

Maths



St Joseph's Catholic Primary School, a Voluntary Academy, Langwith Junction.

Maths- Year 6

Advent 1 Children will know:	Advent 2 Children will know:	Lent 1 Children will know:	Lent 2 Children will know:	Pentecost 1 Children will know:	Pentecost 2 Children will know:
<p>Place value</p> <ul style="list-style-type: none"> • How to recognise the place value of digits in numbers up to 100,000. • How to recognise the place value of digits in numbers up to 1 million. • How to recognise the place value of digits in numbers up to 10 million. • How to read and write numbers in figures up to 10 million. 	<p>Multiplication and Division:</p> <ul style="list-style-type: none"> • How to multiply a 4 digit number by a 1 digit number using formal written methods (short multiplication). • How to multiply a 2 digit number by a 2 digit number using formal written methods (long multiplication) • How to multiply a 3 digit number by a 2 digit number using formal written 	<p>Decimals</p> <ul style="list-style-type: none"> • How to recognise the place value of numbers with up to 2dp. • How to recognise the place value of numbers with up to 3dp. • How to represent numbers up to 3dp in different ways. • How to compare and order numbers up to 3dp. • How to multiply numbers up to 	<p>Ratio:</p> <ul style="list-style-type: none"> • How to use ratio language including 'for every' to compare between two different quantities. • How to use objects and diagrams to compare ratios and fractions. • How to use a colon for the ratio symbol and link this with the language 'for every'. • How to calculate ratios being able to find both a part and a whole. 	<p>Algebra</p> <ul style="list-style-type: none"> • How to follow one step instructions/rules using function machines. • How to follow two step instructions/rules using function machines. • How to use the inverse to find the initial number from the answer. • How to substitute numbers into simple expressions to find answers. • How to form one step equations 	<ul style="list-style-type: none"> • Consolidate previous learning and complete themed projects.

<ul style="list-style-type: none"> • How to read and write numbers in words up to 10 million. • How to represent numbers up to 10 million in different ways. • How to compare numbers up to 10 million using $<$ $>$ $=$ • How to order numbers up to 10 million. • How to round numbers to the nearest 10,100 and 1000. • How to round numbers to the nearest whole number, tenths and hundredths. • How to round numbers up to 10 million to the nearest 10,000, 	<p>methods (long multiplication)</p> <ul style="list-style-type: none"> • How to multiply a 4 digit number by a 2 digit number using formal written methods (long multiplication). • How to use formal written multiplication methods to find missing numbers and digits. • How to divide 4 digits numbers by a 1 digit number using the short division method. • How to divide 4 digit numbers by 2 digit numbers using the short division method. • How to divide 4 digit numbers 	<p>3dp by a 1 digit number.</p> <ul style="list-style-type: none"> • How to multiply numbers up to 3dp by a 2 digit number. • How to divide numbers up to 3dp by a 1 digit number. • How to use multiplication and division of decimals to solve problems. • How to convert decimals to fractions (tenths and hundredths). • How to convert fractions to decimals using their knowledge of tenths and hundredths. • How to convert fractions to 	<ul style="list-style-type: none"> • How to enlarge shapes to make them 2 or 3 times as big etc using scale factor, drawing these on a single quadrant grid. • How to calculate the scale factor of similar shapes. • Solve problems involving ration and proportion. <p>Perimeter, Area and Volume:</p> <ul style="list-style-type: none"> • How to calculate the area and perimeter of rectilinear shapes. • How to draw rectilinear shapes that have the same area. • How to draw rectilinear shapes that have 	<p>using algebraic notion.</p> <ul style="list-style-type: none"> • How to solve one step equations using the 4 operations. • How to solve two step equations using the 4 operations. • How to use substitution to find pairs of values (e.g. $a+b=6$) <p>Converting Units</p> <ul style="list-style-type: none"> • How to read, write and recognise all metric measures for length, mass and capacity (mm, cm, m, km, g, kg, ml, l) • How to use their estimation skills in context and decide when it is 	
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<p>100,000 and 1 million.</p> <ul style="list-style-type: none"> • How to use negative numbers in context. • How to calculate using negative numbers using intervals across zero. <p>Four Operations:</p> <p>Addition and Subtraction:</p> <ul style="list-style-type: none"> • How to add numbers with more than 4 digits using column addition. • How to subtract numbers with more than 4 digits using column subtraction with exchanging. • How to use column addition 	<p>by 1 or 2 digit numbers using short division including remainders.</p> <ul style="list-style-type: none"> • How to express division remainders as whole number remainders, fractions and decimals. • How to divide 3 digit numbers by a 2 digit number using the long division method. • How to calculate multiples of 2 digit numbers for long division. • How to divide 4 digit numbers by 2 digit numbers using the long division method. 	<p>decimals using division.</p> <p>Percentages:</p> <ul style="list-style-type: none"> • How to know what 'per cent' means and be able to name percentages out of 100. • How to convert fractions to percentages using previous knowledge of decimals and fractions. • How to convert, compare and order fractions, decimals and percentages. • How to find percentages of amounts using known fractional equivalents (50%, 25%, 10% and 1%) 	<p>the same perimeter.</p> <ul style="list-style-type: none"> • How to count squares to work out the area of triangles. • How to calculate the area of a right-angled triangle. • How to calculate the area of any triangle using $b \times h / 2$ • How to calculate the area of parallelograms. • How to understand what volume is. • How to calculate volume of 3d shapes by counting cubes. • How to calculate volume of cuboids using $l \times w \times h$. • 	<p>appropriate to use different metric units of measure.</p> <ul style="list-style-type: none"> • How to convert between mm, cm, m and km in both directions. • How to convert between g and kg in both directions. • How to convert between m and l in both directions. • How to solve problems using measurement in context. • How to convert between miles and km. • How to know some imperial measures and their conversions. <p>Statistics</p>	
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<p>and subtraction methods to find missing digits and numbers.</p> <ul style="list-style-type: none"> • How to use inverse operations to find missing numbers and check calculations. • How to understand the commutative law to support their inverse work. • How to use addition and subtraction formal methods to solve multi-step problems. • How to choose an appropriate method (written or mental) to solve addition and subtraction calculations. 	<ul style="list-style-type: none"> • How to divide 4 digit numbers by 2 digit numbers using the long division method where remainders are involved. • How to multiply by 10,100 and 1000 beginning to do this mentally. <p>Fractions</p> <ul style="list-style-type: none"> • How to name equivalent fractions for unit fractions. • How to name equivalent fractions for non-unit fractions. • How to simplify fractions to their simplest form. 	<ul style="list-style-type: none"> • How to find percentages of amounts to the nearest 10%, 5% and 1%. <p>Geometry: Position and Direction:</p> <ul style="list-style-type: none"> • How to read and plot co-ordinates on a single quadrant grid. • How to draw shapes on a single quadrant grid from given coordinates. • How to read and plot co-ordinates in a 4 quadrant grid. • How to draw shapes from given co-ordinates in a 4 quadrant grid. • How to calculate the length of a 		<ul style="list-style-type: none"> • How to read and interpret information from line graphs. • How to draw their own line graphs using the most appropriate scales and intervals for the data. • How to solve problems using line graphs. • How to illustrate and name parts of a circle including radius, diameter, centre and circumference. • How to recognise that the diameter is twice the length of the radius. • How to interpret the data from pie charts including 	
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<p>Factors and Multiples</p> <ul style="list-style-type: none"> • How to name factors of a given number. • How to find common factors of 2 numbers. • How to name multiples of a given number. • How to find common multiples of numbers. • How to name some prime numbers. • How to give prime factors of a given number. • How to square and cube numbers. • How to use the order of operations to 	<ul style="list-style-type: none"> • How to convert improper fractions to mixed numbers. • How to convert mixed numbers to improper fractions. • How to count forwards and backwards in fractions. • How to compare and order fractions where the denominator is the same. • How to compare and order fractions where the denominators are different. • How to add and subtract fractions within 1 where the denominators are the same. 	<p>line by using the coordinates of its two endpoints.</p> <ul style="list-style-type: none"> • How to translate shapes in all 4 quadrants. • How to describe translations using directional language (units, left, right, up, down) • How to draw translated shapes. • How to reflect shapes in all 4 quadrants-reflecting in both the x and the y axis. • How to describe reflections using directional language (right, left, x axis etc.). 		<p>those with percentages.</p> <ul style="list-style-type: none"> • How to solve problems using information from pie charts. • How to construct their own pie chart. • How to calculate the mean average in a variety of contexts. 	
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complete calculations.	<ul style="list-style-type: none">• How to add and subtract fractions within 1 where the denominators are multiples of the same number.• How to add and subtract fractions where the denominators are not multiples of the same number.• How to add and subtract fractions where the answer is larger than 1.• How to adding and subtracting mixed numbers.• How to solve problems using addition and subtraction of				
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	<p>fractions and mixed numbers.</p> <ul style="list-style-type: none">• How to multiply fractions by an integer.• How to multiply a mixed number by an integer.• How to multiply fractions by fractions.• How to divide fractions by an integer where the numerator is a multiple of the integer.• How to divide fractions by an integer where the numerator is not a multiple of the integer.• How to use the four operations when calculating with fractions.				
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	<ul style="list-style-type: none">• How to calculate fractions of an amount.				
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Maths- Year 5

