

Maths Curriculum Map Lent Term 2022

EYFS	<p>Pre-Counting Skills</p> <p>Counting the Sort: Counting a set of items accurately, saying how many there are in a set and comparing this to the amount in other sets</p> <p>Using Counting to Compare: Using counting to compare and finding a precise numerical difference in sets of objects in varied contexts</p> <p>Spatial Thinking: Developing spatial thinking and spatial language linked to position and direction, in movements and using symbols</p> <p>Magnitude – Ordering and Estimating: Knowing the position of numbers 0-10 and the relationship to other numbers, including whether they are close to 0, 5 or 10</p> <p>Regrouping the whole: Developing a deeper understanding that numbers are made up of other numbers and beginning to rehearse number bonds.</p>
Year 1	<p>Measure: Measure and begin to record the following: lengths and heights, mass/weight. Compare: lengths and heights, mass/weight</p> <p>Arithmetic: Addition skills: Add by counting on starting from the larger number. Find and make number bonds. Add by making 10.</p> <p>Subtraction skills: Partition to make 10. Subtract by crossing 10. Compare number sentences and apply their skills to independently solve worded problems selecting the correct operation. To help solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing numbers. Learn about 'part' or 'whole unknown' to partition numbers to 10 then partition numbers to 20. Use partitioning methods to find missing numbers. Use 'part or whole unknown' to solve problems.</p> <p>Statistics: Interpret and compare data on a simple graph</p> <p>Measures: Standard and Non-Standard Units: Know the difference between standard and non-standard units of measure. Select an appropriate unit of measure. Measure with a good level of accuracy. Use a ruler correctly and accurately</p> <p>Measures: Money: Recognise different coins in the British currency. Count coins to make up to 20p. Order coins of different values. Compare coins of different values. Recognise different notes in the British currency</p>

Arithmetic:

Adding 2-digit numbers using expanded column addition

Applying their increasing knowledge of mental and written methods when solving problems

Recall and use addition and subtraction facts to 20 fluently and derive and use related facts to 100 ie compliments to multiples of 10

Ongoing: recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

Recall and use multiplication and division facts for 2, 5, 4 and 8, times tables.

Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the symbols: \times \div and $=$

Show that multiplication of two numbers can be done in any order (commutative) and division of one number cannot.

Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Geometry:

Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3D shapes (e.g. a circle on a cylinder and a triangle on a pyramid). Compare and sort common 3D shapes and everyday objects.

Measure: Money

Recognise British coin currency. Add money with coins: 1p, 2p, 5p, 10p, 20p, 50p, £1. Double and halve one-digit numbers and Amounts of money. Double and halve two-digit numbers and amounts of money. Solve simple problems in a practical context involving addition and subtraction when giving change with money. **Solve problems involving fractions of amounts of money**

Time:

Tell and write the time to five minutes to the next hour from half past to the O clock and draw the hands on a clock face to show these times.

Fractions

Recognise and find $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. **Find and recognise equivalent**

fractions: e.g. $\frac{2}{4} = \frac{1}{2}$ $\frac{5}{10} = \frac{1}{2}$

Statistics:

Construct bar charts, Pictograms, Tables and Tally Charts. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity

Year 3	<p>Shape: perimeter of regular and irregular shapes. Symmetry – identify and draw lines of symmetry in shapes.</p> <p>Arithmetic: Develop strategies for multiplication and division to include: associative and distributive laws. Apply these strategies to solve a range of contextual problems. Learn to multiply multiples of 10 and begin to use the formal written multiplication method.</p> <p>Statistics: Interpret data represented on a pictogram and bar chart, collect own data and represent as a pictogram and bar chart.</p> <p>Measure: Money – recognise and understand the meaning of the symbols p and £, recognise all coins and notes in the British currency, find totals up to and beyond a £1 using coins. Find totals using notes up to £100 and find the difference between amounts up to and beyond £1.</p> <p>Fractions: To know what a unit and non-unit fraction is. To find fractions of discrete and continuous data involving: $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{1}{3}$. To compare and order fractions. To add and subtract fractions with the same denominator.</p>
Year 4	<p>Measure: Money – recap on coin/note recognition and the notation: p and £. Use repeated addition of coins to find totals and solve problems involving decimals to 2 decimal places.</p> <p>Shape: Understand what 'area' is and find the area of shapes using square sticky pads and then counting the small squares. Identify regular 2D shapes to include parallelograms, triangles, squares, trapeziums, equilateral triangles. Learn about symmetry to complete half a shape using a line of symmetry. Recognise symmetry within shapes.</p> <p>Arithmetic: Multiply decimals by 10 and 100 and order decimals up to 2 decimal places. Multiply two-digit numbers by a one-digit number using the formal written method. Move onto multiplying three-digit numbers by a one-digit number. Divide two-digit numbers by a one digit number using the formal method and then move onto dividing three-digit numbers by a one digit number. If ready then children can begin to learn the 'bus-stop' method.</p> <p>Fractions: Recap on equivalent fractions, being able to find equivalent fractions of shapes, quantities and on a number line. Order and compare fractions. Add and subtract fractions with the same denominators and use this knowledge to solve worded problems, understanding fractions in the context of measure.</p>
Year 5	<p>Statistics: draw and label x and y axis on a graph. Draw and interpret data a frequency graph from given and collected data. Collect, draw and interpret data on a line graph. Construct a survey to obtain data then draw graphs to illustrate and write conclusions. Using world maps find out about time zones and GMT. Understand and define the following terms: range, mode, median, mean and complete calculations to obtain them. Use the vocabulary to describe chance and probability and be aware of the difference. Use probability and chance lines to position events and find outcomes for conditional probability.</p> <p>Fractions: Recap on unit/non-unit fractions and equivalent fractions. Convert improper fractions to mixed numbers and mixed numbers to improper fractions. Compare and order fractions greater and less than 1 then order fractions with different denominators. Then move on to adding and subtracting fractions with different denominators – solving problems involving these in a range of contexts.</p> <p>Arithmetic: Understand the value of decimal digits, order decimal numbers, relate simple fractions to decimal values then round decimal numbers to the nearest tenth and hundredth. Add and subtract numbers with 2 decimal places, when secure, multiply and divide 2 decimal place numbers by a single digit.</p> <p>Geometry: Calculate angles on a straight line, at a point, vertically opposite, in a triangle, quadrilateral and angles in mixed shapes. Through investigations, prove that angles in a triangle add up to 180 and those in a quadrilateral add up to 360.</p>

