St. Elizabeth's Catholic Primary School

Maths Progression

Early Years	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place value - counting <u>Pre-school (3-4 year olds</u> -To quickly recognise up to 3 objects, without having to count them individually. (subitising) -To recite numbers past 5. -To say one number for each item in order: 1,2,3,4,5. -To know that the last number reached when counting a small set of objects tells you how many there are in total. (cardinal principle) <u>Reception</u> -To count objects, actions and sounds. -To subitise. -To count beyond 10.	**Place value - counting** -To count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. -To count numbers to 100 in numerals. -To count in multiples of 2, 5 and 10.	**Place value - counting** -To count in steps of 2, 3 and 5 from 0. -To count in steps of 10 from any number, forwards and backward.	**Place value - counting** -To count from 0 in multiples of 4, 8, 50 and 100. -To find 10 or 100 more or less than a given number.	**Place value - counting** -To count in multiples of 6, 7, 9, 25 and 1000. -To count backwards through zero to include negative numbers.	**Place value - counting** -To count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	**Place value - counting** -To consolidate knowledge, skills and understanding from previous year groups.
Place value – representing number <u>Pre-school (3-4 year olds</u> -To show 'finger numbers' up to 5. -To link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. -To experiment with own symbols and marks as well as numerals. <u>Reception</u> -To link the number symbol (numeral) with its cardinal number value.	**Place value – representing number** -To identify and represent numbers using objects and pictorial representations, including the number line. -To use the language of equal to, more than, less than (fewer), most, least. -To read and write numbers to 100 in numerals. -To read and write numbers from 1 to 20 in numerals and words.	**Place value – representing number** -To read and write numbers to at least 100 in numerals and words. -To identify, represent and estimate numbers using different representations, including the number line.	**Place value - representing number** -To continue to identify, represent and estimate numbers using different representations. -To read and write numbers up to 1000 in numerals and words.	**Place value – representing number** -To continue to identify, represent and estimate numbers using different representations. -To 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.	**Place value – representing number** -To read and write numbers to at least 1,000,000. -To read Roman numerals to 1000 (M) and recognise years written in Roman numerals.	**Place value – representing number** -To read and write numbers up to 10,000,000.
Place value – use and compare	**Place value – use and compare**	**Place value – use and compare**	**Place value – use and compare**	**Place value – use and compare**	**Place value – use and compare**	**Place value – use and compare**

Pre-school (3-4 year olds) -To compare quantities using language 'more than', 'fewer than'. Reception -To compare numbers. -To understand the 'one more than/ one less than' relationship between consecutive numbers.	-To identify 1 more and 1 less than a given number.	-To recognise the place value of each digit in a 2-digit number. (10s and 1s) -To compare and order numbers from 0 up to 100. -To use the =, <, > signs.	-To recognise the value of each digit in a 3-digit number. (100s, 10s and 1s) -To compare and order numbers up to 1000.	-To find 1000 more or less than a given number. -To recognise the place value of each digit in a 4-digit number. (1000s, 100s, 10s and 1s) -To order and compare numbers beyond 1000.	-To order and compare numbers up to 1,000,000. -To determine the value of each digit in numbers up to 1,000,000.	-To order and compare numbers up to 10,000,000. -To determine the value of each digit in numbers up to 10,000,000.
Place value – problems and rounding	**Place value – problems and rounding**	**Place value – problems and rounding** -To use place value and number facts to solve problems.	**Place value – problems and rounding** -To continue to solve number problems and practical problems.	**Place value – problems and rounding** -To round any number up to 100,000 to the nearest 10, 100 or 1000. -To solve number problems and practical problems involving rounding in positive numbers.	**Place value – problems and rounding** -To interpret negative numbers in context. -To count forwards and backward with positive and negative whole numbers, including through zero. -To round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 and 100,000. -To continue to solve number problems and practical problems using negative numbers and rounding positive numbers.	**Place value – problems and rounding** -To round any whole number to a required degree of accuracy. -To use negative numbers in context and calculate intervals across zero. -To solve number and practical problems involving rounding and calculating intervals across zero.
Addition and subtraction – recall, representing and using Reception -To explore the composition of numbers to 10. -To automatically recall number bonds for numbers 1-10.	**Addition and subtraction – recall, representing and using** -To read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. -To represent and use number bonds and related subtraction facts within 20.	**Addition and subtraction – recall, representing and using** -To recall and use addition and subtraction facts to 20 fluently. -To use known number bonds to 20 to find related facts up to 100. -To know and show that addition of 2 numbers can be done in any order (commutative).	**Addition and subtraction – recall, representing and using** -To estimate the answer to a calculation. -To continue to use inverse operation to check calculations.	**Addition and subtraction – recall, representing and using** -To continue to estimate the answer to a calculation. -To continue to use inverse operation to check calculations.	**Addition and subtraction – recall, representing and using** -To use rounding to check answers to calculations. -To determine, in the context of a problem, the level of accuracy required.	**Addition and subtraction – recall, representing and using** -To consolidate knowledge, skills and understanding from previous year groups.

