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Birch Hill Primary School and Nursery
Maths Progression Document

Term	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	1 Place value (within 10) 2 Addition and subtraction (within 10) 3 Shape	1 Place value 2 Addition and subtraction 3 Shape	1 Place value 2 Addition and subtraction 3 Multiplication and division A	1 Place value 2 Addition and subtraction 3 Area 4 Multiplication and division A	1 Place value 2 Addition and subtraction 3 Multiplication and division A 4 Fractions A	1 Place value 2 Addition, subtraction, multiplication and division 3 Fractions A 4 Fractions B 5 Converting units
Spring	1 Place value (within 20) 2 Addition and subtraction (within 20) 3 Place value (within 50) 4 Length and height 5 Mass and volume	1 Money 2 Multiplication and division 3 Length and height 4 Mass, capacity and temperature	1 Multiplication and division B 2 Length and perimeter 3 Fractions A 4 Mass and capacity	1 Multiplication and division B 2 Length and perimeter 3 Fractions 4 Decimals A	1 Multiplication and division B 2 Fractions B 3 Decimals and percentages 4 Perimeter and area 5 Statistics	1 Ratio 2 Algebra 3 Decimals 4 Fractions, decimals and percentages 5 Area, perimeter and volume 6 Statistics
Summer	1 Multiplication and division 2 Fractions 3 Position and direction 4 Place value (within 100) 5 Money 6 Time	1 Fractions 2 Time 3 Statistics 4 Position and direction	1 Fractions B 2 Money 3 Time 4 Shape 5 Statistics	1 Decimals B 2 Money 3 Time 4 Shape 5 Statistics 6 Position and direction	1 Shape 2 Position and direction 3 Decimals 4 Negative numbers 5 Converting units 6 Volume	1 Shape 2 Position and direction 3 Themed projects, consolidation and problem solving

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Counting	• count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number • count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens **White Rose:** Autumn 1, Spring 1, Spring 3, Summer 1, Summer 4	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward **White Rose:** Autumn 1	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number **White Rose:** Autumn 1, Autumn 3	• count in multiples of 6, 7, 9, 25 and 1000 • find 1000 more or less than a given number *Counting backwards through zero (negative numbers) is taught in Year 5 in White Rose.* **White Rose:** Autumn 1, Autumn 4	• count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • count backwards through zero to include negative numbers *[NC Year 4 objective]* • interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero **White Rose:** Autumn 1, Summer 4	• use negative numbers in context, and calculate intervals across zero **White Rose:** Autumn 1
Place Value	• given a number, identify one more and one less **White Rose:** Autumn 1, Spring 1, Spring 3, Summer 4	• 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 **White Rose:** Autumn 1	• 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 **White Rose:** Autumn 1	• 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 **White Rose:** Autumn 1	• read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • 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 **White Rose:** Autumn 1	• 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 • solve number and practical problems that involve all of the above **White Rose:** Autumn 1

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Representing number	• identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • read and write numbers from 1 to 20 in numerals and words • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs **White Rose:** Autumn 1, Autumn 2, Spring 1, Spring 2, Spring 3, Summer 4	• identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words **White Rose:** Autumn 1	• identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words **White Rose:** Autumn 1	• identify, represent and estimate numbers using different representations • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value **White Rose:** Autumn 1	• read Roman numerals to 1000 (M) and recognise years written in Roman numerals **White Rose:** Autumn 1	
Number facts (+/–)	• represent and use number bonds and related subtraction facts within 20 **White Rose:** Autumn 2, Spring 2	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 **White Rose:** Autumn 2				

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Mental +/–	• add and subtract one-digit and two-digit numbers to 20, including zero **White Rose:** Autumn 2, Spring 2	• 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 • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot **White Rose:** Autumn 2	• add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds **White Rose:** Autumn 2		• add and subtract numbers mentally with increasingly large numbers **White Rose:** Autumn 2	• perform mental calculations, including with mixed operations and large numbers **White Rose:** Autumn 2
Written +/–			• add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction **White Rose:** Autumn 2	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **White Rose:** Autumn 2	• add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) **White Rose:** Autumn 2	

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Problems +/–	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 **White Rose:** Autumn 2, Spring 2	• 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 • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems **White Rose:** Autumn 2	• estimate the answer to a calculation and use inverse operations to check answers • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction **White Rose:** Autumn 2	• estimate and use inverse operations to check answers to a calculation • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why **White Rose:** Autumn 2	• 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 **White Rose:** Autumn 2	• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy **White Rose:** Autumn 2

