

Long Term Plan 2021/22 – Maths

The Ponfracr Academies Trust primaries follow the White Rose Maths scheme of work, to access their schemes of learning for individual year groups and mixed aged groups please visit <https://whiterosemaths.com/resources/primary-resources/>

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	Topic: All About me People Who Help Us	Topic: Light and Dark Celebrations	Topic: Winter Wonderland	Topic: Living things	Topic: Traditional Tales	Topic: Seaside
	Books: Zog, Zog & the Flying Doctors, Room on the Broom	Books: Rama & Sita, The Gunpowder Plot, Owl Babies, Kipper's Birthday, The First Christmas, The Nativity Story	Books: Percy the Park Keeper: One Snowy Night, Lost & Found	Books: What the Ladybird Heard, I Don't Want to be a Frog, We're Going on an Egg Hunt	Books: Jack & the Beanstalk, Jasper's Beanstalk, The Three Little Pigs, The Three Little Wolves & the Big Bad Pig, The Three Billy Goats Gruff, The Troll	Books: What the Ladybird Heard at the Seaside, The Lighthouse Keeper's Lunch, The Rainbow Fish, Commotion in the Ocean
EYFS	Getting to Know You	It's Me 1, 2, 3!	Alive in 5!	Building 9 and 10	To 20 and Beyond	Find My Pattern Doubling
	Just Like Me! Match Sort Compare amounts Compare size, mass and capacity Exploring pattern	Introduce 1 and 0 Representing 1,2 3 Comparing 1,2,3 Introduce 2 Composition of 1,2,3 Introduce 3 Circles and Triangles Spatial Awareness Light and Dark Introduce 4 Introduce 5 1 more/ 1 less Comparing Shapes Night and Day Time	Introducing Zero Comparing numbers to 5 Composition of 4 and 5 Making Pairs Compare Mass Compare Capacity Growing 6, 7, 8 6 Making Pairs Combining 2 Groups 7 Making Pairs Combining 2 Groups 8 Making Pairs Combining 2 Groups Length, Height and Time	Comparing numbers to 9 Bonds to 9 10 Comparing numbers to 10 Bonds to 10 3D Shape and pattern Consolidation	Number Patterns to 20 Matching Picture to Numeral Estimating Missing Numbers Ordering Numbers to 20 Which Holds the Most? Matching Shapes Matching Models First, Then, Now Taking Away Counting On Adding 1 More Adding 2 More Taking Away 1 Taking Away 2	On the Move

				Adding Unknown Taking Away Unknown Making New Shapes	
--	--	--	--	--	--

Year 1	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	Topic: Modern Britain	Topic: Healthy Bodies Healthy Minds	Topic: The World Beyond Us	Topic: Technology In Action	Topic: Culture	Topic: The World Around Us
	Book: But Why Can't I?	Book: The Tiger Who Came to Tea	Book: The Gruffalo	Book: Rosie Revere Engineer	Book: The Hunter	Book: Rainforest Adventure
	Number: Place Value (within 10)		Number: Addition & Subtraction (within 20)		Number: Multiplication & Division	
	Count to <u>10</u> , forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to <u>10</u> in numerals Given a number, identify one more and one less 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		Represent and use number bonds and related subtraction facts within 20 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs 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 $7 = \square - 9$		Count in multiples of 2s, 5s and 10s 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.	
	Number: Addition & Subtraction (within 10)		Number: Place Value (within 50)		Number: Fractions	
Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs Represent and use number bonds and related subtraction facts within 10 Add and subtract one-digit and two-digit numbers to 10, including zero		Count to <u>50</u> , forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to <u>50</u> in numerals Given a number, identify one more and one less Identify and represent numbers using objects and pictorial representations including the		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. Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]		
				Geometry: Position & Direction		

Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems	number line, and use the language of: equal to, more than, less than (fewer), most, least Count in multiples of 2s, 5s and 10s	Describe position, direction and movement, including whole, half, quarter and three-quarter turns
Geometry: Shape	Measurement: Length & Height	Number: Place Value (within 100)
Recognise and name common 2-D shapes, including for example, rectangles (including squares), circles and triangles Recognise and name common 3-D shapes, including for example, cuboids (including cubes), pyramids and spheres	Measure and begin to record lengths and heights Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]	Count to <u>100</u> , forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to <u>100</u> in numerals Given a number, identify one more and one less 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
Number: Place Value (within 20)	Measurement: Weight & Volume	
<ul style="list-style-type: none"> Count to <u>20</u>, forwards and backwards, beginning with 0 or 1, or from any given number Count, read and write numbers to <u>20</u> in numerals Given a number, identify one more and one less 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 	<ul style="list-style-type: none"> Measure and begin to record mass/weight, capacity and volume Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] 	Measurement: Money
		Measurement: Time
		<ul style="list-style-type: none"> 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 time, dates, including days of the week, weeks, months and years Compare, describe and solve practical problems for: time (for example, quicker, slower, earlier, later) Measure and begin to record time (hours, minutes, seconds)