		-To know that subtracting 1 number from another must be done in a specific order. -To recognise and use the inverse relationship between addition and subtraction to check calculations. - To recognise and use the inverse relationship between addition and subtraction to solve missing number problems.				
Addition and subtraction – calculations	**Addition and subtraction – calculations** -To add and subtract 1-digit and 2-digit numbers to 20 including zero.	**Addition and subtraction – calculations** -To add and subtract numbers using concrete objects, pictorial representations and mentally: ● a 2-digit number and ones ● a 2-digit number and tens ● two 2-digit numbers -To add three 1-digit numbers.	**Addition and subtraction – calculations** -To add and subtract numbers mentally including: ● a 3-digit number and ones ● a 3-digit number and tens ● a 3-digit number and hundreds. -To add and subtract numbers with up to 3-digits, using formal written methods of columnar addition and subtraction.	**Addition and subtraction – calculations** -To add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction when appropriate. -To decide whether a calculation requires a written method or can be done mentally.	**Addition and subtraction – calculations** -To add and subtract whole numbers with more than 4-digits including using formal written methods. -To add and subtract larger numbers mentally.	**Addition and subtraction – calculations** -To calculate mentally with larger numbers including mixed operations. -To use knowledge of the order of operations to carry out calculations involving addition, subtraction, multiplication and division.
Addition and subtraction – Solving problems -To solve real world mathematical problems with numbers up to 5.	**Addition and subtraction – Solving problems** -To solve 1-step problems that involve addition and subtraction, using concrete objects and pictorial representations. -To solve missing number problems using 1-digit numbers e.g. 7=__ -9	**Addition and subtraction – Solving problems** -To solve number problems that involve addition and subtraction using concrete objects, pictorial representations, written and mental methods. -To solve problems involving quantities and measures.	**Addition and subtraction – Solving problems** -To solve problems, including missing number problems using number facts and place value. -To solve more complex addition and subtraction problems using written methods.	**Addition and subtraction – Solving problems** -To solve 2-step addition and subtraction problems in contexts, deciding which operation and method to use. - To explain why an operation and method have been chosen when solving problems.	**Addition and subtraction – Solving problems** -To solve multi-step addition and subtraction problems in contexts, deciding which operation and method to use. - To explain why an operation and method have been chosen when solving problems.	**Addition and subtraction – Solving problems** To consolidate solving multi-step addition and subtraction problems in contexts, deciding which operation and method to use. - To explain why an operation and method have been chosen when solving problems.
	Multiplication and division– recall, representing and using	**Multiplication and division– recall, representing and using**	**Multiplication and division– recall, representing and using**	**Multiplication and division– recall, representing and using**	**Multiplication and division– recall, representing and using**	**Multiplication and division– recall, representing and using**

