



Maths Coverage

Year 5

AUTUMN Term



	Term 1							Term 2							Creative arts week
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
NC Focus	Number-Place Value			Number- Addition and Subtraction		Statistics		Number- Multiplication and Division			Measure- Perimeter and Area			Consolidation Statistics	Recap Year 4 Shape
NC Objectives	<ul style="list-style-type: none"> Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 			<ul style="list-style-type: none"> Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 		<ul style="list-style-type: none"> Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables. 		<ul style="list-style-type: none"> Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and cube numbers and the notation for squared (2) and cubed (3) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19 			<ul style="list-style-type: none"> Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles (including squares), and including using standard units, cm², m² estimate the area of irregular shapes. 			<ul style="list-style-type: none"> Using tables Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables. 	<ul style="list-style-type: none"> Acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry.
White Rose Small Steps	<ul style="list-style-type: none"> Number to 10,000 Roman numerals to 1,000 Round to the nearest 10, 100 and 1,000 Number to 100,000 Compare and order numbers to 100,000 Round numbers within 100,000 Numbers to a million Counting in 10s, 100s, 1,000s, 10,000s and 100,000s Compare and order numbers to a million Round numbers to a million Negative numbers 			<ul style="list-style-type: none"> Add whole numbers with more than 4-digits (column method) Subtract whole numbers with more than 4-digits (column method) Round to estimate and approximate Inverse operations (addition and subtraction) Multi-step addition and subtraction problems 		<ul style="list-style-type: none"> Read and interpret line graphs Draw line graphs Use line graphs to solve problems Read and interpret tables Two way tables Timetables 		<ul style="list-style-type: none"> Multiples Factors Common factors Prime numbers Square numbers Cube numbers Inverse operations (Multiplication and Division) Multiply by 10, 100 and 1,000 Divide by 10, 100 and 1,000 Multiply and divide by multiples of 10, 100 and 1,000 			<ul style="list-style-type: none"> Measure perimeter Calculate perimeter Find unknown lengths Area of rectangles Area of compound shapes Estimate and approximate area 			<ul style="list-style-type: none"> Read and interpret line graphs Draw line graphs Use line graphs to solve problems Read and interpret tables Two way tables Timetables 	<ul style="list-style-type: none"> Identify angles Compare and order angles Triangles Quadrilaterals Lines of symmetry Complete a symmetric figure.

21 Steps

Number: Place Value

Step 16

- I can read, write and order numbers to at least 10 000 and determine the value of each digit.
- I can round any 5 digit number to the nearest 10, 100, 1000.
- I can read Roman numerals to 500 (I – D).
- I can read, write, order and compare numbers with 1 d.p.
- I can find complements for 1 with tenths (1 d.p.) I can add and subtract 0.1 mentally to other numbers to 1 d.p.
- I can count forwards and backwards in 10 000 from any given number up to 1 000 000. I can count forwards and backwards through 0 including negative numbers

Step 17

- I can round any 5 number to the nearest 10, 100 and 1000, 10 000
- I can round decimals with one d.p. to the nearest whole number
- I can read Roman numerals to 1000 (I – M)
- I can read, write, order and compare numbers with up to 2 d.p.
- I can find complements for 1 with tenths and hundredths (2 d.p.)
- I can add and subtract 0.01 mentally to other numbers to 2 d.p
- I can count forwards and backwards in 100 000 from any given number up to 1 000 000.

Step 18

- I can read, write and order numbers to at least 100 000 and determine the value of each digit.
- I can put negative numbers onto a number line.
- I can round any number up to 1 000 000 to the nearest 10, 100, 1,000, 10 000 and 100 000.
- I can recognise and use thousandths and

Calculating: Addition and Subtraction

Step 16

- I can add and subtract numbers with 4 digits using formal written methods of columnar addition and subtraction where appropriate with or without regrouping any number of times.
- I can add and subtract mentally a four digit number and multiple of 10, 100 or 1000 or a combination of these (E.g +/- 2300)
- I can use rounding to estimate the answer to a calculation.

Step 17

- I am beginning to add and subtract whole numbers with more than 4 digits using formal columnar addition.
- I can add and subtract mentally a five digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000)
- I can use rounding to estimate the answer to a calculation.
- I am beginning to add and subtract numbers to 2 d.p. using the formal written method.

Step 18

- I can add and subtract mentally a six digit number and multiple of 10, 100 or 1000, 10 000 or a combination of these (E.g +/- 23 000)
- I can estimate the answer to a calculation using rounding and say whether my answer is likely.
- I can solve addition and subtraction two-step

Statistics

Step 16

- I can begin to choose which graphical representation to use with a set of continuous or discrete data.
- I am beginning to read and interpret data from time tables.
- I know the vertical axis is referred to as the y axis and the horizontal axis is referred to as the x axis.
- I can read data between marked scales on continuous graphs.
- I can interpret and present discrete and continuous data using appropriate graphical methods

Step 17

- I can plot data on a line graph and join the plots to find further (x,y) values.