Advent 1 Children will know:	Advent 2 Children will know:	Lent 1 Children will know:	Lent 2 Children will know:	Pentecost 1 Children will know:	Pentecost 2 Children will know:
<p>Place value</p> <ul style="list-style-type: none"> • How to recognise the place value of digits in numbers up to 10,000. • How to count forwards and backwards in steps of powers of 10 for any given number up to 10,000. • How to recognise the place value of digits in numbers up to 10,000. • How to read and write numbers in words and 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> • How to identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. • How to use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • How to establish whether a number up to 100 is prime and 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> • How to multiply numbers up to 4 digits by a 1 digit number, using formal written methods (long multiplication, beginning to look at short multiplication) • How to multiply numbers up to 4 digits by a 2 digit number, using formal written methods (long multiplication) 	<p>Perimeter and Area</p> <ul style="list-style-type: none"> • How to measure the perimeter of composite rectilinear shapes (without grids) in centimetres and metres • To consider alternative methods when dealing with rectangles eg, $l + w + l + w$ or $(l + w) \times 2$ • How to calculate the perimeter of composite rectilinear shapes in centimetres and metres • How to calculate the area of 	<p>Properties of Shape</p> <ul style="list-style-type: none"> • How to measure angles in degrees • How to measure acute angles with a protractor • How to measure obtuse angles with a protractor • How to draw given angles accurately • How to estimate and compare acute, obtuse and reflex angles 	<p>Negative Numbers</p> <ul style="list-style-type: none"> • How to interpret negative numbers in context and count forwards and backwards with positive and negative whole numbers, including through zero. <p>Decimals</p> <ul style="list-style-type: none"> • How to round decimals with two d.p to the nearest whole number • How to round decimals with

