplying a two-digit number by ten Multiply a multiple of 10 by a one-digit number, e.g. 60 x 4 Identify factor pairs of a given number within the multiplication tables that they know Use appropriate factor pairs and commutativity in mental calculations e.g. 300 x 6 = 3 x 100 x 6 which becomes 3 x 6 x 100 = 18 x 100
4	Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method Use rounding to estimate the answer to a calculation Use partitioning to calculate a three-digit number multiplied by a single digit number using grid method. Estimate multiplication by rounding to the nearest multiple of 10 or 100 and using related facts e.g. 384 x 6 ≈ 400 x 6
5	Use partitioning to calculate a two-digit number multiplied by a single digit number using grid method Within known tables, use partitioning to multiply T1 by a one-digit number Use rounding to estimate the answer to a calculation Solve problems by using partitioning to calculate a three-digit number multiplied by a single digit number using grid method Estimate multiplication by rounding to the nearest multiple of 10 or 100 and using related facts e.g. 384 x 6 ≈ 400 x 6
Division Week 3	
Lesson	Lesson focus
1	Use partitioning to derive and use halves of multiples of 10 where the tens digit is odd Use partitioning to derive and use halves of all even numbers to 100 Divide a two-digit number by a one-digit number using a partitioning strategy e.g. 96 ÷ 4 becomes (80 ÷ 4) + (16 ÷ 4)
2	Use a horizontal number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know Divide three-digit numbers by a single digit number using the chunking method where there is no remainder e.g. 248 ÷ 4
3	Use a vertical number line to show division as repeated subtraction including numbers beyond the multiplication facts that they know using greater multiples of the divisor Divide three-digit numbers by a single digit number using the chunking method, making the calculation more efficient by subtracting more than one multiple of 10 of the divisor e.g. 248 ÷ 4 by subtracting 240 (60 groups of 4) and 8 (2 groups of 4)

4	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using greater multiples of the divisor (including remainders) Divide three-digit numbers by a single digit number using the chunking method, making the calculation more efficient by subtracting more than one multiple of 10 of the divisor e.g. 248 ÷ 4 by subtracting 240 (60 groups of 4) and 8 (2 groups of 4) Estimate division by rounding to the nearest multiple of 10 of the divisor and using related facts e.g. 352 ÷ 6 ≈ 360 ÷ 6 Use inverse to check the answer to a calculation, e.g. 78 x 6 = 468 can be checked by carrying out the following calculation correctly: 468 ÷ 6
5	Use division to identify unlabelled marks on a scale Read different scales to the nearest whole unit Use division to identify unlabelled marks on a scale Read different scales to the nearest whole unit
Fractions Week 4	
1	Recognise fractions of a shape, set of objects or quantity (with small denominators) Recognise fractions of a shape, set of objects or quantity (recap of learning)
2	Recognise and use fractions as numbers (on a bar model and demarcated number line) Estimate the position of a fraction on a number line Where a fraction of an amount cannot be found by using known division facts, use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects, e.g. 3/8 of 112
3	Use concrete materials to find unit fractions (with denominators of ten or less) of a set of objects, e.g. 1/7 of 63 Use concrete materials to find non-unit fractions (with denominators of ten or less) of a set of objects, e.g. 2/7 of 63 Use pictorial representations, such as fraction strips, to add fractions with the same denominator crossing a ones boundary, e.g. 5/7 + 4/7 = 9/7 Add fractions with the same denominator crossing a ones boundary by adding the numerators
4	Use pictorial representations, e.g. bar model, to find unit fractions of a set of objects, e.g. 1/3 of 51 Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects, e.g. 2/3 of 51 Use pictorial representations, such as fraction strips, to subtract fractions with the same denominator crossing a ones boundary Subtract fractions with the same denominator crossing a ones boundary by subtracting the numerators, e.g. 15/9 – 8/9 = 7/9
5	Solve problems involving fractions Solve problems involving fractions
Measures Week 5	
Lesson	Lesson focus
1	Measure lengths in m, cm and mm Add and subtract, including finding the difference between, lengths Measure and draw lengths (m/cm/mm) and use known measurements to make reasonable estimates including numbers to two decimal places Compare the lengths of different objects including to two decimal places
2	Estimate, measure and compare the volume/capacity of different containers Find the difference between the volume/capacities of containers