	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 2	Topic: Modern Britain	Topic: Healthy Bodies Healthy Minds	Topic: The World Beyond Us	Topic: Technology In Action	Topic: Culture	Topic: The World Around Us
	Book: But Why Can't I?	Book: The Tiger Who Came to Tea	Book: The Gruffalo	Book: Rosie Revere Engineer	Book: The Hunter	Book: Rainforest Adventure
	Number: Place Value		Number: Multiplication & Division		Geometry: Position & Direction	
	<ul style="list-style-type: none"> Read and write numbers to at least 100 in numerals and in words Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs Use place value and number facts to solve problems. Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward 		<ul style="list-style-type: none"> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 		<ul style="list-style-type: none"> 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) Order and arrange combinations of mathematical objects in patterns and sequences 	
	Number: Addition & Subtraction				Problem solving & Efficient Methods	
					See White Rose Problems https://whiterosemaths.com/resources/classroom-resources/problems/page/3/	
			Statistics		Measurement: Time	

Year 2	<ul style="list-style-type: none"> Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 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. 	<ul style="list-style-type: none"> 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 Ask and answer questions about totalling and comparing categorical data 	<ul style="list-style-type: none"> 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 Compare and sequence intervals of time
	<ul style="list-style-type: none"> 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. 	Geometry: Properties of Shape	Measurement: Mass, Capacity & Temperature
	Measurement: Money	<ul style="list-style-type: none"> Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line 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 2-D and 3-D shapes and everyday objects. 	<ul style="list-style-type: none"> 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 =
	<ul style="list-style-type: none"> 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 	Number: Fractions	Investigations
Number: Multiplication & Division	<ul style="list-style-type: none"> Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ 	See White Rose Problems https://whiterosemaths.com/resources/classroom-resources/problems/page/3/	

	<ul style="list-style-type: none"> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), 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 contexts Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 	Measurement: Length & Height	<ul style="list-style-type: none"> 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 =

Year 3	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	Healthy Bodies Healthy Minds	Technology In Action	The World Beyond Us	Culture	Healthy Bodies Healthy Minds	The World Around Us
	George's Marvellous Medicine	Operation Gadgetman	Homework on Pluto	The Chocolate Tree	The Edible Pyramid	The Explorer
	Number: Place Value		Number: Multiplication & Division		Number: Fractions	
	<ul style="list-style-type: none"> Identify, represent and estimate numbers using different representations Find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words 		<ul style="list-style-type: none"> Recall and use 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 times one-digit numbers, using mental and progressing to formal written methods Solve problems, including missing number problems, involving multiplication and 		<ul style="list-style-type: none"> 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, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] solve problems that involve all of the above	
					Measurement: Time	

Year 3	<ul style="list-style-type: none"> Solve number problems and practical problems involving these ideas Count from 0 in multiples of 4, 8, 50 and 100 	<p>division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p>	<ul style="list-style-type: none"> 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] 	
	Number: Addition & Subtraction	Measurement: Money		
	<ul style="list-style-type: none"> 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 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 	<ul style="list-style-type: none"> Add and subtract amounts of money to give change, using both £ and p in practical contexts 		
		Statistics		
	Number: Multiplication & Division	Measurement: Length and Perimeter		Geometry: Properties of Shape
		<ul style="list-style-type: none"> 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 		
<ul style="list-style-type: none"> Count from 0 in multiples of 4, 8, 50 and 100 Recall and use 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 times one-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 	<ul style="list-style-type: none"> Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) Measure the perimeter of simple 2-D shapes 	<ul style="list-style-type: none"> 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 Draw 2-D shapes and make 3-D shapes using modelling materials Recognise 3-D shapes in different orientations and describe them 		
	Number: Fractions		Measurement: Mass & Capacity	
	<ul style="list-style-type: none"> 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 Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators Solve problems that involve all of the above 		<ul style="list-style-type: none"> Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) 	

Year 4	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	Healthy Bodies Healthy Minds	Technology In Action	The World Beyond Us	Culture	Healthy Bodies Healthy Minds	The World Around Us
	George's Marvellous Medicine	Operation Gadgetman	Homework on Pluto	The Chocolate Tree	The Edible Pyramid	The Explorer
	Number: Place Value		Number: Multiplication & Division		Number: Decimals	
	<ul style="list-style-type: none"> Count in multiples of 6, 7, 9, 25 and 1000 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 Identify, represent and estimate numbers using different representations 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 Count backwards through zero to include negative numbers 		<ul style="list-style-type: none"> Recall multiplication and division facts for multiplication tables up to 12×12 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 		<ul style="list-style-type: none"> Compare numbers with the same number of decimal places up to two decimal places Round decimals with one decimal place to the nearest whole number Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Understand 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 	
	Number: Addition & Subtraction		Measurement: Area		Measurement: Money	
<ul style="list-style-type: none"> Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 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 		<ul style="list-style-type: none"> Find the area of rectilinear shapes by counting squares 		<ul style="list-style-type: none"> estimate, compare and calculate different measures, including money in pounds and pence solve simple measure and money problems involving fractions and decimals to two decimal places 		
				Measurement: Time		
				<ul style="list-style-type: none"> 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 Convert between different units of measure [for example, hour to minute] 		

