

Autumn Term Breakdown: 13 weeks

Number- 9 weeks

Measurement- 2 weeks

Geometry- 1 week

Statistics- 1 week

<u>Year 4</u>	<u>Year 5 Core Objectives</u>	<u>Challenge Objectives</u>
<p>Number and Place Value</p>	<p>Number and Place Value</p> <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 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. 	
<p>Addition and Subtraction</p>	<ul style="list-style-type: none"> • Addition and Subtraction 	
	<ul style="list-style-type: none"> • add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar 	

	<p>addition and subtraction)</p> <ul style="list-style-type: none"> • add and subtract numbers mentally with increasingly large numbers • 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. 	
Measurement	<ul style="list-style-type: none"> • Measurement 	
	<ul style="list-style-type: none"> • convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • solve problems involving converting between units of time 	
Fractions (including decimals and percentages)	Fractions (including decimals and percentages)	
	<ul style="list-style-type: none"> • compare and order fractions whose denominators are all multiples of the same number 	

	<ul style="list-style-type: none"> • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundreds • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as mixed (for example $\frac{2}{5} + \frac{4}{5} = 1 \frac{1}{5}$) • 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. 	
<p>Multiplication and Division</p>	<p>Multiplication and Division</p>	
	<ul style="list-style-type: none"> • identify multiples and factors, including finding all factor pairs of a number and common factors of two numbers • multiply numbers up to 4 digits by a one- or two-digit number using an efficient 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 efficient written method of short division and 	

	<p>interpret remainders appropriately for the context</p> <ul style="list-style-type: none"> • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 	
Statistics	<ul style="list-style-type: none"> ▪ Statistics 	
	<ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in line graphs • complete, read and interpret information in tables, including timetables. 	
Geometry - Properties of shapes	<p>Geometry - Properties of shapes</p> <ul style="list-style-type: none"> • identify 3-D shapes, including cubes and cuboids, from 2-D representations • know angles are measured in degrees; estimate and measure them and draw a given angle, writing its size in degrees ($^{\circ}$) <p>Identify:</p> <ul style="list-style-type: none"> • 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°) 	

	<ul style="list-style-type: none"> • other multiples of 90° 	
<i>Geometry - Position and Direction</i>	<i>Geometry - Position and Direction</i>	
	<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. 	
<i>Statistics</i>	<i>Statistics</i>	
	<ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in line graphs • complete, read and interpret information in tables, including timetables. 	

Spring Term Breakdown: 11. 5 weeks

Number-
Measurement-
Geometry-
Statistics -

<u>Year 4 Support Objectives</u>	<u>Year 5 Core Objectives</u>	<u>Challenge Objectives</u>
	<p style="text-align: center;">Number and Place Value</p> <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 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. 	
	<p style="text-align: center;">Addition and Subtraction</p>	
	<ul style="list-style-type: none"> • add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar 	

	<p>addition and subtraction)</p> <ul style="list-style-type: none"> • add and subtract numbers mentally with increasingly large numbers • 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. 	
	<p>Multiplication and Division</p>	
	<ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • multiply numbers up to 4 digits by a one- or two-digit number using an efficient 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 efficient written method of short division and 	

	<p>interpret remainders appropriately for the context</p> <ul style="list-style-type: none"> • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • 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 • 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. 	
	<p>Fractions</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 hundreds 	

- recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as mixed (for example $2/5 + 4/5 = 1 \frac{1}{5}$)
- 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 (e.g. $0.71 = \frac{71}{100}$)
- 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
- 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 hundred, 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 with a

	denominator of a multiple of 10 or 25.	
	Measurement	
	<ul style="list-style-type: none"> • convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) • understand and use basic equivalences between metric units and common imperial units such as inches, pounds and pints • measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes • solve problems involving converting between units of time 	
	Geometry- Properties of Shapes	
	<ul style="list-style-type: none"> • identify 3-D shapes, including cubes and cuboids, from 2-D representations • know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles ▪ identify: <ul style="list-style-type: none"> • multiples of 90° • angles at a point on a straight 	

	<p>line and $\frac{1}{2}$ a turn (total 180°)</p> <ul style="list-style-type: none"> • angles at a point and one whole turn (total 360°) • reflex angles, and • compare different angles <ul style="list-style-type: none"> ▪ draw given angles, and measure them in degrees ^(o) ▪ use the properties of a rectangles to deduce related facts and find missing lengths and angles <ul style="list-style-type: none"> • distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 	
	<p>Geometry- Position and Direction</p>	
	<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. 	
	<p>Statistics</p>	
	<ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in line graphs • complete, read and interpret information in tables, including timetables. 	

<p>Summer Term breakdown: 10.5 weeks Number- Measurement- Geometry- Statistics -</p>		
<u>Year 4 Support Objectives</u>	<u>Year 5 Core Objectives</u>	<u>Challenge Objectives</u>
	<p><i>Number and Place Value</i></p>	
	<ul style="list-style-type: none"> • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • 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 	
	<p><i>Addition and Subtraction</i></p>	
	<ul style="list-style-type: none"> • add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction) • add and subtract numbers mentally with increasingly large numbers • 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.	
	Multiplication and Division	
	<ul style="list-style-type: none"> • 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"> • multiply numbers up to 4 digits by a one- or two-digit number using an efficient 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 efficient 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 • 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 	

	<p>knowledge of factors and multiples, squares and cubes</p> <ul style="list-style-type: none"> • 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. 	
	<p>Fractions</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 hundreds • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as mixed (for example $2/5 + 4/5 = 1 \frac{1}{5}$) • 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. 	

	<ul style="list-style-type: none"> • read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$) • 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 • 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 hundred, and as a decimal <ul style="list-style-type: none"> ▪ 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 with a denominator of a multiple of 10 or 25 	
	<p>Measurement</p>	
	<ul style="list-style-type: none"> • convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre) • understand and use basic equivalences between metric units and common imperial units such as inches, pounds and pints 	

	<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 squares and rectangles including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes ▪ solve problems involving converting between units of time 	
	<p><i>Geometry- Properties of Shapes</i></p>	
	<ul style="list-style-type: none"> • know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles ▪ identify: <ul style="list-style-type: none"> • multiples of 90° • angles at a point on a straight line and ½ a turn (total 180°) • angles at a point and one whole turn (total 360°) • reflex angles, and • compare different angles ▪ draw given angles, and measure them in degrees ^(o) ▪ use the properties of a 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.	
	<i>Geometry- Position and Direction</i>	
	N/A	
	<i>Statistics</i>	
	<ul style="list-style-type: none"> complete, read and interpret information in tables, including timetables. 	

	Autumn	Spring	Summer	Total
Number	7.5 weeks	8.5 weeks	7 weeks	25 weeks
Measurement	3.5 weeks	2 weeks	2.5 weeks	8 weeks
Geometry	2 weeks	1 week	1 week	4 weeks