<p>numerals to 10,000.</p> <ul style="list-style-type: none"> • How to compare numbers up to 10,000, including use of $<$, $>$, $=$. • How to order numbers up to 10,000. • How to read Roman numerals to 1000 (M) and recognise years written in Roman numerals. • How to recognise the place value of digits in numbers up to 1,000,000. • How to count forwards and backwards in steps of powers of 10 for any 	<p>recall prime numbers to 19.</p> <ul style="list-style-type: none"> • How to recognise and use square numbers and cube numbers and recognise the notation for squared (2) and cubed (3). • Solve problems involving using knowledge of factors, multiples, squares and cubes. • How to multiply whole numbers and those involving decimals by 10, 100 and 1,000. • How to divide whole numbers and those involving 	<ul style="list-style-type: none"> • How to divide numbers up to 4 digits by a 1 digit number, using the formal written method of short division • How to interpret remainders appropriately for the context. • How to solve problems involving multiplication and division. • How to multiply and divide numbers mentally, drawing upon known facts <p>Fractions</p> <ul style="list-style-type: none"> • How to multiply unit fractions by an integer 	<p>rectangles (including squares)</p> <ul style="list-style-type: none"> • How to use standard units, square centimetres (cm^2) and square metres (m^2) • How to calculate the area of compound shapes • How to split up a compound shape to find the area • How the area remains the same no matter how the compound shape is split up • How to estimate the area of irregular shapes (counting squares method) 	<ul style="list-style-type: none"> • What a right angle is • That two right angles are equivalent to a straight line • How to identify and calculate missing angles on a straight line and half a turn • That there are 360° in a full turn • When to measure an angle and when they should calculate the size of an angle from given facts • How to identify and calculate missing angles at a point and one a whole turn • How to identify and calculate 	<p>2d.p to the nearest tenth (1 d.p)</p> <ul style="list-style-type: none"> • How to solve problems involving numbers up to 3 d.p <p>Converting Units</p> <ul style="list-style-type: none"> • That the prefix 'kilo' in units of length and mass mean a thousand • How to convert from metres to kilometres and vice versa • How to convert from grams to kilograms and vice versa • How to convert from centimetres to metres and vice versa • How to convert from
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<p>given number up to 1,000,000.</p> <ul style="list-style-type: none"> • How to recognise the place value of digits in numbers up to 1,000,000. • How to read and write numbers in words and numerals to 1,000,000. • How to compare numbers up to 1,000,000, including use of $<$, $>$, $=$. • How to order numbers up to 1,000,000. • Round numbers to the nearest 10, 100, 1,000, 10,000 and 100,000. • Round any number up to 1,000,000 to the 	<p>decimals by 10, 100 and 1,000.</p> <p>Fractions</p> <ul style="list-style-type: none"> • How to compare fractions (less than and greater than 1) whose denominators are all multiples of the same number • How to order fractions (less than and greater than 1) whose denominators are all multiples of the same number • How to identify and name equivalent fractions of a given fraction • How to write equivalent 	<ul style="list-style-type: none"> • How to multiply proper fractions by an integer • How to multiply a mixed number by an integer <p>Decimals and Percentages</p> <ul style="list-style-type: none"> • How to read and write decimal numbers (up to 3 d.p) • How to understand the value of each digit (up to 3 d.p) • How to order numbers with up to 3 d.p • How to compare numbers with up to 3 d.p • How to read and write decimals as fractions • How to read and write more 	<p>Statistics</p> <ul style="list-style-type: none"> • How to interpret line graphs • How to draw line graphs • How to use line graphs to solve problems (comparison, sum and difference) • How to read tables • How to interpret tables • How to read two-way tables • How to interpret two-way tables • How to read timetables • How to interpret timetables • 	<p>missing angles involving other multiples of 90</p> <ul style="list-style-type: none"> • The properties of rectangles • How to use these properties to deduce related facts and find missing lengths and angles • How to distinguish between regular and irregular polygons • That regular means all the sides and angles in a shape are equal • That irregular polygons are shapes like a rectangle or isosceles triangle 	<p>centimetres to millimetres and vice versa</p> <ul style="list-style-type: none"> • How to convert from litres to millilitres and vice versa • What imperial units of measure are (such as inches, pounds and pints) • How to understand and use the approximate equivalences between metric units and common imperial units • How to convert between units of time including years, months, weeks, days, hours, minutes and seconds
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<p>nearest 10, 100, 1,000, 10,000 and 100,000.</p> <ul style="list-style-type: none"> Solve number problems and practical problems that involve all of the above. <p>Addition and Subtraction:</p> <ul style="list-style-type: none"> How to add whole numbers with more than 4 digits, using column addition with carrying. How to subtract whole numbers with more than 4 digits, using column subtraction with exchanging. How to add numbers mentally with increasingly 	<p>fractions of a given fraction</p> <ul style="list-style-type: none"> How to recognise mixed numbers (a number consisting of an integer and a proper fraction) How to write mathematical statements > 1 as a mixed number How to recognise improper fractions (a fraction where the numerator is greater than the denominator) How to convert from improper fractions to mixed numbers How to convert from mixed 	<p>complex decimals (0.96, 0.03 etc) and numbers greater than 1 (1.2, 4.01 etc) as fractions</p> <ul style="list-style-type: none"> How to recognise and use thousandths The relationship between tenths, hundredths and thousandths The link between thousandths and decimal and mixed number equivalences That per cent relates to number of parts per hundred The per cent symbol (%) That percentages, decimals and fractions are 		<ul style="list-style-type: none"> How to identify 3-D shapes, including cubes and cuboids from 2-D shapes Language associated with properties of 3-D shapes (faces, curved surfaces, vertices, edges etc) <p>Position and Direction</p> <ul style="list-style-type: none"> That the origin of coordinates is (0,0) That the first number represents the x coordinate That the second number represents the y coordinate 	<ul style="list-style-type: none"> How to solve problems involving converting between units of time <p>Volume</p> <ul style="list-style-type: none"> That volume is the amount of solid space something takes up That volume is different to capacity as capacity is related to the amount a container can hold How to use their understanding of volume to compare and order different solids that are made of cubes
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<p>large numbers (eg, $12,462 + 2300 = 14,762$)</p> <ul style="list-style-type: none"> • How to subtract numbers mentally with increasingly large numbers (eg, $12,462 - 2300 = 10,162$) • How to use column addition to find missing digits and numbers. • How to use column subtraction to find missing digits and numbers. • How to solve addition and subtraction multi-step problems in contexts. • How to decide which operations 	<p>numbers to improper fractions</p> <ul style="list-style-type: none"> • How to add fractions with the same denominator • How to add fractions with denominators that are multiples of the same number. • How to subtract fractions with the same denominator • How to subtract fractions with that are multiples of the same number • How to add two fractions where one or both are mixed numbers or improper fractions 	<p>different ways of expressing proportions</p> <ul style="list-style-type: none"> • How to write percentages as a fraction with a denominator 100 • How to write percentages as a decimal • How to recognise simple equivalent fractions and represent them as decimals • How to recognise simple equivalent fractions and represent them as percentages • Percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{3}{5}$, $\frac{4}{5}$ • Percentage and decimal 		<ul style="list-style-type: none"> • How to translate shapes on a grid • To focus on one vertex at a time when translating • How to translate coordinates • How to describe translations of coordinates • How to reflect shapes on a grid • How to reflect shapes with coordinates • What happens to points (coordinates) when they are reflected in lines parallel to the axes • That reflection and translation do not change the shape 	<ul style="list-style-type: none"> • How to estimate the volume and capacity of different solids and objects • That containers can be different shapes but still hold the same capacity • That they need to choose the most suitable unit of measure for different objects, eg using m^3 for the volume of a room
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<p>and methods to use and why.</p> <ul style="list-style-type: none">• How to use rounding to check answers to calculations and determine levels of accuracy.	<ul style="list-style-type: none">• How to subtract proper fractions from mixed numbers• How to subtract two fractions where one or both are mixed numbers or improper fractions	<p>equivalents of fractions with a denominator of a multiple of 10 or 25</p>			
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Maths- Year 4