	Measure volume/capacity (l/ml) and use known measurements to make reasonable estimates including numbers to two decimal places Compare the volume/capacity of different objects including numbers to two decimal places
3	Estimate, measure and compare the mass of different objects Find the difference between the masses of objects Measure mass (kg/g) and use known measurements to make reasonable estimates including numbers to two decimal places Compare the mass of different objects including numbers to two decimal places
4	Measure and add the mass and volume of different objects Use the relationship between different units of length to identify the calculation necessary for conversion e.g. to convert between cm and m, divide the number of cm by 100 *(NB – there is no requirement in Year 4 to multiply and divide by 1,000. Therefore when converting from m to km or vice versa children would use related facts and whole numbers e.g. 1km is 1,000m so 4km is 4,000m)*
5	Solve problems involving measures Solve problems involving measures and converting measures
Spring 2 – 6 weeks	
2D Shape and sorting Week 1	
Lesson	Lesson focus
1	Recognise angles as a description of a turn Recognise quarter, half, three-quarter and full turns from different starting points as an appropriate number of right angles Identify whether an angle is greater or less than a right angle Know that an angle less than a right angle is called 'acute' Know that an angle between a right angle and a straight angle is called 'obtuse' Identify acute and obtuse angles where one of the lines is horizontal or vertical Identify acute and obtuse angles in any orientation
2	Recognise where sides meet at a vertex in a shape that an angle is created Recognise a drawn right angle when presented in any orientation Compare any two angles less than two right angles where one of the lines is horizontal or vertical, identifying which is greater and less Order more than two angles less than two right angles where one of the lines is horizontal or vertical
3	Identify pairs of perpendicular and parallel lines Identify properties of 2-D shapes including: sides – number of sides, where any are equal, parallel and perpendicular vertices – number of vertices, size of angles (right, acute, obtuse and where angles are equal), diagonals – number, if and how they intersect, line symmetry
4	Sort 2-D shapes according to their properties - Venn with two intersecting sets and two criteria Carroll diagrams (perpendicular, parallel, right angles) Identify a vertical or horizontal line of symmetry in a shape Complete a simple symmetric figure using a vertical or horizontal line of symmetry where the mirror line cuts the shape in half From a set of shapes, identify those with a vertical or horizontal line of symmetry and those without
5	Draw 2-D shapes with specific properties (perpendicular, parallel, right angles) Name triangles according to their properties (scalene, isosceles, equilateral) and use the terms regular and irregular

	Name quadrilaterals (square rectangle, oblong rectangle, rhombus, parallelogram, kite, trapezium, isosceles trapezium) according to their properties and use the terms regular and irregular
Addition and subtraction Week 2	
Lesson	Lesson focus
1	Add two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds, e.g. 468 + 356 Use rounding to estimate, and inverse to check, the answer to a calculation Add a three-digit number to/from a three-digit number including crossing the hundreds boundary, e.g. 203 – 96 (This could be supported by jottings or a number line) Use inverse to check the answer to a calculation
2	Subtract numbers with three digits using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. 426 – 357 Use rounding to estimate, and inverse to check, the answer to a calculation Subtract a three-digit number to/from a three-digit number including crossing the hundreds boundary, e.g. 203 – 96 (This could be supported by jottings or a number line) Use inverse to check the answer to a calculation
3	Add more than two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds including when the 'carried' amount has more than one ten e.g. 326 + 147 + 219. Include adding more than two numbers with different amounts of digits, e.g. 268 + 34 + 356 Use rounding to estimate, and inverse to check, the answer to a calculation Add more than two numbers with up to four digits using formal written method of columnar addition, e.g. 673 + 5,394 + 3,027
4	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Add two numbers with two decimal places using formal written methods of columnar addition with exchange, e.g. 36.13 + 45.68 Write amounts of money using decimal notation
5	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Subtract two numbers with two decimal places using formal written methods of columnar subtraction with exchange, e.g. 43.44 - 28.62 Write amounts of money using decimal notation
Position and Direction – outdoor learning orienteering opportunity Week 3	
Lesson	Lesson focus
1	Describe positions on a square grid labelled with letters and numbers Describe positions on a 2-D grid as coordinates in the first quadrant Plot specified points
2	Use a grid to describe position, direction and movement in a straight line Plot specified points and draw sides to complete a given polygon
3	Use a grid to describe position, direction, movement and turn Describe movements between positions as translations of a given unit to the left/right and up/down
4	Use time to consolidate learning with orienteering
5	
Perimeter and Area Week 4	
1	Learning recap (Year 3&4) of perimeter