		-To recall and use multiplication and division facts for 2, 5 and 10 multiplication tables. -To identify odd and even number patterns when using the 2, 5 and 10 multiplication tables. -To know and show that multiplication of 2 numbers can be done in any order (commutative). -To know that division of one number by another cannot be done in any order.	-To recall and use multiplication and division facts for 3, 4 and 8 multiplication tables.	-To recall and use multiplication and division facts up to the 12 x 12 multiplication tables. -To use place value and known/derived facts to multiply and divide mentally. -To multiply and divide by 0 and 1. -To multiply 3 numbers together -To recognise and use factor pairs and commutativity in mental calculations.	-To identify multiples and factors, finding all factor pairs of a number. -To identify common factors of 2 numbers. -To know that a prime number will only divide by 1 and itself. -To identify the prime factors of a number. -To establish whether a number up to 100 is a prime number or a non-prime number (composite). -To record prime numbers up to 19. To use vocabulary associated with prime numbers and prime factors accurately. -To recognise and use square and cubed numbers (including the correct notations e.g. 6^2, 8^3)	-To consolidate knowledge of common factors, common multiples and prime numbers. -To continue to use estimation to check answers to calculations. -To determine, in the context of a problem, the level of accuracy required.
	Multiplication and division – calculations	**Multiplication and division – calculations** -To calculate mathematical statements for multiplication and division facts learned. -To write multiplication calculations using the ×, ÷ and = signs.	**Multiplication and division – calculations** - To calculate and write mathematical statements for multiplication tables learned. -To multiply 2-digit numbers by 1-digit numbers mentally. - To multiply 2-digit numbers by 1-digit numbers using formal written method.	**Multiplication and division – calculations** -To multiply 3-digit numbers and 2-digit numbers by a 1 –digit number using a formal written method.	**Multiplication and division – calculations** -To multiply up to 4-digit numbers by a 1 –digit or 2 digit number using a formal written method, including long multiplication for 2-digit numbers. -To multiply and divide numbers mentally drawing upon known facts. -To divide numbers up to 4 digits by 1 digit using the formal written method of short division. -To interpret remainders appropriately for the context. -To multiply and divide whole numbers and those	**Multiplication and division – calculations** -To multiply numbers up to 4-digits by a 2-digit whole number using the formal written method of long division and multiplication. -To divide numbers up to 4-digits by a 2-digit whole number using the formal written method of short and long division. -To interpret remainders as whole number remainders, fractions or by rounding as appropriate for the context of a division calculation. -To perform mental calculations, including with

					involving decimals by 10, 100 and 1000.	mixed operations and large numbers.
	Multiplication and division – solve problems -To solve 1-step problems involving multiplication and division using concrete objects, pictorial representation and arrays with teacher support.	**Multiplication and division – solve problems** -To solve problems involving multiplication and division, using apparatus, repeated addition, mental methods and known facts. -To explain the context or story of a multiplication or division problem.	**Multiplication and division – solve problems** -To use knowledge of multiplication, repeated addition and division to solve simple problems relating to missing number problems, correspondence and scaling.	**Multiplication and division – solve problems** -To use knowledge of multiplication, repeated addition and division to solve more complex problems relating to correspondence and scaling. -To break multiplication calculations into simpler parts to aid mental calculations. (distributive law)	**Multiplication and division – solve problems** -To solve problems involving multiplication and division using knowledge of factors, multiples, squares and cubes. - To solve problems involving multiplication and division involving scaling by simple fractions. - To solve problems involving multiplication and division involving money, costs and rates.	**Multiplication and division – solve problems** -To consolidate knowledge of solving problems involving addition subtraction, multiplication and division.
	Multiplication and division – combined operations	**Multiplication and division – combined operations**	**Multiplication and division – combined operations**	**Multiplication and division – combined operations**	**Multiplication and division – combined operations** -To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the = sign.	**Multiplication and division – combined operations** -To use knowledge of the order of operations to carry out calculations involving the 4 operations. (BODMAS)
	Fractions – recognising and writing -To recognise, find and name a half as one of 2 equal parts of an object or shape. -To recognise, find and name a half as one of 2 equal parts of a quantity. -To recognise, find and name a quarter as one of 4 equal parts of a quantity or shape.	**Fractions – recognising and writing** -To recognise, find, name and write the fractions $^1/_3$, $\frac{1}{4}$, $^2/_4$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	**Fractions – recognising and writing** -To count up and down in tenths. -To know that tenths are created by dividing an object into 10 equal parts. -To know that tenths are created by dividing numbers or quantities by 10. -To recognise and use fractions as numbers, unit fractions and non-unit fractions with small denominators.	**Fractions – recognising and writing** -To count up and down in hundredths. -To know that hundredths are created by dividing an object or quantity by 100. -To know that hundredths can also be created by dividing tenths by 10.	**Fractions – recognising and writing** -To identify, name and write equivalent fractions of a given fraction representing visually. (including tenths and hundredths) -To recognise mixed numbers and improper fractions. -To convert mixed numbers into improper fractions and improper fractions into mixed numbers. -To write mathematical statements where the answer is > 1 as a mixed	**Fractions – recognising and writing** -To consolidate knowledge, skills and understanding from previous year groups.

