St Gregory's Catholic Primary School – Mathematics Whole School Yearly Overview

Year Group	Autumn	Spring	Summer
Year 1	**Topic –** **Number: Place Value (within 10)** **Number: Addition and subtraction (within 10)** **Geometry: Shape** **Number: Place Value (within 20)**	**Topic –** **Number: Addition and subtraction (within 20)** **Number: Place Value (within 50 – multiples of 2, 5 and 10 to be included)** **Measurement: Length and Height** **Measurement: Weight and Volume**	**Topic –** **Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)** **Number: Place Value (within 50 – multiples of 2, 5 and 10 to be included)** **Number: Fractions** **Geometry: Position and direction** **Number: Place Value (within 100)** **Measurement: Money** **Time**
	Objectives: **Place Value** • Count to **ten**, forwards and backwards, beginning with 0 or 1, or from any given number. • Count, read and write numbers to **10** in numerals and words. • Given a number, identify one more or 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. **Addition and Subtraction** • Represent and use number bonds and related subtraction facts **within 10** • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	**Objectives:** **Addition and Subtraction** • 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= ☐ – 9. **Place Value** • Count to **50** forwards and backwards, beginning with 0 or 1, or from any number. • Count, read and write numbers to **50** in numerals. • Given a number, identify one more or one less.	**Objectives:** **Multiplication and Division** • Count in multiples of twos, fives and tens. • 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. **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. • **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

	• Add and subtract one-digit numbers **to 10**, including zero. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems. **Shape** • 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.) **Place Value** • Count to **twenty**, forwards and backwards, beginning with 0 or 1, from any given number. • Count, read and write numbers to **20** in numerals and words. Given a number, identify one more or 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.	• 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. • **Count in multiples of twos, fives** and tens. **Length and Height** • 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) **Weight and Volume** • 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]	[for example, full/empty, more than, less than, **half, half full, quarter**]. **Position and direction** • Describe position, direction and movement, including whole, half, quarter and three-quarter turns. **Place Value** • 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. • 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, most, least. **Money** • Recognise and know the value of different denominations of coins and notes. **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. • Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]. • Measure and begin to record time (hours, minutes, seconds).

Year 2	**Topic –** **Number: Place value** **Number: Addition and Subtraction** **Measurement: Money** **Number: Multiplication and Division**	**Topic –** **Number: Multiplication and Division** **Statistics** **Geometry: Properties of Shape** **Number: Fractions** **Measurement: length and height** **Consolidation**	**Topic –** **Position and direction** **Problem solving and efficient methods** **Measurement: Time** **Measurement: Mass, Capacity and Temperature** **Investigations**
	Objectives: **Number – Place Value** • 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. **Number – Addition and Subtraction** • 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 the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	**Objectives:** **Multiplication and Division** • Recall and use multiplication and division facts for the 2, 5 and 10 times 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 the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. **Statistics** • 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. **Geometry- properties of shape** • Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.	**Objectives:** **Position and Direction** • 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. **Problem solving and Efficient methods** **Measurement: 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. • Compare and sequence intervals of time **Measurement: Mass, Capacity and Temperature** • 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 =.

	• 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. **Measurement: Money** • 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. **Multiplication and Division** • Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. • Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	• 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 **Number – fractions** • Recognise, find, name and write fractions **1/3**, **1/4**, **2/4** and **¾** of a length, shape, and set of objects or quantity. • Write simple fractions for example, **½** of 6 = 3 and recognise the equivalence of **2/4** and **½** **Measurement: length and height** • 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 =.	**Investigations**

Year 3	**Topic –** **Number – Place Value** **Number – Addition and Subtraction** **Number – Multiplication and Division** **Consolidation**	**Topic –** **Number – Multiplication and Division** **Measurement: Money** **Statistics** **Measurement: length and perimeter** **Number - Fractions** **Consolidation**	**Topic –** **Number – fractions** **Measurement: Time** **Geometry – Properties of Shapes** **Measurement: Mass and Capacity** **Consolidation**
	Objectives: **Number – Place Value** • 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. • Solve number problems and practical problems involving these ideas. • **Count from 0 in multiples of** 4, 8, **50 and 100.** **Number – Addition and Subtraction** • 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.	**Objectives:** **Number – multiplication and division** • 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 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** objectives. **Measurement – money** • Add and subtract amounts of money to give change, using both £ and p in practical contexts. **Statistics** • 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. **Measurement – length and perimeter** • **Measure, compare, add and subtract: lengths (m/cm/mm);** mass (kg/g); volume/capacity (l/ml). • Measure the perimeter of simple 2D shapes	**Objectives:** **Number – fractions** • 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. **Measurement – time** • 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]. **Geometry – properties of shape** • Recognise angles as a property of shape or a description of a turn.

	Number – Multiplication and Division • **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 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 objectives.	**Number – fractions** • 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.	• 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. **Measurement – mass and capacity** • **Measure, compare, add and subtract:** lengths (m/cm/mm); **mass (kg/g); volume/capacity (l/ml)**
Year 4	**Topic –** **Number – Place Value** **Number- Addition and Subtraction** **Measurement - Length and Perimeter** **Number- Multiplication and Division** **Consolidation**	**Topic –** **Number- Multiplication and Division** **Measurement - Area** **Fractions** **Decimals** **Consolidation**	**Topic –** **Decimals** **Measurement - Money** **Time** **Statistics** **Geometry – Properties of Shape** **Geometry – Position and Direction** **Consolidation**
	Objectives: **Number – Place Value** • **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.	**Objectives:** **Number – multiplication and division** • Recall and use 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 commutatively in mental calculations.	**Objectives:** **Decimals** • 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 **1/4**, **½** and **¾.** • Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.