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number facts (×/÷)		• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers **White Rose:** Spring 2	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables **White Rose:** Autumn 3, Spring 1	• recall multiplication and division facts for multiplication tables up to 12 × 12 **White Rose:** Autumn 4, Spring 1	• 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}) **White Rose:** Autumn 3	• identify common factors, common multiples and prime numbers **White Rose:** Autumn 2
Mental (×/÷)		• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot **White Rose:** Spring 2	• write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental methods **White Rose:** Autumn 3, Spring 1	• 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 **White Rose:** Autumn 4, Spring 1	• multiply and divide numbers mentally drawing upon known facts • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 **White Rose:** Autumn 3, Spring 1, Summer 3	• perform mental calculations, including with mixed operations and large numbers **White Rose:** Autumn 2

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Written (×/÷)			• progress to formal written methods for the multiplication and division calculations above (two-digit numbers times one-digit numbers) **White Rose:** Spring 1	• multiply two-digit and three-digit numbers by a one-digit number using formal written layout • solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context *[RtP 4NF-2]* **White Rose:** Autumn 4, Spring 1	• 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 • 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 **White Rose:** Spring 1	• 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 according to the context **White Rose:** Autumn 2

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Problems (×/÷)	• 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 **White Rose:** Summer 1	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts **White Rose:** Spring 2	• 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 **White Rose:** Spring 1	• 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 **White Rose:** Spring 1	• solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates **White Rose:** Autumn 3, Spring 1	• use their knowledge of the order of operations to carry out calculations involving the four operations • solve problems involving addition, subtraction, multiplication and division **White Rose:** Autumn 2

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Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Recognising fractions	• 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 **White Rose:** Summer 2	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity **White Rose:** Summer 1	• 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 and use fractions as numbers: unit fractions and non-unit fractions with small denominators **White Rose:** Spring 3	• count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • reason about the location of mixed numbers in the linear number system *[RtP 4F-1]* • convert mixed numbers to improper fractions and vice versa *[RtP 4F-2]* **White Rose:** Spring 3, Spring 4, Summer 1	• 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, 2/5 + 4/5 = 6/5 = 1 1/5] **White Rose:** Autumn 4	
Comparing fractions			• compare and order unit fractions, and fractions with the same denominators • recognise and show, using diagrams, equivalent fractions with small denominators **White Rose:** Spring 3	• recognise and show, using diagrams, families of common equivalent fractions **White Rose:** Spring 3	• compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths **White Rose:** Autumn 4	• use common factors to simplify fractions; use common multiples to express fractions in the same denomination • compare and order fractions, including fractions > 1 **White Rose:** Autumn 3

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Finding fractions of quantities			• recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators **White Rose:** Spring 3, Summer 1	*Fractions of quantities are taught in Year 3 and Year 5 in White Rose; the Year 4 objective is placed in Year 5.*	• 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 *[NC Year 4 objective]* **White Rose:** Spring 2	
Fraction calculations		• write simple fractions for example, 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 **White Rose:** Summer 1	• add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7] **White Rose:** Summer 1	• add and subtract fractions with the same denominator • add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers *[RtP 4F-3]* **White Rose:** Spring 3	• 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 **White Rose:** Autumn 4, Spring 2	• add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 1/4 × 1/2 = 1/8] • divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6] **White Rose:** Autumn 3, Autumn 4

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Decimals as fractional amounts				• recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to 1/4, 1/2 and 3/4 • find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths **White Rose:** Spring 4, Summer 1	• read and write decimal numbers as fractions [for example, 0.71 = 71/100] **White Rose:** Spring 3	• associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] • identify the value of each digit in numbers given to three decimal places **White Rose:** Spring 3, Spring 4
Ordering decimals				• 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 **White Rose:** Spring 4, Summer 1	• 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 **White Rose:** Spring 3, Summer 3	

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Calculating with decimals					• add and subtract decimals, including a mix of whole numbers and decimals, decimals with different numbers of decimal places, and complements of 1 *[NC guidance]* **White Rose:** Summer 3	• 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 **White Rose:** Spring 3
Percentages					• 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 **White Rose:** Spring 3	• solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison **White Rose:** Spring 1, Spring 4

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Fraction problems			• solve problems using all fraction knowledge **White Rose:** Spring 3, Summer 1	• solve simple measure and money problems involving fractions and decimals to two decimal places **White Rose:** Spring 3, Spring 4, Summer 1	• solve problems involving number up to three decimal places • solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25 **White Rose:** Spring 3, Summer 3	• solve problems which require answers to be rounded to specified degrees of accuracy • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts **White Rose:** Spring 3, Spring 4
Ratio & Proportion						• 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 similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples **White Rose:** Spring 1