					number, eg. $^2/_5$ + $^4/_5$ = $^6/_5$ = 1 $^1/_5$.	
	Fractions – comparing	Fractions – comparing -To recognise the equivalence of $^2/_4$ and ½.	Fractions – comparing -To recognise, and show using diagrams, equivalent fractions with small denominators. -To compare and order unit fractions with the same denominators.	Fractions – comparing -To recognise, and show using diagrams, families of common equivalent fractions.	Fractions – comparing -To compare and order fractions whose denominators are all multiples of the same number.	Fractions – comparing -To use common factors to simplify fractions. -To use common multiples to express fractions in the same denomination. -To compare and order fractions, including fractions > 1.
	Fractions – calculations	Fractions – calculations -To write simple fractions, eg. ½ of 6 = 3.	Fractions – calculations -To add and subtract fractions with the same denominator within 1 whole, eg. 5/7 + 1/7 = 6/7	Fractions – calculations -To add and subtract fractions with the same denominator.	Fractions – calculations -To continue to add and subtract fractions with the same denominator. -To add and subtract fractions with denominators that are multiples of the same number. -To multiply proper fractions and mixed numbers by whole numbers supported by apparatus and diagrams.	Fractions – calculations -To add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions. -To multiply simple pairs of proper fractions, writing the answer in its simplest form, eg. ¼ x ½ = ⅛. -To divide proper fractions by whole numbers, eg. $^1/_3$ ÷ 2 = 1/6.
	Fractions – solving problems	Fractions – solving problems	Fractions – solving problems -To solve problems that involve applying fractions learning to date.	Fractions – solving problems -To 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. -To solve problems that involve applying fractions learning to date.	Fractions – solving problems -To solve problems that involve applying fractions learning to date.	Fractions – solving problems -To solve problems that involve applying fractions learning to date.
	Decimals – recognising and writing	Decimals – recognising and writing	Decimals – recognising and writing	Decimals – recognising and writing -To recognise and write decimal equivalents of any number of tenths or hundredths.	Decimals – recognising and writing -To read and write decimal numbers as fractions, eg. 0.71 =$^{71}/_{100}$.	Decimals – recognising and writing -To identify the value of each digit in numbers given to 3 decimal places.

				-To recognise and write decimal equivalents to: • ½ (0.5) • ¼ (0.25) • ¾ (0.75)	To recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.	
	Decimals – Comparing	Decimals - Comparing	Decimals - Comparing	Decimals – Comparing -To round decimals with 1 decimal place to the nearest whole number. -To compare numbers with the same number of decimal places up to 2 decimal places.	Decimals – Comparing -To round decimals with 2 decimal places to the nearest whole number. -To round numbers with 2 decimal places to 1 decimal place. -To read, write, order and compare numbers with up to 3 decimal places. 0	Decimals – Comparing -To consolidate knowledge, skills and understanding from previous year groups.
	Decimals – calculations and problems	Decimals – calculations and problems	Decimals – calculations and problems	Decimals – calculations and problems -To find the effect of dividing a 1 or 2-digit number by 10 and 100. -To identify the value of digits as ones, tenths and hundredths.	Decimals – calculations and problems -To solve problems involving numbers up to 3 decimal places.	Decimals – calculations and problems -To multiply and divide numbers by 10, 100, and 1000 giving answers up to 3 decimal places. -To multiply 1-digit numbers with up to 2 decimal places by whole numbers. -To use written division methods in cases where the answer has up to 2 decimal places. -To solve problems which require answers to be rounded to specified degrees of accuracy.
	Fractions, decimals and percentages	Fractions, decimals and percentages	Fractions, decimals and percentages	Fractions, decimals and percentages -To solve simple measure and money problems involving fractions and decimals to 2 decimal places.	Fractions, decimals and percentages -To recognise the percent symbol (%). -To know that 'per cent' relates to the number of parts per 100.	Fractions, decimals and percentages -To associate a fraction with division. -To calculate decimal fraction equivalents. -To recall and use equivalences between simple fractions, decimals and