Step 18

- I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and line graphs
- I can complete, read and interpret information in tables, including time tables.
- I can use line graphs to solve simple conversions problems. E.g. Km – m or hours to minutes.

Calculating: Addition and Subtraction

Step 16

- I can find factors for numbers to 50 and beyond. I can recall and use multiplication and division facts for all tables up to 12 x 12
- I can divide 3-digit numbers by a 1- digit number using short division supported with concrete materials with remainders.
- I can multiply up to 4 digit numbers by one digit numbers using the formal short multiplication method
- I can tell whether a number up to 100 is a prime number and use the vocabulary of prime numbers
- I can recognise square and cube numbers and their notation.
- I express non-integer answers to division as a remainder

Step 17

- I am beginning to recognise and use factor pairs and common factors of two numbers commutatively in mental calculations
- I can recall and use mentally multiplication and division facts for all tables up to 12 x 12
- I can divide a 4-digit number by a one digit number using the formal short-division method without remainders
- I can multiply a 2 digit number by a 2 digit number using the expanded long multiplication method.
- I can recall prime numbers up to 19 and use the vocabulary of prime factors
- I can recognise and use square numbers and their notation.
- I express non-integer answers to division as a fraction.

Step 18

- I can recognise and use factor pairs and common factors of two numbers commutatively in mental calculations
- I can recognise and use multiples in mental calculations
- I can divide up to a four-digit number by a one-digit number using the formal short division method with remainders
- I can multiply a 2 digit number by a 2 digit number using the formal long multiplication method.
- I can recognise and use cube numbers and their notation.
- I can recall prime numbers up to 19 and use

Measurement

Step 16

- I can convert and use fluently between units of length (mm, cm, m, km).
- I can find the perimeter of a rectangle given the length and width.
- I know and understand all metric units for measure

Step 17

- I can convert and use fluently between different units of metric measure including g and kg ;l and ml.
- I can find the perimeter of a rectangle by using the formula $2l+2b$ using standard units
- I can use the formula $L \times B$ to find the area of square/rectangle.. using standard units.
- I know and understand all imperial units for measure
- I can find efficient ways to calculate the perimeter of regular shapes.

Step 18

- I can convert and use fluently between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml).
- I can measure and calculate the perimeter of a composite rectilinear figure (including squares) in centimetres and metres.
- I can measure and calculate the area of a composite rectilinear figure (including squares) in centimetres and metres.
- I can use algebraic expressions to represent missing measure problems. (e.g. $4 + 2b = 20$, for a rectangle of side 2 and perimeter 20)

- I can compare and classify quadrilaterals (for example, parallelogram, trapezium, rhombus) using geometric properties.
 - I can compare and order angles up to two right angles by size by using a protractor to the nearest multiple of 10.
 - I can recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape.
- I can complete a simple symmetric figure with respect to a specific line of symmetry.

	<p>relate them to tenths, hundredths and decimal equivalents</p> <ul style="list-style-type: none">• I can round decimals with two d.p. to the nearest whole number and to one d.p.• I can read, write, order and compare numbers with up to 3 d.p.• I can solve problems involving numbers to three d.p.	<p>problems in contexts, deciding which operations to use and why.</p> <ul style="list-style-type: none">• Can solve more complex one-step problems in contexts, deciding which operations to use and why.• I can add and subtract numbers to 2 d.p. using the formal written method.		<p>the vocabulary of prime factors non-prime numbers I express non-integer answers to division as a decimal to 1 d.p</p>			
--	---	--	--	--	--	--	--



Maths Coverage

Year 5

SPRING Term

	Term 3							Term 4						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
NC Focus	Number- Multiplication and Division		Number-Fractions					Number-Fractions		Number-Decimals and Percentages			Consolidation	
NC Objectives	<ul style="list-style-type: none"> Multiply and divide numbers mentally drawing upon known facts. Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign. 		<ul style="list-style-type: none"> Compare and order fractions whose denominators are multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $25 + 45 = 65 = 1 \frac{15}{20}$] Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions [for example $0.71 = \frac{71}{100}$] Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 					Continue	<ul style="list-style-type: none"> Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve problems involving number up to three decimal places. Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Solve problems which require knowing percentage and decimal equivalents of 12, 14, 15, 25, 45 and those fractions with a denominator of a multiple of 10 or 25. 					
White Rose Small Steps	<ul style="list-style-type: none"> Multiply 4-digits by 1-digit Multiply 2-digits (area model) Multiply 2-digits by 2-digits Multiply 3-digits by 2-digits Multiply 4-digits by 2-digits Divide 4-digits by 1-digit Divide with remainders 		<ul style="list-style-type: none"> Equivalent fractions Improper fractions to mixed numbers Mixed numbers to improper fractions Number sequences Compare and order fractions less than 1 Compare and order fractions greater than 1 Add and subtract fractions Add fractions within 1 Add 3 or more fractions Add fractions Add mixed numbers Subtract fractions Subtract mixed numbers Subtract – breaking the whole Subtract 2 mixed numbers Multiply unit fractions by an integer Multiply non-unit fractions by an integer 						<ul style="list-style-type: none"> Decimals up to 2 d.p. Decimals as fractions (1) Decimals as fractions (2) Understand thousandths Thousands as decimals Rounding decimals Order and compare decimals Understand percentages Percentages as fractions and decimals Equivalent F.D.P 					