Advent 1 Children will know:	Advent 2 Children will know:	Lent 1 Children will know:	Lent 2 Children will know:	Pentecost 1 Children will know:	Pentecost 2 Children will know:
<p>Place value</p> <ul style="list-style-type: none"> • How to count in multiples of 6, 7, 9, 25 and 1000. • How to find 1000 more or less than a given number. • How to count backwards through zero to include negative numbers. • How to recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). • How to order and compare numbers beyond 1000. 	<p>Measurement:</p> <p>Area</p> <ul style="list-style-type: none"> • What area is.? • How to find the area of rectilinear shapes by counting squares. • How to compare area of different shapes. <p>Multiplication and Division</p> <ul style="list-style-type: none"> • How to recall multiplication and division facts for multiplication tables up 6×12. • How to use place value, known and derived facts to 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> • How to recall multiplication and division facts for multiplication tables from 7 to 12×12. • How to multiply a two-digit and three-digit number by a one-digit number using formal written method. • How to divide a two digit and three-digit number by a one-digit number using a formal written method. 	<p>Fractions</p> <ul style="list-style-type: none"> • How to recognise the differences between unit and non-unit fractions. • How to count in tenths. • How to recognise that tenths arise when dividing an object by 10. • How to recognise and show, using diagrams, families of common equivalent fractions. • How to count up and down in hundredths. 	<p>Decimals</p> <ul style="list-style-type: none"> • How to round decimals with one decimal place to the nearest whole number. • How to compare numbers with the same number of decimal places up to two decimal places. • How to order decimals. • How to solve simple problems involving lengths. 	<p>Geometry: Properties of shape.</p> <ul style="list-style-type: none"> • How to compare and classify geometric shapes based on their properties and sizes. • How to identify acute and obtuse angles. • How to compare and order angles up to two right angles by size. • How to identify lines of symmetry in 2-D shapes presented in different orientations. • How to complete a simple symmetric

<ul style="list-style-type: none"> • How to find 1000 more or less than a given number • How to identify, represent and estimate numbers using different representations. • How to round any number to the nearest 10, 100 or 1000. • How to solve number and practical problems that involve all of the above and with increasingly large positive numbers. • How to read Roman numerals to 100 (I to C). <p>Addition</p> <ul style="list-style-type: none"> • How to add numbers with up to 4 digits using the formal written methods of 	<p>multiply and divide mentally, including, multiplying by 0 and 1, dividing by 1.</p> <ul style="list-style-type: none"> • How to multiply together three numbers. • How to recognise and use factor pairs and commutativity in mental calculations. • How to multiply and divide by 10 and 100 including decimals. 	<ul style="list-style-type: none"> • How to solve problems involving multiplying and adding, including using the distributive law, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. <p>Measurement: Length and Perimeter</p> <ul style="list-style-type: none"> • How to convert lengths from m-cm. mm-cm. • How to add and subtract lengths. • How to measure lengths and calculate the perimeter of a rectilinear 	<ul style="list-style-type: none"> • How to recognise that hundredths arise when dividing an object by one hundred. • How to add and subtract fraction with the same denominator. • How to subtract fractions from whole ones. • How to recognise fractions bigger than 1. • How to find fractions of amounts. <p>Fractions and Decimals</p> <ul style="list-style-type: none"> • How to recognise and write decimal equivalents of any number of tenths or hundredths. 	<p>Money</p> <ul style="list-style-type: none"> • How to add and subtract amounts of money. • How to convert pounds and pence. • How to solve simple problems involving all four operations. <p>Time</p> <ul style="list-style-type: none"> • How to convert between units of time. • How to read time on an analogue and digital clock. • How to write and convert time between analogue and digital 12- and 24-hour clocks. • How to solve problems involving 	<p>figure with respect to a specific line of symmetry.</p> <p>Statistics</p> <ul style="list-style-type: none"> • How to interpret and present data using appropriate graphical methods, including bar charts and time graphs. • How to solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. <p>Direction Geometry: Position and Direction</p>
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<p>columnar addition where appropriate.</p> <ul style="list-style-type: none"> • How to solve addition problems in contexts. <p>Subtraction</p> <ul style="list-style-type: none"> • How to subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate. • How to solve subtraction problems in contexts. • How to solve two step problems in context. • How to decide which operations and methods to use and why. 		<p>shapes in cm, mm and m.</p> <ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • How to recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. • How to identify the value of the digits in the answer as ones, tenths and hundredths. • How to divide a 1 or 2 digit number by 10 or 100. 	<p>converting from hours to minutes; minutes to seconds; years to months; weeks to days.</p>	<ul style="list-style-type: none"> • How to describe positions on a 2-D grid as coordinates in the first quadrant. • How to describe movements between positions as translations of a given unit to the left/right and up/down. • How to plot specified points and draw sides to complete a given polygon.
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- How to estimate and use inverse operations to check answers.