					-To write percentages as a fraction with a denominator of 100. -To write percentages as a decimal. -To know the decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $^1/_5$, $^2/_5$,$^4/_5$. -To solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$,$^1/_5$, $^2/_5$,$^4/_5$. -To work out the percentage and decimal equivalents of fractions with a denominator of a multiple of 10 or 25.	percentages in different contexts.
	Ratio and proportion	**Ratio and proportion**	**Ratio and proportion**	**Ratio and proportion**	**Ratio and proportion**	**Ratio and proportion** -To solve problems involving the relative sizes of 2 quantities where missing values can be found by using multiplication and division facts. -To solve problems involving the calculation of percentages including in measures , eg. 15% of 360. - To use percentages for comparison. -To solve problems involving similar shapes where the scale factor is known or can be found. -To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.
	Algebra *Note: Although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as*	**Algebra** *Note: Although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as*	**Algebra** *Note: Although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as*	**Algebra** *Note: Although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as*	**Algebra** *Note: Although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as*	**Algebra** -To use simple formulae. -To generate and describe linear number sequences. -To express missing number problems algebraically.

	exemplified by missing number problems.	*exemplified by missing number problems.*	*exemplified by missing number problems.*	*exemplified by missing number problems.*	*exemplified by missing number problems.*	-To find pairs of numbers that satisfy an equation with 2 unknowns. -To find possibilities of combinations of 2 variables.
Measurement – using measures Pre-school (3-4 year olds) -To make comparisons between objects relating to size, length, weight and capacity. Reception -To compare length, weight and capacity.	**Measurement – using measures** -To compare, describe and solve practical problems for: ● lengths and heights, eg. long/short, longer/shorter, tall/short, double/half ● mass and weight, eg. heavy/light, heavier than/lighter than ● capacity and volume, eg. full/empty, more than/less than, half, half full ● time, eg. quicker/slower, earlier/later -To measure and begin to record: ● lengths and heights ● mass / weight ● capacity and volume ● time (hours, minutes, seconds)	**Measurement – using measures** -To choose and use appropriate standard units to estimate and measure to the whole unit: ● length / height in any direction (m,cm) ● mass (kg,g) ● temperature (°C) ● capacity (l,ml) -To use appropriate measuring equipment including rulers, scales, thermometers and measuring vessels. -To compare and order lengths, mass, volume/capacity. -To record the results of measurements using the >, < and = symbols.	**Measurement – using measures** -To measure, compare, add and subtract: ● length (m, cm, mm) ● mass (kg, g) ● volume/capacity (l,ml)	**Measurement – using measures** -To convert between different units of measure, eg. km to m, hours to minutes. -To estimate, compare and calculate different measures.	**Measurement – using measures** -To convert between different units of metric measure: ● km and m ● cm and m ● cm and mm ● g and kg ● l and ml -To understand and use approximate equivalences between metric units and common imperial units, eg. inches, pounds and pints (approx. 2 ½ cm in an inch, 450g in a pound, 570 ml in a pint) -To use all 4 operations to solve problems involving measure, using decimal notation including scaling. (to include length, mass, volume and money)	**Measurement – using measures** -To solve problems involving the calculation and conversion of units of measure, using decimal notations up to 3 decimal places where appropriate. -To use, read, write and convert between standard units, converting measurement of length, mass, volume and time from a smaller unit of measure to a larger and vice versa using decimal notation up to 3 decimal places. -To know that there are approximately 1.6km in a mile. -To convert between miles and kilometres.
	Measurement – money -To recognise and know the value of different denominations of coins and notes.	**Measurement – money** -To recognise and use symbols for pounds (£) and pence (p).	**Measurement – money** -To add and subtract amounts of money to give change using both £ and p in practical contexts.	**Measurement – money** -To estimate, compare and calculate using £ and p.	**Measurement – money** -To use all 4 operations to solve problems involving money.	**Measurement – money** -To consolidate knowledge, skills and understanding from previous year groups.