	Measure the perimeter of simple polygons by measuring each side using a ruler and calculating the total Calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Calculate a missing length when perimeter given and lengths of other sides
2	Know area is a measure of surface within a given boundary Find the area of irregular shapes (including those with curved sides) by counting squares) Find the area of rectangles presented on squared paper where the sides are horizontal and vertical by counting squares
3	Use knowledge of arrays to find the area of rectangles by counting squares in groups Find the area of other rectilinear shapes presented on squared paper where the sides are horizontal and vertical by counting squares in groups
Measurement including time Week 4	
4	Tell the time on an analogue clock for minutes past and to, e.g. 33 minutes past 4 and 27 minutes to 5 Solve time problems working within and across the hour boundary Recap learning for Year 4
5	Tell the time on a digital clock to the nearest minute and know whether this is before or after midday Solve time problems working within and across the hour boundary Recap learning for Year 4
Statistics Week 5	
Lesson	Lesson focus
1	Present data using bar charts with a scale in fives or tens Select the most appropriate scale when representing data in a bar chart Interpret information in a bar chart to solve two-step questions Explain what a time graph is showing e.g. a child might describe temperature increasing or decreasing at different times during a day Answer questions using time graphs by reading from labelled values e.g. what was the temperature at 3:00pm (where each hour is labelled on the x axis)
2	Select the most appropriate key when representing data in a pictogram Interpret information in a pictogram to solve two-step questions Present time graphs from given data using appropriate scales
3	Problem solving involving data handling Answer questions using time graphs by reading from between labelled values e.g. what was the temperature at 1:30pm (where each hour is labelled on the x axis)
4	Cross-curricular application of skills
5	
Learning Check up to this point ASSESS AND REVIEW IN WEEK 6	

Summer 1 – 6 weeks	
Place Value Week 1	
Lesson	Lesson focus
1	Identify, represent and estimate numbers using different representations (including the number line) Order and compare numbers upto 1,000 Identify, represent and estimate numbers using different representations (including the number line) Order and compare numbers beyond 1,000
2	Count up and down in fractional and decimal tenths Identify fractional and decimal tenths on number lines Find 0.1, 1, 10, 100 or 1,000 more or less than a given number
3	Compare numbers with one decimal place Order numbers with one decimal place Compare numbers with the same number of decimal places saying which number is more or less and use and = correctly. Pay particular attention to numbers that have the same digits, e.g. 115.62 and 161.52 Order numbers with the same number of decimal places saying which numbers are greater or less. Pay particular attention to numbers that have the same digits, e.g. 65.12, 21.56 and 26.15
4	Round any number to the nearest 10 and 100 Round any number to the nearest 10, 100 or 1,000
5	Round any number to the nearest 10 and 100 Round numbers with one decimal place to the nearest whole number where the number is less than 10 Round numbers with one decimal place to the nearest whole number where the number is up to 10,000
Addition and subtraction Weeks 2 and 3	
Lesson	Lesson focus
1	Add a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten more than 397 Add a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one more than 499 Partition a four-digit number without the use of practical equipment into two groups in different ways where one group is appropriate to the context e.g. 1,500 + 2,643 = 1,500 + 2,500 + 143
2	Subtract a number up to three-digits and tens where the tens and hundreds digit changes, e.g. ten less than 407 Subtract a number up to three-digits and ones where the ones, tens and hundreds digit changes, e.g. one less than 500
3	Recognise addition calculations that require mental compensation e.g. 129 + 49 and use this strategy where appropriate (Recap) Mental addition strategies – whole numbers and decimals incl. add a number with one decimal place to another where the ones boundary is crossed, e.g. 14.7 + 8.6 (This could be supported by jottings or a number line)
4	Recognise subtraction calculations that require mental compensation e.g. 175 - 39 and use this strategy where appropriate