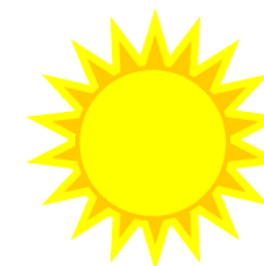
		<ul style="list-style-type: none"> • Multiply mixed numbers by integers • Fraction of an amount • Using fractions as operators 				
<p>21 Steps</p>	<p><u>Calculating: Multiplication and Division</u></p> <p>Step 16</p> <ul style="list-style-type: none"> • I can divide 3-digit numbers by a 1-digit number using short division supported with concrete materials with remainders • I can multiply up to 4-digit numbers by 1-digit numbers using formal short multiplication method. <p>Step 17</p> <ul style="list-style-type: none"> • I can divide a 4-digit number by a 1-digit number using the formal short-division method without remainders. • I can multiply a 2-digit number by a 2-digit number using the expanded long multiplication method. <p>Step 18</p> <ul style="list-style-type: none"> • I can divide up to a 4-digit number by a 1-digit number using the formal short division method with remainders. • I can multiply a 2-digit number by a 2-digit number using the formal long multiplication method. 	<p><u>Number: Fractions and Decimals</u></p> <p>Step 16</p> <ul style="list-style-type: none"> • I can compare and order fractions whose denominators are the same using concrete materials and visual representations. • I can find equivalent fractions for a $\frac{1}{x}$ by multiplying the numerator and denominator by the same multiple. • I can understand mixed numbers and position them on a number line. • I can simplify fractions < 1 by dividing the numerator and denominator by the highest common factor. <p>Step 17</p> <ul style="list-style-type: none"> • I can compare and order fractions whose denominators are the same. • I am beginning to add and subtract fractions with the same denominator and multiples of the same number. • I can multiply proper fractions by a whole number using materials and diagrams. • I can simplify fractions < 1 into integers and other fractions (e.g. $17/3 = 5 \frac{2}{3}$) <p>Step 18</p> <ul style="list-style-type: none"> • I can compare and order fractions whose denominators are multiples of the same number. • I can add and subtract fractions with the same denominator and multiples of the same number. • I can write mathematical statements for addition and subtraction of fractions. • I can multiply mixed numbers by a whole number using materials and diagrams. • I can convert integers and fractions into an improper fraction (e.g. $5 \frac{2}{3} = 17/3$). 			<p><u>Number: Fractions and Decimals (%)</u></p> <p>Step 16</p> <ul style="list-style-type: none"> • I can recognise the percentage symbol (%) and understand percent means number of parts per hundred. • I can write, order and compare numbers with 1 d.p. <p>Step 17</p> <ul style="list-style-type: none"> • I can read and write decimal numbers as fractions over 10 and 100. • I know the decimal equivalents of $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$ and $\frac{4}{5}$. • I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100. • I can round decimals with 1 d.p. to the nearest whole number. • I can read, write, order and compare numbers with up to 2 d.p. <p>Step 18</p> <ul style="list-style-type: none"> • I know the decimal equivalents of those with a denominator of a multiple of 5, 10 or 25. • I can recognise the percent symbol (%) and understand percent means number of parts per hundred and write percentages as a fraction with a denominator 100 and as a decimal. • I can recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. • I can round decimals with 2 d.p to the nearest whole number and to one d.p. • I can read, write, order and compare numbers with up to 3 d.p. 	