		-To combine amounts to make a given value. -To find different combinations of coins that equal the same amount of money. -To solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.				
Measurement – time <u>Pre-school (3-4 year olds)</u> -To begin to describe a sequence of events, real or fictional using words such as 'first', 'then'.	**Measurement – time** -To sequence events in chronological order using appropriate language (before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening) -To recognise and use language relating to dates including days of the week, weeks, months and years. -To tell the time to the hour. -To tell the time to half past the hour. -To draw hands on a clock to show o'clock and half past times.	**Measurement – time** -To compare and sequence intervals of time. -To write and tell the time at quarter to and quarter past the hour. -To tell and write the time to five minute intervals. -To draw hands on a clock to represent these times. -To know the number of minutes in an hour. (60) -To know the number of hours in a day. (24)	**Measurement – time** -To tell and write the time from an analogue clock, including using Roman numerals, from I-XII. -To tell the time on 12 and 24 hour clocks. -To estimate and read time with increasing accuracy to the nearest minute. -To record and compare time in terms of seconds, minutes and hours. -To use vocabulary such as o'clock, am, pm, morning, afternoon, noon and midnight. -To know the number of seconds in a minute. (60) -To know the number of days in each month, year and leap year. -To compare durations of events.	**Measurement – time** -To read, write and convert time between analogue and digital – 12 and 24 hour clock. -To solve problems involving converting from hours to minutes, minutes to seconds, years to months and weeks to days.	**Measurement – time** -To continue to solve problems involving converting between units of time.	**Measurement – time** -To consolidate knowledge, skills and understanding from previous year groups.
	Measurement – perimeter, area and volume	**Measurement – perimeter, area and volume**	**Measurement – perimeter, area and volume** -To measure the perimeter of simple 2-D shapes.	**Measurement – perimeter, area and volume** -To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.	**Measurement – perimeter, area and volume** -To measure and calculate perimeter of composite rectilinear shapes in centimetres and metres. -To calculate and compare the area of rectangles and squares.	**Measurement – perimeter, area and volume** -To recognise that shapes with the same areas can have different perimeters and vice versa. -To recognise when it is possible to use formulae to

				-To find the area of rectilinear shapes by counting squares.	-To use standard units – square centimetres (cm^2) and square metres (cm^3). -To estimate the area of irregular shapes. -To estimate volume and capacity.	find. area and volume of shapes. -To calculate the area of parallelograms and triangles. -To calculate, estimate and compare volumes of cubes and cuboids using standard units including cubic centimetres (cm^3) and cubic metres (m^3). -To start to use more complex standard units including cubic millimetres and kilometres (mm^3, km^3)
Geometry: 2-D shapes Pre-school (3-4 year olds) -To talk about and explore 2D shapes (for example circles, rectangles, and triangles) using informal and mathematical language: sides, corners, straight, flat, found. -To combine shapes to make new ones – an arch, a bigger triangle etc. -To talk about and identify the patterns around them, eg. stripes on clothes, designs on rugs and wallpaper. -To use informal language like 'pointy', 'spotty', 'blobs' etc. -To extend and create ABAB patterns – stick, leaf, stick, leaf. -To notice and correct an error in a repeating pattern. Reception	**Geometry: 2-D shapes** -To recognise and name 2-D shapes e.g. rectangles including squares , circles and triangles	**Geometry: 2-D shapes** -To identify and describe the properties of 2-D shapes including the number of sides. -To identify vertical lined symmetry in a 2-D shape. -To identify 2-D shapes on the surface of 3-D shapes e.g. circle on a cylinder or a triangle on a pyramid. - To compare and sort common 2-D shapes and everyday objects.	**Geometry: 2-D shapes** -To draw 2-D shapes.	**Geometry: 2-D shapes** -To compare and classify geometric shapes including quadrilaterals and triangles based on their properties and size. - To identify lines of symmetry in 2-D shapes presented in different orientations.	**Geometry: 2-D shapes** -To distinguish between regular and irregular polygons based on reasoning about equal sides and angles. -To use properties of rectangles to deduce related facts. - To find missing lengths and angles.	**Geometry: 2-D shapes** -To draw 2-D shapes using given dimensions and angles. -To illustrate and name parts of circles including radius, diameter and circumference. - To know that the diameter is twice the radius.

