Eversley Primary School Maths Curriculum Map

Eversley Primary School Maths Curriculum Map 2021- 2022

YEAR 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value (within 10) Number: Addition and Subtraction (within 10)	Geometry: Shape Number: Place Value (within 20) Consolidation	Number: Addition and Subtraction (within 20) Number: Place Value (within 50)	Measurement: Length and Height Measurement: Weight and Volume Consolidation	Number: Multiplication and Division Number: Fractions Number: Place Value (within 100)	Geometry: Position and Direction Measurement: Money Measurement: Time Consolidation
National Curriculum objectives Click here	• Count to and across 100, forwards, backwards, beginning with 0 or 1, from any given number. • Count numbers to 100 in numerals; count in multiples of twos, fives and tens. • Identify and represent numbers using objects and pictorial representations • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify one more and one less • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one- digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as 7= ? - 9 • Recognise and name common 2D shapes (for example, rectangles (including squares), circles and triangles) • Recognise and name common 3D shapes (for example, cuboid (including cubes) pyramids and spheres) • Count to and across 100, forwards, backwards, beginning with 0 or1, from any given number. • Count numbers to 100 in numerals; count in multiples of twos, fives and tens. • Identify and represent numbers using objects and pictorial representations • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify one more and one less		• Count to and across 100, forwards, backwards, beginning with 0 or1, from any given number. • Count numbers to 100 in numerals; count in multiples of twos, fives and tens. • Identify and represent numbers using objects and pictorial representations • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify one more and one less • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract one- digit and two-digit numbers to 20, including zero • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as 7= ? - 9 • Compare, describe and solve practical problems for: lengths and heights (for example long. short, longer/shorter, tall/short, double/half) Mass/weight (for example, heavy/light, heavier than/lighter than) • Capacity and volume (for example, full/empty, more than/less than, half full, quarter) • Time, (for example, quicker, slower, earlier, later) • Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds)		• Count to and across 100, forwards, backwards, beginning with 0 or1, from any given number. • Count numbers to 100 in numerals; count in multiples of twos, fives and tens. • Identify and represent numbers using objects and pictorial representations • Read and write numbers to 100 in numerals • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify one more and one less • Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. • Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity • Describe position, direction and movement, including whole, half, quarter and three-quarter turns. • Compare, describe and solve practical problems for: lengths and heights (for example long. short, longer/shorter, tall/short, double/half) Mass/weight (for example, heavy/light, heavier than/lighter than) • Capacity and volume (for example, full/empty, more than/less than, half full, quarter) • Time, (for example, quicker, slower, earlier, later) • Measure and begin to record the following: lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds) • Recognise and know the value of different denominations of coins and notes • Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon, evening) • Recognise and use language relating to dates, including days of the week, weeks, months and years • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times	
DfE/NCETM Building blocks/Ready to progress Click here for Y1 guidance	1NPV–1 Count within 100, forwards and backwards, starting with any number.	1G–1 Recognise common 2D and 3D shapes presented in different orientations, and				

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resources to support teaching and learning	1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = 1NF–1 Develop fluency in addition and subtraction facts within 10. 1NF–2 Count forwards and backwards in multiples of , 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. S 1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. 1AS–2 Read, write and interpret equations containing addition ( ), subtraction ( ) and equals ( ) symbols, and relate additive expressions and equations to real-life contexts.	know that rectangles, triangles, cuboids and pyramids are not always similar to one another. 1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to lace them in particular orientations.				

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YEAR 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value Number: Addition and Subtraction Measurement: Money Number: Multiplication and Division		Number: Multiplication and Division Statistics Geometry: Properties of Shapes Number: Fractions		Measurement: Length and Height Geometry: Position and Direction Consolidation and problem solving Measurement: Time Measurement: Mass, Capacity and Temperature	
National Curriculum objectives Click here	• Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward • read and write numbers to at least 100 in numerals and in words • Identify, represent and estimate numbers using different representations including the number line • Recognise the place value of each digit in a two-digit number (tens, ones) • Compare and order numbers from 0 up to 100; use <, > and = signs • Use place value and number facts to solve problems • Recall and use addition and subtraction facts to 20 fluently and derive and se related facts up to 100 • Show that addition of two numbers can be done in any order (commutative)ad subtraction of one number from another cannot • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems • Add and subtract numbers using concrete objects, pictorial representations and mentally including: a two-digit number and ones, a two-digit number and tens, two two-digit numbers, adding three one-digit numbers • Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying their increasing knowledge of mental and written methods • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Calculate mathematical statements for multiplication and division within the multiplication tables and write them sing the multiplication (x), division (÷) and equals (=) signs • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts including problems in context • Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Find different combinations of coins that equal the same amounts of money		• Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Calculate mathematical statements for multiplication and division within the multiplication tables and write them sing the multiplication (x), division (÷) and equals (=) signs • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts including problems in context • Recognise, find, name and write fractions ⅓, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity • Recognise the equivalence of 2/4 and ½ • Write simple fractions for example, ½ of 6 = 3 • Choose and use appropriate standard units to estimate and measure length / height in any direction (m / cm); mass (kg / g); temperature (°C); capacity (litres / ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume / capacity and record the results using >, < and = • Identify and describe the properties of 2-D shapes including the number of sides and line symmetry in a vertical line • Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid] • Compare and sort common 2-D shapes and everyday objects • Recognise and name common 3-D shapes [for example, cuboids (including cubes) pyramids and spheres] • Compare and sort common 3-D shapes and everyday objects • Order and arrange combinations of mathematical objects in patterns and sequences • Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) • Interpret and construct simple pictograms, tally charts, block diagrams and simple tables • Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity		• Choose and use appropriate standard units to estimate and measure length / height in any direction (m / cm); mass (kg / g); temperature (°C); capacity (litres / ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume / capacity and record the results using >, < and = • Compare and sequence intervals of time • Tell and write the time to five minutes, including quarter past / to the hour and draw the hands on a clock face to show these times • Know the number of minutes in an hour and the number of horse in a day • Order and arrange combinations of mathematical objects in patterns and sequences • Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)	