Maths- Year 3

Advent 1 Children will know:	Advent 2 Children will know:	Lent 1 Children will know:	Lent 2 Children will know:	Pentecost 1 Children will know:	Pentecost 2 Children will know:
<p>Place Value</p> <ul style="list-style-type: none"> • How to count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number • How to recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • How to compare and order numbers up to 1000 • How to identify, represent and estimate numbers using 	<p>Subtraction</p> <ul style="list-style-type: none"> • How to subtract numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds • How to subtract numbers with up to three digits, using formal written methods of columnar subtraction • How to estimate the answer to a calculation and use inverse 	<p>Multiplication</p> <ul style="list-style-type: none"> • How to write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods • How to solve problems, including missing number problems, 	<p>Fractions</p> <ul style="list-style-type: none"> • How to understand the denominators of unit and non-unit fractions. • How to 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 • How to recognise, find and write fractions of a discrete set of objects: unit fractions and 	<p>Fractions</p> <ul style="list-style-type: none"> • How to add fractions including adding more than 2 fractions. • How to subtract fractions. • How to subtract from whole amounts. • How to find fractions of amounts or objects. • How to calculate fractions of a quantity. <p>Money</p> <ul style="list-style-type: none"> • How to add and subtract 	<p>Shape</p> <ul style="list-style-type: none"> • how to draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them • how to recognise angles as a property of shape or a description of a turn • how to identify right angles, recognise that two right angles make a half-turn, three make

<p>different representations</p> <ul style="list-style-type: none"> • How to read and write numbers up to 1000 in numerals and in words • How to solve number problems and practical problems involving these ideas. <p>Addition</p> <ul style="list-style-type: none"> • How to add numbers mentally, including: a three-digit number and ones, a three-digit number and tens, a three-digit number and hundreds • How to add numbers with up 	<p>operations to check answers</p> <ul style="list-style-type: none"> • How to solve problems, including missing number problems, using number facts, place value, and more complex subtraction <p>Multiplication/Division</p> <ul style="list-style-type: none"> • How to recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 	<p>involving multiplication, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>Division</p> <ul style="list-style-type: none"> • How to write and calculate mathematical statements for division using mental and progressing to formal written methods • How to solve problems, including missing number problems, involving division, including positive 	<p>non-unit fractions with small denominators</p> <ul style="list-style-type: none"> • How to recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • How to find equivalent fractions in different representations. • How to order and compare fractions. <p>Mass and Capacity</p> <ul style="list-style-type: none"> • How to measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml) 	<p>amounts of money to give change, using both £ and p in practical contexts</p> <p>Time</p> <ul style="list-style-type: none"> • How to tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • How to estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes 	<p>three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle</p> <ul style="list-style-type: none"> • how to identify horizontal and vertical lines and pairs of perpendicular and parallel lines. <p>Statistics</p> <ul style="list-style-type: none"> • How to interpret and present data using bar charts, pictograms and tables • How to solve one-step and two-step questions [for example, 'How
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<p>to three digits, using formal written methods of columnar addition</p> <ul style="list-style-type: none"> • How to estimate the answer to a calculation and use inverse operations to check answers • How to solve problems, including missing number problems, using number facts, place value, and more complex addition 		<p>integer scaling problems and correspondence problems in which n objects are connected to m objects.</p> <p>Length and Perimeter</p> <ul style="list-style-type: none"> • How to measure, compare, add and subtract: lengths (m/cm/mm) • How to measure the perimeter of simple 2-D shapes 		<p>and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <ul style="list-style-type: none"> • The number of seconds in a minute and the number of days in each month, year and leap year • How to compare durations of events [for example to calculate the time taken by particular events or tasks]. 	<p>many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</p>
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Year 2- Maths

By the end of the Advent Term 1 children will:	By the end of the Advent Term 2 children will:	By the end of the Lent Term 1 children will:	By the end of the Lent Term 2 children will:	By the end of the Pentecost Term 1 children will know:	By the end of the Pentecost Term 2 children will:
<p>Place value</p> <ul style="list-style-type: none"> • Be able to count forwards and backwards within 20. • Recognise tens and ones within 20. • Be able to count forwards and backwards within 50. • Recognise tens and ones within 50. • Be able to compare numbers within 50 using knowledge of tens and ones. • Count objects to 100 and read and write numbers in numerals and words 	<p>Subtraction</p> <ul style="list-style-type: none"> • Recognise fact families for subtraction bonds to 20. • Be able to subtract 1 and 10 less to numbers up to 100. • Be able to compare subtraction number sentences using symbols (<, > or =). • Be able to subtract a 1-digit number from a 2-digit number crossing ten by exchanging. • Be able to subtract a 2-digit number from a 2- 	<p>Division</p> <ul style="list-style-type: none"> • Be able to divide any 1 or 2-digit number within 100 by two using concrete, pictorial and abstract methods. • Be able to divide any 1 or 2-digit number within 100 by five using concrete, pictorial and abstract methods. • Be able to divide any 1 or 2-digit number within 100 by ten using concrete, pictorial and abstract methods. • Be able to answer division calculation by making equal 	<p>Fractions</p> <ul style="list-style-type: none"> • Name and write $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{2}{4}$ and $\frac{3}{4}$ fractions recognising the numerator and denominator. • Recognise $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape or set of objects. • Be able to find $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape or set of objects. • Be able to find $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{2}{4}$ and $\frac{3}{4}$ of an amount using pictorial and concrete resources to make equal groups. 	<p>Length and Height</p> <ul style="list-style-type: none"> • Recognise length and height. • Be able to measure lengths using a ruler using the correct unit of measure (cm and m). • Be able to compare lengths (cm and m) using more than and less than symbols (<, > and =). • Be able to order lengths (cm and m). • Be able to answer length and height calculations using the four operations (add, subtract, multiply 	<p>Statistics</p> <ul style="list-style-type: none"> • Be able to make tally charts by interpreting data using the correct symbols. • Be able to draw pictograms using a key representing 1, 2, 5 and 10. • Be able to interpret pictograms with keys representing 1, 2, 5 and 10. • Be able to make block diagrams by interpreting data. • Be able to interpret block diagrams and find the difference between pieces of data.