	• 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. • 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. **Number- Addition and Subtraction** • 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. **Measurement: Length and Perimeter** • 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]. **Number – Multiplication and Division** • Recall and use 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**,	• 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. **Measurement – Area** • Find the area of rectilinear shapes by counting squares. **Fractions** • Recognise and show, using diagrams, families of common equivalent fractions. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. • 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. • Add and subtract fractions with the same denominator. **Decimals** • 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 or 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].	**Measurement- Money** • 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. **Time** • **Convert between different units of measure [for example,** kilometre to metre; **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. **Statistics** • 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. **Geometry: Properties of shape** • 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. • Complete a simple symmetric figure with respect to a specific line of symmetry. **Geometry Position and Direction** • Describe positions on a 2-D grid as coordinates in the first quadrant. • Plot specified points and draw sides to complete a given polygon.

	integer scaling problems and harder correspondence problems such as n objects are connected to m objects.		• Describe movements between positions as translations of a given unit to the left/ right and up/ down.
Year 5	**Topic –** **Number – Place Value** **Number – Addition and Subtraction** **Statistics** **Number – Multiplication and Division** **Perimeter and Area** **Consolidation**	**Topic –** **Number – Multiplication and Division** **Number – Fractions** **Number – Decimals & Percentages** **Consolidation**	**Topic –** **Number – Decimals** **Geometry Properties of Shapes** **Geometry Position and Direction** **Measurement Converting Units** **Measures Volume** **Consolidation**
	Objectives: **Number – Place Value** • Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. • Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. • Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000. • Solve number problems and practical problems that involve all of the above. • Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. **Number- Addition and Subtraction** • 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).	**Objectives:** **Number – Multiplication and Division** • Multiply and divide numbers mentally drawing upon known facts. • Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. • Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign. **Number: Fractions** • Compare and order fractions whose denominators are multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as	**Objectives:** **Number: Decimals** • Solve problems involving number up to three decimal places. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. **Geometry- Properties of Shapes and Angles** • Identify 3D shapes, including cubes and other cuboids, from 2D representations. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measure them in degrees (^{o}) • Identify: angles at a point and one whole turn (total 360^{o}), angles at a point on a straight line and ½ a turn (total 180^{o}) other multiples of 90^{o} **Geometry - position and direction**

	• 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. **Statistics** • Solve comparison, sum and difference problems using information presented in a line graph. • Complete, read and interpret information in tables including timetables. **Number – multiplication and division** • Multiply and divide numbers mentally drawing upon known facts. • Multiply and divide whole numbers by 10, 100 and 1000. • Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • Recognise and use square numbers and cube numbers and the notation for squared (^{2}) and cubed (^{3}). • Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. **Perimeter and Area** • Measure and calculate the perimeter of composite rectilinear shapes in cm and m. • Calculate and compare the area of rectangles (including squares), and	a mixed number [for example **2/5** + **4/5** = **6/5** = 1 **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 [for example 0.71 = **71/100**]. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. **Number: Decimals and Percentages** • 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 **1/2**, **1/4**, **1/5**, **2/5**, **4/5** and those fractions with a denominator of a multiple of 10 or 25.	• 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. **Measurement- converting units** • Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml]. • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time. **Measures Volume** • Estimate volume [for example using 1cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]. • Use all four operations to solve problems involving measure.

	including using standard units, cm^2, m^2 estimate the area of irregular shapes.		
Year 6	**Topic –** **Number – Place Value** **Number – Addition, Subtraction, Multiplication and Division** **Fractions** **Geometry Position and Direction** **Consolidation**	**Topic –** **Number – Decimals** **Number Percentages** **Number – Algebra** **Measurement Converting units** **Measurement Perimeter, Area and Volume** **Number Ratio** **Consolidation**	**Topic –** **Geometry Properties of Shapes** **Problem Solving** **Statistics** **Investigations** **Consolidation**
	Objectives: **Number: Place Value** • 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. **Number- addition subtraction, multiplication and division** • Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. • Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. • Divide numbers up to 4 digits by a 2-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 2-digit number using the formal written method of	**Objectives:** **Number: Decimals** • Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places. • Multiply one-digit numbers with up to 2 decimal places by whole numbers. • Use written division methods in cases where the answer has up to 2 decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. **Number: Percentages** • 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. **Number: 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.	**Objectives:** **Geometry: Properties of Shapes** • 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. **Statistics** • 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 the mean as an average.

	short division, interpreting remainders according to the context. • Perform mental calculations, including with mixed operations and large numbers. • Identify common factors, common multiples and prime numbers. • Use their knowledge of the order of operations to carry out calculations involving the four operations. • Solve problems involving addition, subtraction, multiplication and division. • Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. **Fractions** • 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 denominations and mixed numbers, using the concept of equivalent fractions. • Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example **¼** x **½** = **1/8**]. • Divide proper fractions by whole numbers [for example **1/3** ÷ 2 = **1/6**]. • Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example **3/8**]. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	• Enumerate possibilities of combinations of two variables. **Measurement Converting Units** • 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 3dp. • Convert between miles and kilometres. **Measurement: Perimeter, Area and Volume** • 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 cm^3, m^3 and extending to other units (mm^3, km^3). **Number: Ratio** • 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.	

	Geometry Position and Direction • **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.**		