	<p>Measure: When collecting data, learn to read scales e.g. thermometers, rain gauges but children should experience scales going into negative numbers.</p>
Year 6	<p>Shape: Quadrilaterals: know their properties and how to calculate the perimeter and area.</p> <p>Statistics: Revision of line and frequency graphs: planning what sort of data to collect and how best to represent it. Design questionnaires for a simple survey to create an appropriate style graph – present and draw conclusions from the graph. Interpret data from a pie chart. Construct a survey and collect data for it. Calculate the degree per person/item represented on the pie chart then construct a pie chart using the information. Draw conclusions from the pie chart.</p> <p>Build on understanding of Probability, knowing that it is part of a whole and is written as a fraction. Find the probability of events and simple conditional probability. Find the MMR from a set of numbers and from a frequency table.</p> <p>Algebra: Expand brackets by an integer, a letter, both a letter and an integer. Revise use of the four operations in two stage equations and solve equations involving brackets. Continue sequences, find the nth term of a sequence (including simple squared sequences), derive a sequence from the nth term, continue sequences in picture format. Form and solve simple expressions from a written statement, form expressions and equations for perimeter.</p> <p>Arithmetic: Convert mixed numbers to improper fractions (revision), add and subtract mixed numbers and improper fractions with unit fractions and non-unit fractions.</p> <p>Understand that fractions, decimals and percentages are linked and all part of a whole. Convert simple fractions into decimals and percentages, convert simple percentages into fractions and decimals and simple decimals into percentages and fractions. Understand recurring decimal numbers and order simple fractions, decimals and percentages by conversion.</p> <p>Ratio and Scale: simplify integer ratio to their lowest term, simplify decimal/fraction ratio to the lowest term. Share a quantity into two parts of a given ratio then into three parts. Work with maps to develop an understanding of scale drawing. Use ratio to calculate distances/lengths for map scales.</p>
Year 7	<p>Algebra – can expand algebraic brackets, factorise two terms fully, factorise terms using indices</p> <p>Algebra – can continue sequences, find the nth term of a sequence (including simple squared sequences), derive a sequence from the nth term, continue sequences in picture format, construct a table to record a sequence from picture format, give nth terms for sequences related to drawings</p> <p>Algebra – can substitute numbers into an equation plotting straight line graphs in all four quadrants, understand the gradient and intersect of a linear function, draw parallel lines and find points of intersection of lines, find the area enclosed by given linear functions (top set to work with quadratic functions)</p> <p>Geometry – can use formulas for the area and perimeter of 2d shapes, use areas and perimeters composite shapes, calculate the volume and surface area</p> <p>Number – calculate the product of prime factors giving answers with indices, find the Highest Common Factor, find the Lowest Common Multiple</p> <p>Number – can increase and decrease a quantity by a percentage, find the percentage change, work with profit and loss solving 'real life' problems</p> <p>Geometry – understand the origins of pi, know the formulae for area and circumference of circles, use a scientific calculator, find the area and circumference of whole and parts of circles</p> <p>Algebra – can solve equations using inverse operations.</p>

Statistics – can interpret conversion graphs, understand correlations, draw conversion graphs, plot and draw scatter graphs, draw the line of best fit, interpret scatter graphs

Statistics – can interpret and draw line and frequency graphs, find the MMR from a frequency table/graph, calculate the angles for a pie chart, accurately draw a pie chart

Geometry – can solve area and perimeter problems involving quadrilaterals, including kites, rhombi and trapezia. Can solve volume and surface area problems.

Geometry – can find interior and exterior angles in regular polygons, identify parallel line angles and calculate them, solve angle problems in polygons including parallel lines rules.

Algebra – can continue sequences, find the n th term of a sequence (including simple squared sequences), derive a sequence from the n th term, continue sequences in picture format, construct a table to record a sequence from picture format, give n th terms for sequences related to drawings

Algebra – can substitute numbers into an equation plotting straight line graphs in all four quadrants, understand the gradient and intersect of a linear function, draw parallel lines and find points of intersection of lines, find the area enclosed by given linear functions (**top set to work with quadratic functions**)

Number – can write probability using fractions/decimals, construct, complete and evaluate a probability table, calculate the probability of a single event, calculate conditional probability

Number – can solve problems simplifying ratios and dividing quantities into a ratio.

Scholarships and entrance exams this term
CE Trial Exams