<ul style="list-style-type: none"> • Be able to represent numbers to 100 using tens and ones. • Be able to use a part-whole model to represent tens and ones. • Be able to write addition number sentences showing the partition of tens and ones. • Be able to use a place value chart to represent tens and ones using different pictorial representation such as cubes and rods and counters. • Be able to compare objects using knowledge of more or less using symbols (<, > and =). • Compare numbers using knowledge of more or less tens or ones using symbols (<, > and =). 	<p>digit number not crossing ten.</p> <ul style="list-style-type: none"> • Be able to subtract a 2-digit number from a 2-digit number crossing ten by subtracting ones and tens. • Be able to find and make number bonds up to 100 using tens and ones. • Be able to use the inverse to check calculations for addition and subtraction calculations. • Be able to use a bar model to find missing numbers using knowledge of whole numbers and parts. • Be able to find missing numbers in addition and subtraction sentences using 	<p>groups by sharing using concrete (cubes and rods), pictorial and abstract resources.</p> <ul style="list-style-type: none"> • Be able to answer division calculations by making equal groups by grouping using concrete (cubes and rods), pictorial and abstract resources. • Be able to use the inverse to check calculations for multiplication and division calculations. • Be able to find missing numbers in multiplication and division sentences using inverse operations. • Recognise fact families for arrays including multiplication, 	<ul style="list-style-type: none"> • Recognise $\frac{1}{2}$ and $\frac{2}{4}$ as equivalent fractions. <p>Time</p> <ul style="list-style-type: none"> • Be able to tell the time to the hour, half hour and quarter hour using the correct vocabulary (o'clock, half past, quarter past and quarter to). • Be able to tell the time to five minutes using the correct vocabulary (past and to). • Be able to draw the hands on a clock face to show time. • Be able to compare and sequence intervals of time (am and pm, hour, minutes, days, week, month and year). 	<p>and divide) in a practical context.</p> <p>Measure: Mass, Capacity and Temperature</p> <ul style="list-style-type: none"> • Be able to choose the appropriate standard of unit to estimate and measure mass (kg/g) to the nearest unit using scales. • Be able to compare and order mass and record results using the more than and less than (<, > and =) using the appropriate unit (kg/g). • Be able to choose the appropriate standard of unit to estimate and measure capacity (litres/ml) to the nearest unit using scales and measuring vessels. 	<p>Geometry: Position and Direction</p> <ul style="list-style-type: none"> • Recognise and describe the position, direction and movement of objects using mathematical vocabulary. • Be able to distinguish rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise).
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<ul style="list-style-type: none"> • Be able to order objects and numbers using knowledge of more or less tens and ones. • Be able to count in 2s, 5s and 10s forwards and backwards from any number. • Be able to count up to 100 forwards and backwards. <p>Addition</p> <ul style="list-style-type: none"> • Recognise fact families for addition bonds to 20. • Recognise related facts for tens bonds to 100. • Be able to compare addition number sentences using symbols (<, > or =). • Be able to add 1 and 10 more to 	<p>inverse operations.</p> <p>Multiplication</p> <ul style="list-style-type: none"> • Recognise equal groups using pictorial and abstract resources. • Be able to make equal groups using pictorial and abstract resources. • Be able to add equal groups to make repeated addition sentences. • Be able to write and answer repeated addition calculations as a multiplication using the x symbol. • Be able to write multiplication sentences from pictures such as arrays using the x symbol. 	<p>division and repeated addition sentences.</p> <p>Money</p> <ul style="list-style-type: none"> • Recognise coins and notes using the correct unit of measure (p or £). • Be able to count money in pence adding and counting on in 1s, 2s, 5s and 10s. • Be able to count money in pounds in notes and coins by adding or counting on. • Be able to count money with combination of notes and coins by adding or counting on. • Be able to select money to make an amount in pence and pounds. • Be able to make the same amount 	<ul style="list-style-type: none"> • Know the number of minutes in an hour and the number of hours in a day. <p>Shape</p> <ul style="list-style-type: none"> • Recognise 2D shapes and name them using appropriate spelling. • Recognise the properties of 2D shapes including number of sides and vertices. • Be able to draw lines of symmetry. • Be able to compare and group 2D shapes and everyday objects based on their properties. • Recognise 3D shapes and name them using appropriate spelling. • Recognise the properties of 3D 	<ul style="list-style-type: none"> • Be able to compare and order volume and record results using the more than and less than (<, > and =) using the appropriate unit (litres/ml). • Be able to choose the appropriate standard of unit to estimate and measure temperature (°C) to the nearest unit using thermometers. 	
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<p>numbers up to 100.</p> <ul style="list-style-type: none"> • Be able to add a 2-digit and 1-digit number crossing ten by exchanging. • Be able to add two 2-digit numbers not crossing ten by adding ones and adding tens. • Be able to add two 2-digit numbers crossing ten by adding ones and then adding tens. • Be able to add three 1-digit numbers. 	<ul style="list-style-type: none"> • Be able to answer multiplication calculations by making equal groups by sharing using concrete (cubes and rods), pictorial and abstract resources. • Be able to answer multiplication calculations by making equal groups by grouping using concrete (cubes and rods), pictorial and abstract resources. • Recognise and use arrays writing associated calculations. • Recognise and count in the 2-times table from any number within 100. • Recognise and count in the 5-times table from 	<p>of money using different combinations of coins or notes.</p> <ul style="list-style-type: none"> • Be able to compare money using the more than, less than or equal to symbols (<, > or =). • Be able to find the total for an amount of coins using the four operations (addition, subtraction, multiplication and division). • Be able to find the difference of an amount of money using subtraction in a practical context. • Be able to find change for an amount of money using subtraction in a practical context. 	<p>shapes including number of faces, edges and vertices.</p> <ul style="list-style-type: none"> • Recognise 2D shapes on the surface of 3D shapes (e.g. a circle on a cylinder). • Be able to compare and sort 3D shapes and everyday objects based on their properties. 		
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	<p>any number within 100.</p> <ul style="list-style-type: none">• Recognise and count in the 10-times table from any number within 100.	<ul style="list-style-type: none">• Be able to answer two-step money problems using the four operations (addition, subtraction, multiplication and division).			
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Maths- Year 1