Maths Coverage

Year 5

SUMMER Term



	Term 5							Term 6						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
NC Focus	Number-Decimals				Geometry- Position and Direction			Geometry Properties of Shapes			Measurement-Converting Units	Measures- Volume	Consolidation	
NC Objectives	<ul style="list-style-type: none"> Solve problems involving number up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 				<ul style="list-style-type: none"> Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. 			<ul style="list-style-type: none"> Geometry- Properties of Shapes and Angles Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°) Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°. 			<ul style="list-style-type: none"> Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time. 	<ul style="list-style-type: none"> Estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure. 		
White Rose Small Steps	<ul style="list-style-type: none"> Adding decimals within 1 Subtracting decimals within 1 Complements to 1 Adding decimals – crossing the whole Adding decimals with the same number of decimal places Subtracting decimals with the same number of decimal places Adding decimals with a different number of decimal places Subtracting decimals with a different number of decimal places Adding and subtracting wholes and decimals Decimal sequences Multiplying decimals by 10, 100 and 1,000 Dividing decimals by 10, 100 and 1,000 				<ul style="list-style-type: none"> Position in the first quadrant Reflection Reflection with coordinates Translation Translation with coordinates 			<ul style="list-style-type: none"> Measuring angles in degrees Measuring with a protractor (1) Measuring with a protractor (2) Drawing lines and angles accurately Calculating angles on a straight line Calculating angles around a point Calculating lengths and angles in shapes Regular and irregular polygons Reasoning about 3D shapes 			<ul style="list-style-type: none"> Kilograms and kilometres Milligrams and millilitres Metric units Imperial units Converting units of time Timetables 	<ul style="list-style-type: none"> What is volume? Compare volume Estimate volume Estimate capacity 		
21 Steps	Number: Fractions and Decimals Step 16				Geometry: Position and Direction			Geometry: Properties of Shape Step 16			Measurement Step 16	Measurement Step 16		
	<ul style="list-style-type: none"> I can find complements for 1 with tenths (1 d.p). 						<ul style="list-style-type: none"> I can identify and use mathematical language 			<ul style="list-style-type: none"> I can convert and use 	<ul style="list-style-type: none"> I am beginning 			

	<ul style="list-style-type: none"> I can add and subtract 0.1 mentally to other numbers to 1 d.p. <p>Step 17</p> <ul style="list-style-type: none"> I can find complements for 1 with tenths and hundredths (2 d.p). I can add and subtract 0.01 mentally to other numbers to 2 d.p. <p>Step 18</p> <ul style="list-style-type: none"> I am beginning to use scaling to find equivalent decimal equivalents of non-unit fractions where the denominator is a factor of 100 or multiple of 10 (e.g. $4/20 = 2/10$ (0.2) or $20/100$ (0.2)). I can solve problems involving numbers to 3 d.p. 	<p>Step 16</p> <ul style="list-style-type: none"> I can describe position using co-ordinates on a 2D-grid in the first quadrant after a translation to the left, right, up or down. <p>Step 17</p> <ul style="list-style-type: none"> I can describe position using co-ordinates on a 2D-grid in the first quadrant after a reflection in a horizontal or vertical line. <p>Step 18</p> <ul style="list-style-type: none"> I can describe position using co-ordinates on a 2D grid in the first quadrant after a translation in two different directions (e.g. up and down). 		<p>to describe properties of 3D shapes.</p> <ul style="list-style-type: none"> I can measure given angles using a protractor to the nearest 5°. I can describe mathematical properties of regular and irregular polygons using precise vocabulary. I understand an angle on a point on a straight line is 180°. <p>Step 17</p> <ul style="list-style-type: none"> I am beginning to identify 3D shapes, including cubes and cuboids, from 2D representations. I can identify what acute, obtuse and reflex angles are. I can measure given angles using a protractor to the nearest 1°. I can identify multiples of 90 degrees when measuring angles. I understand an angle on a single point is a whole turn. I can draw polygons accurately using a ruler to the nearest mm and protractor to the nearest 1°. <p>Step 18</p> <ul style="list-style-type: none"> I can identify 3D shapes, including cubes and suboids, from 2D representations. I can estimate and compare acute, obtuse and reflex angles. I can identify missing angles by using my knowledge of angles on a straight line or at a point. I can use the facts I know about polygons to find missing facts. I can use angle sum facts and other properties to find missing values. I use the fact that an angle on a single point is a whole turn to find internal angles of common polygons. I can use the properties of rectangles to deduce related facts and find missing lengths and angles. 	<p>fluently between units of length (mm, cm, m, km).</p> <ul style="list-style-type: none"> I know and understand all metric units for measure. <p>Step 17</p> <ul style="list-style-type: none"> I can convert and use fluently between different units of metric measure including g and kg; l and ml. I know and understand all imperial units for measure. <p>Step 18</p> <ul style="list-style-type: none"> I can convert and use fluently between different units of metric measure (e.g. km and m; cm and m; cm and mm; g and kg; l and ml). I can understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. 	<p>to estimate volume.</p> <p>Step 17</p> <ul style="list-style-type: none"> I can estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water). 	
--	--	--	--	---	---	---	--