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	• Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change		• Ask and answer questions about totalling and comparing categorical data			
DfE/NCETM Building blocks/ Ready to progress Click here for Y2 guidance resources to support teaching and learning	2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning 2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. facts within 10. 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. 2AS–1 Add and subtract across 10.2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?" 2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. 2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers	2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables 2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division)	2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables 2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division)	2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties		

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YEAR 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value Number: Addition and Subtraction Number: Multiplication and Division		Number: Multiplication and Division Measurement: Money Measurement: Length and Perimeter Number: Fractions		Number: Fractions Measurement: Time Geometry: Properties of Shape Measurement: Mass and Capacity	
National Curriculum objectives Click here	• Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • Identify, represent and estimate numbers using different representations • Read and write numbers up to 1000 in numerals and in words • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Compare and order numbers up to 1000 • Solve number problems and practical problems involving these ideas • Estimate the answer to a calculation and use inverse operations to check answers • Add and subtract numbers mentally, including; a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • Solve problems, including missing number problems, using number facts, place value and more complex addition and subtraction • Recall multiplication and division facts for the 3, 4 and 8 multiplication tables • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers, using mental and progressing to formal written methods		• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers, using mental and progressing to formal written methods • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects • Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 • Recognise, find and write fractions of a discrete set of objects: unit fractions with small denominators • Recognise and use fractions as number; unit fractions and non-unit fractions with small denominators • Solve problems that involve all of the above • Measure, compare, add and subtract: lengths (m / cm / mm); mass (kg / g); volume / capacity (l / ml) • Add and subtract amounts of money to give change, using both £ and p in practical contexts • Measure the perimeter of simple 2-D shapes • Interpret and present data using bar charts, pictograms and tables • Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables		• Recognise and show, using diagrams, equivalent fractions with small denominators • Compare and order unit fractions and fractions with the same denominators • Add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7] • Solve problems that involve all of the above • Measure, compare, add and subtract: lengths (m / cm / mm); mass (kg / g); volume / capacity (l / ml) • Tell and write the time from an analogue clock, including Roman numerals from I to XII, and 12-hour and 24-hour clocks • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, non and midnight • Know the number of seconds in a minute and the number of days in each month, year and leap year • Compare durations of events [for example to calculate the time taken by particular events of tasks] • Draw 2-D shapes • Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • Recognise angles as a property of shape or a description of a turn • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	
DfE/NCETM Building blocks/ Ready to progress Click here for Y3 guidance resources to support teaching and learning	3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. 3NPV–2 Recognise the place value of each digit in three-digit numbers and compose and decompose three-digit numbers	3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the	3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the 3NF–3 Apply place-value knowledge to known	3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts 3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency)		3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations. 3G–2 Draw polygons by joining marked points, and identify

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	using standard and non-standard partitioning. 3NPV–3 Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 10 3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.0 and 10. 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice 3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). 3AS–1 Calculate complements to 100 3AS–2 Add and subtract up to three-digit numbers using columnar methods 3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition and understand the related property for subtraction.	3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10) corresponding number. 3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	additive and multiplicative number facts (scaling facts by 10) corresponding number. 3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	3F–3 Reason about the location of any fraction within 1 in the linear number system. 3F–4 Add and subtract fractions with the same denominator, within 1.		parallel and perpendicular sides