-To select, rotate and manipulate shapes in order to recognise that a shape can have other shapes within it, just as numbers can. -To continue, copy and create repeating patterns.						
Geometry: 3-D shapes Pre-school (3-4 year olds) -To talk about and explore 3D shapes (for example cuboids) using informal and mathematical language: sides, corners, straight, flat, found. -To select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Reception -To select, rotate and manipulate shapes in order to recognise that a shape can have other shapes within it, just as numbers can. -To continue, copy and create repeating patterns.	**Geometry: 3-D shapes** -To recognise and name common 3-D shapes e.g. cuboids including cubes, pyramids and spheres.	**Geometry: 3-D shapes** -To recognise, name, compare and sort common 3-D shapes and everyday objects, including the number of edges, vertices and faces.	**Geometry: 3-D shapes** -To make 3-D shapes using modelling materials. -To recognise and describe 3-D shapes in different orientations.	**Geometry: 3-D shapes** -To consolidate objectives covered in previous year groups	**Geometry: 3-D shapes** -To identify 3-D shapes including cubes and cuboids from 2-D representations.	**Geometry: 3-D shapes** -To recognise, describe and build simple 3-D shapes including making nets.
Geometry: Angles and lines	**Geometry: Angles and lines**	**Geometry: Angles and lines**	**Geometry – Angles and lines** -To recognise angles as a property of a shape or a description of a turn. -To recognise right angles. -To know that 2 right angles make a half turn. -To know that 3 right angles make ¾ of a turn. -To know that 4 right angles make a complete turn.	**Geometry – Angles and lines** -To identify acute (smaller than a right angle) and obtuse (larger than a right angle) angles. -To compare and order angles (up to 2 right angles) by size. -To continue to identify lines of symmetry on 2-D shapes presented in different orientations.	**Geometry – Angles and lines** -To know that angles are measured in degrees. -To recognise and use the symbol for degrees. -To estimate and compare acute, obtuse and reflex angles. -To draw given angles and measure them in degrees. -To identify angles at a point and 1 whole turn. (360°)	**Geometry – Angles and lines** -To know that the angles in a triangle add up to 180°. -To find unknown angles in any triangles. -To know that angles in a quadrilateral add up to 360°. -To find unknown angles in quadrilaterals and regular polygons. -To continue to recognise angles where they meet at a

			-To identify whether angles are greater or less than a right angle. -To identify horizontal and vertical lines. -To identify pairs of parallel lines. -To identify pairs of perpendicular lines.	-To complete a simple figure with respect to a specific line of symmetry.	-To identify angles at a point on a straight line and half a turn. (180°) -To identify other multiples of 90°.	point or are on a straight line. -To recognise angles where they are vertically opposite and find missing angles.
Geometry – Position and direction <u>Pre-school (3-4 year olds)</u> -To understand position through words alone – for example, 'The bag is under the table' with no pointing. -To describe a familiar route. -To discuss routes and locations, using words like 'in front of' and 'behind'.	**Geometry – Position and direction** -To describe position, direction and movement including whole, half, quarter and three-quarter turns.	**Geometry – Position and direction** -To order and arrange combinations of mathematical objects in patterns and sequences. -To use mathematical vocabulary to describe position, direction and movement including movement in a straight line. -To distinguish between rotation as a turn and in terms of right-angles for quarter, half and three quarter turns (clockwise and anti-clockwise).-	**Geometry – Position and direction** -To consolidate learning from previous year groups.	**Geometry – Position and direction** -To describe positions on a 2-D grid as co-ordinates in the first quadrant. -To describe movements between positions as translations of a given unit to the left/right/up/down. -To plot specified points and draw sides to complete a given polygon.	**Geometry – Position and direction** -To identify, describe and represent the position of a shape following a reflection or translation using appropriate language. -To recognise that following a reflection or translation, the shape has not changed but the position has.	**Geometry – Position and direction** -To describe position on the full co-ordinate grid. (all 4 quadrants) -To draw and translate simple shapes on the co-ordinate plane and reflect them in the axes.
	Statistics – presenting and interpreting	**Statistics – presenting and interpreting** -To interpret simple pictograms, tally charts, block diagrams and tables. -To construct simple pictograms, tally charts, block diagrams and tables.	**Statistics – presenting and interpreting** -To interpret bar charts, pictograms and tables. -To present data using bar charts, pictograms and tables.	**Statistics – presenting and interpreting** -To interpret discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. -To present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.	**Statistics – presenting and interpreting** -To complete, read and interpret information in tables, including timetables.	**Statistics – presenting and interpreting** -To interpret and construct pie charts and line graphs and use these to solve problems.
	Statistics – solving problems	**Statistics – solving problems** -To ask and answer simple questions by counting the number of objects in each	**Statistics – solving problems** -To solve 1-step and 2-step questions using information presented in scaled bar charts, pictograms and	**Statistics – solving problems** -To solve comparison, sum and difference problems using information presented	**Statistics – solving problems** -To solve comparison, sum and difference problems using information presented in a line graph.	**Statistics – solving problems** -To calculate and interpret the mean as an average.

		category and sorting the categories by quantity. -To ask and answer questions about totalling and comparing categorical data.	tables, eg. How many more? How many fewer?	in bar charts, pictograms, tables and other graphs.		