	(Recap) Mental subtraction strategies – whole numbers and decimals incl. subtract a number with one decimal place from another where the ones boundary is crossed, e.g. 14.2 - 5.6 (This could be supported by jottings or a number line)
5	Add more than two numbers with three digits using formal written methods of columnar addition with exchange from ones into tens and tens into hundreds including when the 'carried' amount has more than one ten e.g. 326 + 147 + 219. Include adding more than two numbers with different amounts of digits, e.g. 268 + 34 + 356 Use rounding to estimate, and inverse to check, the answer to a calculation Add more than two numbers with up to two decimal places using formal written methods of columnar addition with exchange, e.g. 268 + 34.7 + 356.53 Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
6	Subtract numbers with different numbers of digits up to three digits, using formal written methods of columnar subtraction with exchange from tens into ones and hundreds into tens, e.g. 334 – 68 using the place value columns to set the calculation out correctly. Include examples with zero used as a place holder, e.g. 304 – 168 Use rounding to estimate, and inverse to check, the answer to a calculation Subtract two numbers with up to two decimal places using formal written methods of columnar subtraction with exchange where the greater number has one 0 as a place holder, e.g. 51.07 - 23.58 Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
7	Identify missing digits in columnar addition and subtraction calculations Estimate; use inverse operations to check answers to a calculation Solve addition and subtraction problems involving missing numbers
8	Recognise calculations that require counting on mentally to find the difference Choose an appropriate strategy to solve a calculation based upon the numbers involved Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
9	Problem solving activities
10	
Multiplication and Division Weeks 4 and 5	
Lesson	Lesson focus
1	Recap mental multiplication strategies including multiplying by 10 and doubling Derive facts from known multiplication tables Recap mental multiplication strategies incl. use related facts to multiply TO × 20 (by multiplying by 10 and doubling) Recognise and use factor pairs and commutativity in mental calculations Use place value, known and derived facts to multiply and divide mentally, including: - multiplying by 0 and 1 - multiplying together three numbers
2	Describe and extend number sequences involving counting on or back in different steps (including 4, 8, 50 and 100) Identify and describe the rule in a number sequence by calculating the step size between non-adjacent numbers in the sequence
3	Use the grid method to solve a two-digit by one-digit multiplication Use rounding to estimate the answer to a calculation Multiply two-digit and three-digit numbers by a one-digit number using formal written layout

4	Use the grid method to solve multiplication problems including positive integer scaling problems Use rounding to estimate the answer to a calculation Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems
5	Identify missing numbers in grid method calculations Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, harder correspondence problems such as n objects are connected to m objects
6	Choose an appropriate strategy to solve a multiplication calculation based upon the numbers involved Choose an appropriate strategy to solve a multiplication calculation based upon the numbers involved
7	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using repeated greater multiples of the divisor (include remainders) Use rounding to estimate the answer to a calculation Divide three-digit numbers by a single digit number efficiently using the chunking method where there is a remainder e.g. 176 ÷ 6 and interpret remainders appropriately for the context
8	Use a vertical number line to show division as repeated subtraction for numbers beyond the multiplication facts that they know using efficient greater multiples of the divisor (include remainders) Use rounding to estimate the answer to a calculation Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
9	Solve division problems that require the interpretation of remainders Solve problems involving converting from years to months; weeks to days Solve problems involving converting from hours to minutes; minutes to seconds
10	Choose an appropriate strategy to solve a division calculation based upon the numbers involved Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method)
Fractions Week 6	
Lesson	Lesson focus
1	Show practically or pictorially that a fraction is one whole number divided by another Use pictorial representations such as fraction walls to recognise where more than two fractions are equivalent e.g. 3/4 , 6/8 and 9/12
2	Use pictorial representations, including the number line, to compare and order fractions with the same denominator Use pictorial representations to compare and order unit fractions Recognise and show, using diagrams, families of common equivalent fractions
3	Use concrete and pictorial representations to recognise where fractions are equivalent Recognise and write decimal equivalents of any number of tenths or hundredths Recognise and write decimal equivalents to 1/4 , 1/2 ,3/4
4	Add fractions to make one whole Subtract fractions from one whole Add and subtract fractions with the same denominator (using diagrams)
5	Add and subtract fractions with the same denominator within one whole Add and subtract fractions with the same denominator (using diagrams)