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YEAR 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value Number: Addition and Subtraction Measurement: Length and Perimeter Number: Multiplication and Division		Number: Multiplication and Division Measurement: Area Number: Fractions Number: Fractions Number: Decimals		Number: Decimals Measurement: Money Measurement: Time Statistics Geometry: Properties of Shape Geometry: Position and Directions	
National Curriculum objectives Click here	• Count in multiples of 6, 7, 9, 25 and 1000 • Count backwards through zero to include negative numbers • Identify, represent and estimate numbers using different representations • Read Roman numerals 10o (I to C) and know that over time, the numeral system changed to include the concept of zero and place value • Find 1000 more or less than a given number • Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones) • Order and compare numbers beyond 1000 • Round any number to the nearest 10, 100 or 1000 • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • Estimate and use inverse operations to check answers to a calculation • Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate • Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why • Recall multiplication and division facts for multiplication tables up to 12x12 • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • Recognise and use factor pairs and commutativity in mental calculations • Convert between different units of measure [for example, kilometre to metre; hour to minute] • Estimate, compare and calculate different measures • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Find the area of rectilinear shapes by counting squares		• Recall multiplication and division facts for multiplication tables up to 12x12 • Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers • Recognise and use factor pairs and commutativity in mental calculations • Multiply two-digit and three-digit numbers by a one-digit number using formal written layout • Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • Recognise and show, using diagrams, families of common equivalent fractions • Add and subtract fractions with the same denominator • Solve problems involving increasingly harder fractions to calculate quantities, including non-unit fractions where the answer is a whole number • Recognise and write decimals equivalents of any number of tenths or hundredths • Recognise and write decimal equivalents to ¼, ½, ¾ • Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Solve simple measure and money problems involving fractions and decimals to two decimal places • Convert between different units of measure [for example, kilometre to metre; hour to minute] • Estimate, compare and calculate different measures • Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • Find the area of rectilinear shapes by counting squares		• Recognise and write decimals equivalents of any number of tenths or hundredths • Recognise and write decimal equivalents to ¼, ½, ¾ • Round decimals with one decimal place to the nearest whole number • Compare numbers with the same number of decimal places up to two decimal places • Solve simple measure and money problems involving fractions and decimals to two decimal places • Convert between different units of measure [for example, kilometre to metre; hour to minute] • Estimate, compare and calculate different measures • Estimate , compare and calculate different measures, including money in pounds and pence • Read, write and convert time between analogue and digital 12- and 24-hour clocks • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days • Compare and classify geometric shapes, including quadrilaterals and triangles, base on their properties and sizes • Identify lines of symmetry in 2-D shapes presented in different orientations • Identify acute and obtuse angles and compare and order angles up to two right angles by size • 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 • Describe positions on a 2-D grid as coordinates in the first quadrant • Describe movements between positions as translations of a given unit to the left / right and up / down • Plot specified points and draw sides to complete a given polygon • Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	

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					• Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs	
DfE/NCETM Building blocks/Ready to progress [Click here](#) for Y4 guidance resources to support teaching and learning	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. 4NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning. 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 parts	4NF–1 Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. 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–2 Manipulate multiplication and division equations and understand and apply the commutative property of multiplication. 4MD–3 Understand and apply the distributive property of multiplication.	4NF–1 Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number 4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context. 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–2 Manipulate multiplication and division equations and understand and apply the commutative property of multiplication. 4MD–3 Understand and apply the distributive property of multiplication	4F–1 Reason about the location of mixed numbers in the linear number system 4F–2 Convert mixed numbers to improper fractions and vice versa. 4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers		4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant. 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 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

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YEAR 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value Number: Addition and Subtraction Statistics Number: Multiplication and Division Measurement: Perimeter and Area		Number: Multiplication and division Number: Fractions Number: Fractions Number: Decimals and Percentages		Number: Decimals Geometry: Properties of Shape Geometry: Position and Directions Measurement: Converting Units Measurement: Volume	
National Curriculum objectives Click here	• Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • Count forwards and backwards with positive and negative whole numbers, including through zero • Read, write (order and compare) numbers to at least 1 000 000 and determine the value of each digit • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals • (Read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit • Interpret negative numbers in context • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 • Solve number problems and practical problems that involve all of the above • Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction • Add and subtract numbers mentally with increasingly large numbers • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • 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 • Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) • Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • Multiply and divide numbers mentally drawing upon known facts		• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • Multiply and divide numbers mentally drawing upon known facts • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • 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, ⅖ + ⅘ = 6/5 =1 ⅕] • Compare and order fractions whose denominators are all multiples of the same number • 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 = 71/100] • 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 • Read, write, order and compare numbers with up to three decimal places		• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers • Multiply and divide numbers mentally drawing upon known facts • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Solve problems involving number up to three decimal places • Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre0 • Understand and use use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling • Use all four operations to solve problems involving measure [for example, money] • Solve problems involving converting between units of time • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standards units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • Estimate volume [for example, using 1 cm³ blacks to build cuboids (including cubes)] and capacity [for example, using water] • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles • Use properties of rectangles to deduce related facts and find missing lengths and angles • Identify 3-D shapes, including cubes and other cuboids, from 2-D representations • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	