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Algebra						• 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 **White Rose:** Spring 2

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Measures	• compare, describe and solve practical problems for: lengths and heights; mass/weight; capacity and volume; time • measure and begin to record: lengths and heights; mass/weight; capacity and volume; time (hours, minutes, seconds) **White Rose:** Spring 4, Spring 5, Summer 6	• 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 = **White Rose:** Spring 3, Spring 4	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **White Rose:** Spring 2, Spring 4	• convert between different units of measure [for example, kilometre to metre] • estimate, compare and calculate different measures **White Rose:** Spring 2, Summer 3	• convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints • estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water] • use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling **White Rose:** Spring 4, Summer 5, Summer 6	• 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 **White Rose:** Autumn 5

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Mensurement			• measure the perimeter of simple 2-D shapes **White Rose:** Spring 2	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares **White Rose:** Autumn 3, Spring 2	• 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 standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes **White Rose:** Spring 4	• recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles • 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] **White Rose:** Spring 5

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Money	• recognise and know the value of different denominations of coins and notes **White Rose:** Summer 5	• 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 • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change **White Rose:** Spring 1	• add and subtract amounts of money to give change, using both £ and p in practical contexts **White Rose:** Summer 2	• estimate, compare and calculate different measures, including money in pounds and pence **White Rose:** Summer 2	• use all four operations to solve problems involving measure [for example, money] using decimal notation, including scaling **White Rose:** Summer 3	

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Time	• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and 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 **White Rose:** Summer 6	• 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 hours in a day **White Rose:** Summer 2	• tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks • estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon 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 or tasks] **White Rose:** Summer 3	• convert between different units of measure [for example, hour to minute] • 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 **White Rose:** Summer 3	• solve problems involving converting between units of time **White Rose:** Summer 5	*Converting units of time is part of the Year 6 measures objective (see Measures). White Rose teaches time conversions in Year 5; the Year 6 block concentrates on metric units.*

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Shape vocabulary	• recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] • recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] **White Rose:** Autumn 3	• use vocabulary precisely, such as sides, edges, vertices and faces *[NC guidance]* **White Rose:** Autumn 3	• identify horizontal and vertical lines and pairs of perpendicular and parallel lines **White Rose:** Summer 4			• illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius **White Rose:** Summer 1
Properties of 2-D shape		• identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line • compare and sort common 2-D shapes and everyday objects **White Rose:** Autumn 3	• draw 2-D shapes **White Rose:** Summer 4	• 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:** Summer 4	• 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 **White Rose:** Summer 1	• draw 2-D shapes using given dimensions and angles • compare and classify geometric shapes based on their properties and sizes **White Rose:** Summer 1

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Properties of 3-D shape		• identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • 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 3-D shapes and everyday objects **White Rose:** Autumn 3	• make 3-D shapes using modelling materials • recognise 3-D shapes in different orientations and describe them **White Rose:** Summer 4		• identify 3-D shapes, including cubes and other cuboids, from 2-D representations **White Rose:** Summer 1	• recognise, describe and build simple 3-D shapes, including making nets **White Rose:** Summer 1
Angles			• 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 **White Rose:** Summer 4	• identify acute and obtuse angles and compare and order angles up to two right angles by size **White Rose:** Summer 4	• 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 1/2 a turn (total 180°); other multiples of 90° **White Rose:** Summer 1	• 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 **White Rose:** Summer 1

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Position & Direction	• describe position, direction and movement, including whole, half, quarter and three-quarter turns **White Rose:** Summer 3	• 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) **White Rose:** Summer 4		• 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 **White Rose:** Summer 6	• 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 **White Rose:** Summer 2	• 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 **White Rose:** Summer 2
Interpreting data		• interpret and construct simple pictograms, tally charts, block diagrams and simple tables **White Rose:** Summer 3	• interpret and present data using bar charts, pictograms and tables **White Rose:** Summer 5	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs **White Rose:** Summer 5	• complete, read and interpret information in tables, including timetables **White Rose:** Spring 5	• interpret and construct pie charts and line graphs • calculate and interpret the mean as an average **White Rose:** Spring 6
Extract info from data		• ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • ask and answer questions about totalling and comparing categorical data **White Rose:** Summer 3	• 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 **White Rose:** Summer 5	• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs **White Rose:** Summer 5	• solve comparison, sum and difference problems using information presented in a line graph **White Rose:** Spring 5	• use pie charts and line graphs to solve problems **White Rose:** Spring 6