Summer 2 – 5 weeks	
2D and 3D Shape Week 1	
1	Accurately draw 2-D shapes with specific properties (including angles) (Recap) Accurately draw 2-D shapes with specific properties (including angles), identify lines of symmetry
2	(Recap) Identify and describe the properties of 3-D shapes, including the number of edges, faces and vertices (Recap) Identify and describe the properties of 3-D shapes: faces – number, shape and where any are congruent (identical); number of edges and where any are of equal length; number of vertices
3	Investigate the nets of 3D shapes using Clixi or Polydron Compare and name any two angles less than two right angles in any orientation, identifying which is greater and less Order more than two angles less than two right angles in any orientation Identify acute and obtuse angles (in shapes) and compare angles (in shapes) up to two right angles by size
4	Recognise and describe 3-D shapes in different orientations, e.g. Which of these shapes has five faces? Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes (2-D shapes)
5	Sort 3-D shapes according to their properties - Venn with two intersecting sets and two criteria Carroll diagrams Use Venn and Carroll diagrams to compare and sort 3-D shapes
Place Value Week 2	
Lesson	Lesson focus
1	Read Roman numerals from I to XII Know that L represents 50 and C represents 100 Know that I can only be used before V and X to represent 1 less than 5 (4) and 1 less than 10 (9) Know that X can only be used before L and C to represent 10 less than 50 (40) and 10 less than 100 (90) Represent any number up to 100
2	Estimate and place numbers on a range of number lines Count backwards through zero to include negative numbers and place on number lines
3	Read scales for mass, volume/capacity and temperature Order temperatures including those below 0°C
4	Solve non-routine problems involving rounding Represent numbers with only additive properties up to 100 i.e. not ending in 4 or 9
5	Problem solving
Statistics Week 3	
1	Pose a question and identify what data to collect to answer the question Collect and record data Understand that discrete data that can only take specific, separate values and the data sets are not related to each other
2	Present data in a bar chart with an appropriate scale Interpret and present discrete data using appropriate graphical methods, including bar charts
3	Present data in a pictogram with an appropriate key

	Solve comparison, sum and difference problems using information presented in time graphs
4	Use and interpret data from bar charts and pictograms to answer questions Compare and evaluate representations of data Understand that continuous data is data that can take on any value along a continuum Interpret and present continuous data using appropriate graphical methods, including time graphs
5	Solve problems involving statistics (convert between different representations, incomplete sets of data, matching tables to graphs etc.) Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
Fractions Week 4	
Lesson	Lesson focus
1	Identify fractions with the same denominators on a number line (marked and unmarked) Compare and order fractions with the same denominators (Recap) Use pictorial representations such as fraction walls to recognise where more than two fractions are equivalent e.g. 3/4 , 6/8 and 9/12 Recognise and show, using diagrams, families of common equivalent fractions
2	Compare and order unit fractions such as 1/3 , 1/4 , 1/2 and 1/6 by positioning them including on a number line Where a fraction of an amount cannot be found by using known division facts, use pictorial representations, e.g. bar model to find non-unit fractions of a set of objects, e.g. 3/8 of 112
3	Recognise and show, using diagrams, equivalent fractions with small denominators – applying in different contexts Find non-unit fractions of an amount by using division to find the unit fraction then multiplying to scale up by the numerator e.g. 4/7 of 315 by calculating 315 ÷ 7 to find 1/7 of 315 which is 45 then 45 × 4 to find 4/7 of 315 which is 180
4	Use pictorial representations, e.g. bar model, to find non-unit fractions of a set of objects beyond multiplication table knowledge (using a multiplication grid), e.g. 3/7 of 56 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
5	Solve simple measure and money problems involving fractions Solve simple measure and money problems involving fractions and decimals to two decimal places
Time Week 5	
Lesson	Lesson focus
1	Record and compare time in terms of seconds, minutes and hours Record and compare time in terms of seconds, minutes and hours
2	Tell and write the time from an analogue clock including using Roman numerals Tell and write the time from an analogue clock including using Roman numerals
3	Tell and write the time from a 12 hour digital clock Tell and write the time from a 24 hour digital clock
4 & 5	Solve problems involving time Solve problems involving time
Learning Check up to this point ASSESS AND REVIEW IN WEEK 6	