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	• Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates • Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), and including using standards units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • Estimate volume [for example, using 1 cm³ blacks to build cuboids (including cubes)] and capacity [for example, using water] • Complete, read and interpret information in tables, including timetables • Solve comparison, sum and difference problems using information presented in a line graph		• Recognise the per cent symbol (%) and understand that per cent related to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those fractions with a denominator of a multiple of 10 or 25		• 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 (180°), other multiples of 90° • 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	
DfE/NCETM Building blocks/ Ready to Progress Click here for Y5 guidance resources to support teaching and learning	5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. 10 times the size of 0.01. 5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. 5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. 5NPV–5 Convert between units of measure, including using common decimals and fractions.	5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice. 5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size. 5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors. 5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method. 5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. 5F–1 Find non-unit fractions of quantities. 5F–2 Find equivalent fractions and understand	5F–3 Recall decimal fraction equivalents for half, quarter, fifth and tenth, and for multiples of these proper fractions.	5F–3 Recall decimal fraction equivalents for half, quarter, fifth and tenth, and for multiples of these proper fractions. 5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.7 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	

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		5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context. 5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	that they have the same value and the same position in the linear number system. 5F–3 Recall decimal fraction equivalents for half, quarter, and , and for multiples of these proper fractions.			

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YEAR 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Unit of work Based on White Rose Programme of Study Click here	Number: Place Value Number: Addition, Subtraction, Multiplication and Division Number: Fractions Geometry: Position and Directions		Number: Decimals Number: Percentage Number: Algebra Measurement: Converting Units Measurement: Perimeter, Area and Volume Number: Ratio		Statistics Geometry: Properties of Shape Consolidation or SATs preparation Consolidation, Investigations and Preparations for KS3	
National Curriculum objectives Click here	• Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • Round any whole number to a required degree of accuracy • Use negative numbers in context and calculate intervals across zero • Solve number and practical problems that involve all of the above • Perform mental calculations including with mixed operations an large numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve addition and subtraction multi-step problems in contexts deciding which operations and methods to use and why • Identify common factors, common multiples and prime numbers • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication • Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context • Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders accordion to the context • Perform mental calculations, including with mixed operations and large numbers • Solve problems involving addition, subtraction, multiplication and division • Use their knowledge of the order of operations to carry out calculations involving the four operations • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions including fractions > 1 • Add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions • Multiply simple pairs of fractions, writing down the answer in its simplest form [for example, ¼ x ½ = ⅛]		• Identify the value of each digit in numbers given to three decimal places • Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places • Multiply one-digit numbers with up to two decimal places by whole numbers • Use written division methods in cases where the answer has up to two decimal places • Solve problems which require answers to be rounded to specified degrees of accuracy • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example ⅜] • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts • Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison • Solve problems involving similar shapes where the scale actor is known or can be found • Solve problem involving unequal sharing and grouping using knowledge of fractions and multiples • Use simple formulae • Generate and describe linear number sequences • Express missing number problems algebraically • Find pairs of numbers that satisfy an equation with two unknowns • Enumerate possibilities of combinations of two variables • Solve problems involving the calculation and conversion of units of measure using decimal notation up to three decimal places where appropriate • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places • Convert between miles and kilometres • Recognise that shapes with the same areas can have different perimeters and vice versa		• Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit and vice versa • Draw 2-D shapes using given dimensions and angles • Compare and classify geometric shapes based on their properties and sizes • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise, describe and build simple 3-D shapes, including making nets • Find unknown angles in any triangles, quadrilaterals, and regular polygons • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles • Interpret and construct pie charts and line graphs and use there to solve problems • Calculate and interpret the mean as an average	

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	• Divide proper fractions by whole numbers [for example ⅓ ÷ 2 = ⅙] • Describe positions on the full coordinate grid (all four quadrants) • Draw and translate simple shapes on the coordinate plane, and reflect them in the axes		• Recognise when it is possible to use formulae for area and volume of shapes • Calculate, estimate and compare volume of cubes and cuboids, using standard units, including cubic centimetres (cm^3) and cubic metres (m^3), and extending to other units [for example, mm^3 and km^3]			
DfE/NCETM Building blocks/ Ready to Progress **Click here for Y6 guidance resources to support teaching and learning**	6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). 6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning. 6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. 6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. 6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 6AS/MD–3 Solve problems involving ratio relationships. 6AS/MD–4 Solve problems with 2 unknowns.	6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. 6AS/MD–3 Solve problems involving ratio relationships. 6AS/MD–4 Solve problems with 2 unknowns. 6F–1 Recognise when fractions can be simplified and use common factors to simplify fractions. 6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. 6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.		6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.	