

Mathematical aspect	Mathematical themes	National Curriculum statement
Weeks 1-2	<p>Geometry</p> <p>Identify perpendicular and parallel lines. Identify horizontal and vertical lines. Describe the properties 2-dimensional shapes and 3-dimensional shapes Learn about types of angles. Name and compare angles and use this information to help when classifying triangles and quadrilaterals. Understand what makes an angle are perpendicular - 'perpendicular' means two lines meet to make a right angle. Use concrete materials to find and show different lines. Understand that 'parallel' means two lines that never meet. Understand the term 'horizontal' meaning parallel to the floor. Identify the term 'vertical' meaning perpendicular to the floor. Name and identify the angles, vertices and sides in a 2-D shape. Describe the sides using 'perpendicular' and 'parallel' Measure 2-D shape to the nearest centimetre. Build 3-D shapes from their nets. Identify the correct net for a 3-D shape, using terms such as 'faces', 'vertices' and 'sides'. Identify the 2-D shapes on 3-D shapes Explore symmetry and symmetrical figures before applying this knowledge to the completion of symmetrical figures. Draw lines of symmetry on shapes and figures.</p>	<p>Identify pairs of perpendicular and parallel lines Identify horizontal and vertical lines Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Recognise 3-D shapes in different orientations and describe them. Identify acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations.</p>

<p>Weeks 3-4</p>	<p>Perimeter and area</p> <p>Explore perimeter.</p> <p>Understand perimeter as measuring the total length around a shape</p> <p>Understand perimeter as combining the lengths of sides.</p> <p>Calculating perimeter by adding all of the lengths together</p> <p>Measure area by measuring surface coverage, i.e. counting squares before measuring area by using multiplication.</p> <p>Find areas of figures that have squares and rectangles by counting and visualising. T</p> <p>Find area to figures in different orientations.</p>	<p>Measure the perimeter of simple 2-D shapes.</p> <p>To measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres</p> <p>Find the area of rectilinear shapes by counting squares</p>
<p>Weeks 5</p> <p>(At this stage in the year, need to decide on coverage. If you need time, number calculation and arithmetic need to be an daily theme rather than this 2 week block)</p>	<p>Number, calculation and arithmetic:</p> <p>Compliments to 100 (eg $20 + 80 = 100$, $67 + 33 = 100$) and all 2-digits numbers within 100</p> <p>Application of appropriate mental strategies when the numbers are easy to manipulate $58 + 22 = 60 + 20$</p> <p>Using rounding to check the reasonableness of the answer</p> <p>Understanding the columns</p> <p>Understanding the process of where to start and how to track through the written method</p> <p>Apply tables knowledge in the context of place value</p> <p>eg $6 \times 7 = 42$ and 60×7 etc</p> <p>Understanding the relationships between the multiplication and division statements eg $6 \times 7 = 42$, $7 \times 6 = 42$ and $42 \div 7 = 6$</p> <p>Facts and mental to written methods</p> <p>Mental strategies for partitioning for multiplication (96×6 could be 90×6 and 6×6)</p> <p>Mental strategies for rearranging for division ($96 \div 6$ could be partitioned into $60 \div 6$ and $36 \div 6$) distributive law</p> <p>Understanding multiplication as commutative</p> <p>Appropriate methods for addition, subtraction, multiplication and division stage in the year</p> <p>Short division method backed up by models and images (refer to calculation on policy</p>	<p>To add and subtract numbers mentally.</p> <p>To estimate the answer to a calculation and use inverse operations to check answers</p> <p>To add and subtract numbers using columnar methods</p> <p>To estimate the answer to a calculation and use inverse operations to check answers</p> <p>To solve addition and subtraction problems</p> <p>To recall and use multiplication and division facts</p> <p>To write and calculate mathematical statements for multiplication and division, using facts and place value</p> <p>To recognise and use commutativity in mental calculations</p> <p>To use a formal written method for multiplication and division.</p> <p>To recognise and use commutativity in mental calculations</p> <p>To understand the effect of dividing a one- or two- digit number by 10 and 100</p> <p>To solve problems, including missing number problems, involving multiplication and division</p>

<p>Weeks 6-7</p>	<p>Time</p> <p>The structure of the clock face.</p> <p>Understanding the position of the hands for o'clock and half past.</p> <p>Knowing that when the hour hand is half way between two numbers the minute hand will be in the 6 for half past.</p> <p>Understanding the position of the hands for quarter past and quarter to.</p> <p>Counting round the clock face in five minute intervals and then introduce the five minute interval</p> <p>Know the number of minutes in an hour and the number of hours in a day.</p> <p>Telling the time using 'a.m.' and 'p.m.', telling time to the minute, using analogue and digital time and telling time by using both the minute and hour hands.</p> <p>Understand the 24-hour clock and clocks using roman numerals.</p> <p>Measuring and comparing time in seconds, hours and minutes.</p> <p>Converting units of time and then finding a number of days in lengths of time</p>	<p>Tell and write the time: an analogue clock and 12-hour and 24-hour clocks; an analogue clock, including using Roman numerals from I to XII.</p> <p>Estimate and read time with increasing accuracy to the nearest minute.</p> <p>Record and compare time in terms of seconds, minutes and hours</p> <p>Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight.</p> <p>Know the number of seconds in a minute and the number of days in each month, year and leap year</p> <p>Compare durations of events [for example to calculate the time taken by particular events or tasks].</p> <p>Read, write and convert time between analogue and digital 12- and 24-hour clocks.</p> <p>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.</p>
<p>Week 8</p>	<p>Statistics:</p> <p>Use appropriate language: x axis is the horizontal axis. Y axis is the vertical axis. Ensure children understand this terminology.</p> <p>Understand how line graphs are used to measure change over time.</p> <p>Interpret line graphs</p> <p>Use information collated in a table to draw a line graph.</p> <p>Make predictions based on trends identified in data.</p> <p>When looking at pictograms ensure that pupils understand that one picture is not always equal in value to 1.</p> <p>Check appropriate scales to measure values.</p> <p>Read values in between scales accurately.</p> <p>Compare data from one bar graph with another</p>	<p>To interpret and present data using bar charts, pictograms and tables</p> <p>To solve one-step and two- step questions [for example 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables</p> <p>To interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs</p> <p>To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p>

<p>Week 9</p>	<p>Position and movement</p> <p>Plotting coordinate on the x and y axis To be able to read and write the notation of coordinates To be able to use the language to describe a shape as being translated Appropriate language and vocabulary</p>	<p>To describe positions on a 2D grids as coordinates in the first quadrant</p> <p>To describe movements between positions as translations</p> <p>To plot specified points and draw sides to complete a given polygon</p>
<p>Week 10</p>	<p>Assessment - testbase</p>	
<p>Weeks 11-12</p>	<p>Close the gap Opportunities to go richer and deeper Cross-curriculum learning: project</p>	