<p align="center">Advent 1</p> <p>Children will know how to:</p>	<p align="center">Advent 2</p> <p>Children will know how to:</p>	<p align="center">Lent 1</p> <p>Children will know how to:</p>	<p align="center">Lent 2</p> <p>Children will know how to:</p>	<p align="center">Pentecost 1</p> <p>Children will know how to:</p>	<p align="center">Pentecost 2</p> <p>Children will know how to:</p>
<p>Place value</p> <ul style="list-style-type: none"> Sort, count and represent objects up to 10. Count, read and write numbers forwards and backwards from any number 0 to 10 (numerals and words). Count one more or one less from any given number 0 to 10. Compare groups (using language such as equal, more or less than) Recognise <, > and = symbols to compare numbers. 	<p>Subtraction</p> <ul style="list-style-type: none"> Find how many left by taking away within 10. Recognise the subtraction symbol -. Find a missing number (part) within subtraction up to 10. Compare subtraction and addition number sentences up to 10 using symbols (<, > or =). <p>Shape</p> <ul style="list-style-type: none"> Recognise and name 2D shapes. Sort 2D shapes. 	<p>Place Value</p> <ul style="list-style-type: none"> Count, read and write numbers forwards and backwards to 20 (in words and numerals). Represent numbers to 20 using tens and ones. Compare groups of objects and numbers to 20. Order groups of objects and numbers to 20. Count one more or one less from any given number 0 to 20. Compare groups (using language such 	<p>Place Value</p> <ul style="list-style-type: none"> Count, read and write numbers forwards and backwards to 50. Represent numbers to 50 using tens and ones. Compare groups of objects and numbers to 50. Order groups of objects and numbers to 50. Count one more or one less from any given number 0 to 50. Compare groups (using language such as equal, more or less than) to 50. 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> Count in 2s, 5s and 10s Recognise equal groups using pictorial and abstract resources. Make equal groups using pictorial and abstract resources. Add equal groups to make repeated addition sentences. Make arrays by making equal groups and building them up in columns or rows. Explore doubling numbers up to 20. 	<p>Geometry: Position and Direction</p> <ul style="list-style-type: none"> Describe turns such as 'full', 'half', 'quarter' and 'three-quarter' made by shapes/objects. Describe direction of objects and shapes from different starting points such as 'left', 'right', 'forwards' and 'backwards'. Know how to describe positions of objects and shapes from different starting points such as 'top', 'in between', 'bottom', 'above' and 'below'.

<ul style="list-style-type: none"> • Order groups of objects and numbers to 10. • Use ordinal numbers (1st, 2nd, 3rd ...) <p>Addition</p> <ul style="list-style-type: none"> • Understand that a number can be split into parts (part-whole model). • Recognise the addition symbol +. • Recognise the fact families for addition bonds to 10. • Know how to find a missing number (part) within addition. • Compare addition number sentences up to 10 using symbols (<, > or =). 	<ul style="list-style-type: none"> • Recognise and name 3D shapes. • Sort 3D shapes. • Make patterns with 3D and 2D shapes. 	<p>as equal, more or less than) to 20.</p> <ul style="list-style-type: none"> • Recognise <, > and = symbols to compare numbers. • Count in 2s <p>Addition</p> <ul style="list-style-type: none"> • Add by counting on, within 20. • Add by making 10. • Recognise the fact families for addition bonds to 20. • Know how to find a missing number (part) within addition. • Compare addition number sentences up to 20 using symbols (<, > or =). <p>Subtraction</p> <ul style="list-style-type: none"> • Find how many left by taking away within 20. 	<ul style="list-style-type: none"> • Recognise <, > and = symbols to compare numbers to 50. • Count in 5s <p>Length and Height</p> <ul style="list-style-type: none"> • Understand the language of length such as long, longer, short, shorter, tall and taller. • Understand that height is a type of length • Compare lengths and heights using non-standard units, such as cubes, hands and straws to measure length and height • Begin to measure length and height with a ruler (in cm). <p>Weight and Mass</p> <ul style="list-style-type: none"> • Describe objects using vocabulary 	<ul style="list-style-type: none"> • Make groups of an equal amount from a given total. • Explore sharing equally as a model of division using concrete and pictorial representations <p>Fractions</p> <ul style="list-style-type: none"> • Explore finding a half using shapes or objects. • Know how to find half of a small quantity of concrete or pictorial representation. • Explore finding a quarter using shapes or objects. • Find a quarter of a small quantity of concrete or pictorial representation. 	<p>Place Value</p> <ul style="list-style-type: none"> • Count, read and write numbers forwards and backwards to 100. • Represent numbers to 100 using tens and ones. • Compare groups of objects and numbers to 100. • Order groups of objects and numbers to 100. • Compare groups (using language such as equal, more or less than) to 100. • Recognise <, > and = symbols to compare numbers to 100. • Count one more or one less from any given number 0 to 100. <p>Money</p>
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		<ul style="list-style-type: none"> • Know how to find a missing number (part) within subtraction up to 20. • Compare subtraction and addition number sentences up to 20 using symbols (<, > or =). 	<p>such as heavy, light, heavier than, lighter than</p> <ul style="list-style-type: none"> • Use the scales to compare weight and mass of objects • Measure the mass of an object using non-standard units such as cubes and bricks • Compare weight and mass of objects using language such as 'heavier', 'lighter' and 'equal to'. <p>Capacity and Volume</p> <ul style="list-style-type: none"> • Compare the volume in a container by describing whether it is 'full', 'empty' or 'nearly empty'. • Begin to measure capacity of different containers using non-standard units 		<ul style="list-style-type: none"> • Recognise and know the value of different coins. • Understand the equivalent values of coins. • Recognise and know the value of different notes. • Understand the equivalent values of notes. • Know how to count in coins. • Know how to compare amounts of money. <p>Time</p> <ul style="list-style-type: none"> • Describe and sort events in order of time such as 'before' and 'after' or 'morning', 'afternoon' and 'evening'. • Name the 7 days in a week.
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			<p>of measure such as cups full or spoonsful.</p> <ul style="list-style-type: none">• Compare the capacity in a container by using non-standard units of measure.		<ul style="list-style-type: none">• Talk about events using 'today', 'yesterday' and 'tomorrow'.• Name the months of the year.• Tell the time to the hour using an analogue clock.• Tell the time to the half hour using an analogue clock.• Tell the difference between seconds, minutes and hours.• Compare amounts of time such as 'faster', 'slower', 'earlier' and 'later'.
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Mathematics

Intent - Mathematics involves developing good number sense to solve problems in practical situations and everyday life. Practising visualisation to support understanding and problem solving. The opportunity to explore and experience shapes, space and measures in everyday context. The aim for each learner is to become a confident mathematician.