Year 4	Measurement: Length & Perimeter	Number: Fractions	Statistics	
	<ul style="list-style-type: none"> measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure [for example, kilometre to metre; hour to minute] 		<ul style="list-style-type: none"> Recognise and write decimal equivalents of any number of tenths or hundredths 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 	<ul style="list-style-type: none"> Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs
	Number: Multiplication & Division		Geometry: Properties of Shape	
	<ul style="list-style-type: none"> Recall multiplication and division facts for multiplication tables up to 12×12 Count in multiples of 6, 7, 9, 25 and 1000 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 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 		<ul style="list-style-type: none"> 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] 	<ul style="list-style-type: none"> Identify 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 <p>Complete a simple symmetric figure with respect to a specific line of symmetry</p>
	Geometry: Position & Direction			
			<ul style="list-style-type: none"> Describe positions on a 2-D grid as coordinates in the first quadrant Plot specified points and draw sides to complete a given polygon Describe movements between positions as translations of a given unit to the left/right and up/down 	

Year 5	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	The World Beyond Us		Culture		Healthy Bodies Healthy Minds	
	Cosmic		The Boy at the Back of the Class		Cogheart	
	Number: Place Value		Number: Multiplication & Division		Number: Decimals	
	<ul style="list-style-type: none"> Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero 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 Read Roman numerals to 1000 (M) and recognise years written in Roman numerals 		<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 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 Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 		<ul style="list-style-type: none"> Recognise and write decimal equivalents of any number of tenths and hundredths Find the effect of dividing a one- or two-digit number by 10 or 100, identifying the value of the digits in the answers as ones, tenths and hundredths Solve simple measures and money problems involving fractions and decimals to two decimal places Convert between different units of measurement (for example, kilometre to meter) 	
	Number: Addition & Subtraction		Number: Fractions		Geometry: Properties of Shape	
	<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 <p>Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>		<ul style="list-style-type: none"> 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 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] Add and subtract fractions with the same denominator and denominators that are multiples of the same number 		<ul style="list-style-type: none"> Identify 3-D shapes, including cubes and other cuboids, from 2-D 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 ($^{\circ}$) Identify angles at a point and one whole turn (total 360°), angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°) other multiples of 90° 	

Year 5	Statistics	Number: Decimals & Percentages	Geometry: Position & Direction
	<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"> 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 $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 	<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
	Number: Multiplication & Division		Measurement: Converting Units
	<ul style="list-style-type: none"> Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals 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"> 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 Solve problems involving converting between units of time
	Measurement: Perimeter & Area		Measurement: Volume
<ul style="list-style-type: none"> 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 (cm²) and square metres (m²) and estimate the area of irregular shapes 		<ul style="list-style-type: none"> Estimate volume [for example, using 1 cm³ 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 	

Year 6	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
	The World Beyond Us		Culture		Healthy Bodies Healthy Minds	
	Cosmic		The Boy at the Back of the Class		Cogheart	
	Number: Place Value		Number: Decimals		Geometry: Properties of Shape	
	<ul style="list-style-type: none"> 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 		<ul style="list-style-type: none"> Identify the value of each digit in numbers given to three decimal places and 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 		<ul style="list-style-type: none"> Draw 2-D shapes using given dimensions and angles Compare and classify geometric shapes based on their properties and sizes and 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 	
	Number: Addition, Subtraction, Multiplication & Division		Number: Percentages		Statistics	
	<ul style="list-style-type: none"> Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 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 Perform mental calculations, including with mixed operations and large numbers 		<ul style="list-style-type: none"> Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 		<ul style="list-style-type: none"> Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius Interpret and construct pie charts and line graphs and use these to solve problems Calculate and interpret the mean as an average 	
		Number: Algebra		Investigations		
		<ul style="list-style-type: none"> 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 		See White Rose Problems https://whiterosemaths.com/resources/classroom-resources/problems/page/3/		

Year 6	Number: Fractions	Measurement: Converting Units	Y6 – Y7 Transition / Bridging Unit	
	<ul style="list-style-type: none"> Use common factors to simplify fractions; use common multiples to express fractions in the same denomination Compare and order fractions, including fractions > 1 Generate and describe linear number sequences (with fractions) 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, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$] Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts 	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Stretch and challenge opportunities Problem solving Investigations Bringing maths to life Consolidation of key areas <p>In collaboration with the heads of maths at TKS & CHS, the primary maths leads will plan a bridging unit to compliment the transition to Year 7.</p>	
		Measurement: Perimeter, Area & Volume		
		<ul style="list-style-type: none"> 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]. 		
Geometry: Position & Direction	Number: Ratio			
	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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 		