Number

Reception

Advent

- To know some numerals of personal significance - e.g. age, house number.
- To know the composition of numbers 1, 2 and 3.
- To know how to subitise to 3.

Lent

- To know the composition of numbers to 10.
- To know how to subitise to 5.
- To know addition facts up to 5 using all combinations. Then 6, 7, 8, 9, 10.

Pentecost

- To know the composition of numbers to 20.
- To know number bonds for numbers 0-10 by automatic recall.
- To know and begin to use the vocabulary involved in adding and subtracting including counting on and back.
- To know how to approach addition and find the total number of items in two groups by counting all of them and starting to use 'counting on'.
- To know addition facts up to 5 using all combinations. Then 6, 7, 8, 9, 10.

ELG: Number

- To know number to 10 and have a deep understanding, including the composition of each number.
- To know how to subitise (recognise quantities without counting) up to 5.
- To know number bonds up to 5 by automatic recall (without reference to rhymes, counting or other aids), including subtraction facts and some number bonds to 10, including double facts.

Mathematics

Numerical Patterns

Reception

Autumn

- To know how to estimate how many objects and check by counting all of them.
- To know how to count up to three objects by saying one number name for each item.
- To know to link the number symbol (numeral) with its cardinal number value.
- To know all manipulations of the numbers to 3.
- To know how to select the correct numeral to represent 1 to 3.
- To know how to find one more or one less from a group of up to 3 objects, then ten objects.
- To know 'one more than/one less than' and the relationship between consecutive numbers.
- To know how to compare numbers.
- To know how to use the language of 'more' and 'fewer' to compare two sets of objects.

Lent

- To know all manipulations of the numbers to 10.
- To know how to count objects to 10.
- To know how to count out up to six objects from a larger group.
- To know how to select the correct numeral to represent 1 to 10 objects.
- To know how to combine two groups of objects and give a total.
- To know how to find one more or one less from a group of up to 10 objects.

Summer

- To know how to begin to use 'teens' to count beyond 10.
- To know how to count beyond 20 recognising number patterns.
- To know how to count objects beyond 10.
- To know how some doubling facts to 10.
- To know patterns in numbers to 10 for evens and odd.

ELG: Number Patterns		

- To know how to verbally count beyond 20, recognising the pattern of the counting system.
- To know how to compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.
- To know patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Mathematics

Shape, Space and Measure

Reception

Autumn

- To know how to use comparative language like taller, shorter, the same.
- To know how to start to identify shapes in the environment.
- To know how to start to find appropriate shapes for certain tasks.
- To know how to start to make more meaningful pictures, patterns and arrangements with shapes.
- To know how to compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.

Lent

- To know how to compare length, weight and capacity.
- To know how to experiment with length, height, capacity and use my findings to order and group items.
- To know how to talk about the routine of the day and use language like before, after.
- To know how to recall routines and start to relate them to the time on the clock
- To know how to recall names for 2D and 3D shapes and to be able to use some of the terms to describe their properties.

Pentecost

- To know how to select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- To know similarities, differences, patterns and changes.
- Continue, copy and create repeating patterns

Mathematics

Mathematics involves developing good number sense to solve problems in practical situations and everyday life. Practising visualisation to support understanding and problem solving. The opportunity to explore and experience shapes, space and measures in everyday context. The aim for each learner is to become a confident mathematician.

Number

ELG: Have a deep understanding of number to 10, including the compositions of each numbers, subitise up to 5, Automatically recall number bonds up to 5 and some number bonds to 10 including double facts

3 & 4 year olds

Advent	Lent	Pentecost
<ul style="list-style-type: none">• To know how to mark make and ascribe some concept of number to the marks (attempts at digits from the environment, making dots, lines etc).• To know and experiment with their own symbols and marks as well as numerals.• To know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle')• To know how to identify numerals in the environment.• To know how to sort objects using one simple criteria.	<ul style="list-style-type: none">• To know and show understanding of conservation.• To know how to subitise showing a fast recognition of up to 3 objects, without having to count them individually ('subitising').• To know how to link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5.• To know to bring one or two objects when an adult requests.• To know and show an understanding of simple comparisons like 'more'.• To know when two small groups have the same number of objects.• To know how to compare quantities using language: 'more than', 'fewer than'	<ul style="list-style-type: none">• To know, talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.• To know how to begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'• To know how to extend and create ABAB patterns -stick, leaf, stick, leaf.• To know how to notice and correct an error in a repeating pattern.• To know how to solve real world mathematical problems with numbers up to 5.

Numerical Patterns

ELG: Verbally count beyond 20, recognising the patterns of the counting system, compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity, explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

3 & 4 year olds

Advent	Lent	Pentecost
<ul style="list-style-type: none">• To know how to recite some number names in sequence (not necessarily understand at this stage).• To show finger numbers up to 5.	<ul style="list-style-type: none">• To know and say one number for each item in order: 1, 2, 3, 4, 5	<ul style="list-style-type: none">• To know and recite numbers past 5.• To know how to solve real world mathematical problems with numbers up to 5.

Shape, Space and Measure

3 & 4 year olds

Advent

- To know how to start to fit shapes into board puzzles or shape sorters.
- To know how to begin to build using simple blocks.
- To know how to fill and empty a container.
- To know how to use small world play to experiment with size, shape, differences and similarities.
- To know how to use comparative language like 'taller', 'shorter', 'the same'.

Lent

- To know and show some understanding of 'now' and 'next'.
- To know how to ask questions about the routine and what is happening next.
- To know and talk about the routine of the day and use language like 'before' and 'after'.
- To know and understand position through words alone - for example, "The bag is under the table," -with no pointing.
- To know and describe a familiar route.
- To know and discuss routes and locations, using words like 'in front of' and 'behind'.

Pentecost

- To know how to start to identify shapes in the environment.
- To know to see some shapes in pictures and can start to make pictures using shapes.
- To know how to talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'.
- To know how to start to find appropriate shapes for certain tasks.
- To know and select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.
- To know how to combine shapes to make new ones - an arch, a bigger triangle etc
- To know how to ask questions about my observations of differences and similarities.
- To know how to start to make more meaningful pictures, patterns and arrangements with shapes.
- To know and make comparisons between objects relating to size, length, weight and capacity.