

## Year 5 Maths Medium Term Planning

### Year 5 Maths Medium Term Planning

#### AUTUMN

Unit A1   Number – place value, addition and subtraction, multiplication and division	
Weeks 1&2	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>• Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li> </ul>
	Strand: Number – place value
	<ul style="list-style-type: none"> <li>• Count from any given number (up to at least one million) in whole number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line</li> </ul>
	<ul style="list-style-type: none"> <li>• Explain what each digit represents in whole numbers and decimals with up to three places, and partition, round and order these numbers to the nearest whole number, 1 decimal place and to the nearest 10, 100, 1000, 10000, and 100000</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>• Use knowledge of place value and addition and subtraction of two digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>
	<ul style="list-style-type: none"> <li>• Recall quickly multiplication facts up to <math>12 \times 12</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>• Identify pairs of factors of two-digit whole numbers and find common factors and common multiples, e.g. for 6 and 9</li> </ul>
	<ul style="list-style-type: none"> <li>• Know and use the vocabulary of prime numbers, prime factors, composite numbers (non-prime)</li> </ul>
	<ul style="list-style-type: none"> <li>• Recognise and use square numbers and cubed numbers and use the notation squared (<math>^2</math>) and cubed (<math>^3</math>)</li> </ul>
	<ul style="list-style-type: none"> <li>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	<ul style="list-style-type: none"> <li>• Use efficient written methods to add and subtract whole numbers with more than four digits and decimals with up to two places</li> </ul>
<ul style="list-style-type: none"> <li>• Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000</li> </ul>	
<ul style="list-style-type: none"> <li>• Extend mental methods for whole-number calculations, for example to multiply a two-digit number by a one-digit number (e.g. <math>12 \times 9</math>), to multiply by 25 (e.g. <math>16 \times 25</math>), to subtract one near-multiple of 1000 from another (e.g. <math>6070 - 4097</math>)</li> </ul>	

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Unit B1   3 weeks   Number – multiplication and division, geometry	
<b>Weeks 3-5</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false</li> </ul>
	Strand: Number – multiplication and division
	<ul style="list-style-type: none"> <li>Recall quickly multiplication facts up to 12 x 12 and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>Identify pairs of factors of two-digit whole numbers and find common factors and common multiples, e.g. for 6 and 9</li> </ul>
	<ul style="list-style-type: none"> <li>Know and use the vocabulary of prime numbers, prime factors, composite numbers (non-prime)</li> </ul>
	<ul style="list-style-type: none"> <li>Recognise and use square numbers and cubed numbers and use the notation squared (<math>^2</math>) and cubed (<math>^3</math>)</li> </ul>
	<ul style="list-style-type: none"> <li>Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	Strand: Number – addition and subtraction
	<ul style="list-style-type: none"> <li>Use efficient written methods to add and subtract whole numbers with more than four digits and decimals with up to two places</li> </ul>
	Strand: Geometry
<ul style="list-style-type: none"> <li>Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes</li> </ul>	

## Year 5 Maths Medium Term Planning

Unit C1   2 weeks   Statistics and measurement	
Weeks 6-7	<b>Learning Objectives</b>
	<b>Strand: Using and applying mathematics</b>
	<ul style="list-style-type: none"><li>Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry</li></ul>
	<ul style="list-style-type: none"><li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li></ul>
	<b>Strand: Measurement</b>
	<ul style="list-style-type: none"><li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li></ul>
	<ul style="list-style-type: none"><li>Understand and use equivalences between metric units and common imperial units (inches, pounds, pints)</li></ul>
	<ul style="list-style-type: none"><li>Interpret a reading that lies between two unnumbered divisions on a scale</li></ul>
	<b>Strand: Statistics</b>
	<ul style="list-style-type: none"><li>Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask</li></ul>
<ul style="list-style-type: none"><li>Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time – solve problems using information presented in a line graph and in tables</li></ul>	

## Year 5 Maths Medium Term Planning

Unit D1   2 weeks   Measurement and geometry, Number - fractions	
<b>Weeks 8-9</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	Strand: Number – Place Value and Fractions
	<ul style="list-style-type: none"> <li>Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000</li> </ul>
	<ul style="list-style-type: none"> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li> </ul>
	Strand: Geometry
	<ul style="list-style-type: none"> <li>Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides</li> </ul>
	Strand: Measurement
	<ul style="list-style-type: none"> <li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy, (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li> </ul>
<ul style="list-style-type: none"> <li>Interpret a reading that lies between two unnumbered divisions on a scale</li> </ul>	
<ul style="list-style-type: none"> <li>Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area and estimate area of irregular shapes</li> </ul>	
<ul style="list-style-type: none"> <li>Estimate volume and capacity</li> </ul>	
	<ul style="list-style-type: none"> <li>Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals Solve problems involving converting between units of time</li> </ul>

## Year 5 Maths Medium Term Planning

Unit E1   3 weeks   Number - fractions	
<b>Weeks 10-12</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	<ul style="list-style-type: none"> <li>Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem</li> </ul>
	<ul style="list-style-type: none"> <li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li> </ul>
	Strand: Number - fractions
	<ul style="list-style-type: none"> <li>Express a smaller whole number as a fraction of a larger one, (e.g. recognise that 5 out of 8 is <math>\frac{5}{8}</math>); find equivalent fractions,</li> <li>(e.g. <math>\frac{7}{10} = \frac{14}{20}</math>, or <math>1\frac{2}{10} = \frac{12}{10}</math>); relate fractions to their decimal representations (including to thousandths)</li> </ul>
	<ul style="list-style-type: none"> <li>Compare and order fractions</li> <li>Identify name and write equivalent fractions</li> <li>Recognise and convert mixed numbers and improper fractions</li> <li>Add and subtract fractions with the same denominator and multiples of the same denominator</li> <li>Multiply fractions by whole numbers</li> </ul>
	Strand: Number – multiplication and division
	<ul style="list-style-type: none"> <li>Recall quickly multiplication facts up to <math>10 \times 10</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>Identify pairs of factors of two-digit whole numbers and find common factors and common multiples, e.g. for 6 and 9</li> </ul>
	<ul style="list-style-type: none"> <li>Know and use the vocabulary of prime numbers, prime factors, composite numbers (non-prime)</li> </ul>
	<ul style="list-style-type: none"> <li>Recognise and use square numbers and cubed numbers and use the notation squared (<math>^2</math>) and cubed (<math>^3</math>)</li> </ul>
	<ul style="list-style-type: none"> <li>Extend mental methods for whole-number calculations, for example to multiply a two-digit number by a one-digit number (e.g. <math>12 \times 9</math>), to multiply by 25 (e.g. <math>16 \times 25</math>), to subtract one near-multiple of 1000 from another (e.g. <math>6070 - 4097</math>)</li> <li>Refine and use efficient written methods to multiply and divide <math>HTU \times U</math>, <math>TU \times TU</math>, <math>U.t \times U</math> and <math>HTU \div U</math></li> <li>Find fractions using division, (e.g. <math>\frac{1}{100}</math> of 5 kg), and percentages of numbers and quantities, (e.g. 10%, 5% and 15% of £80)</li> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li> </ul>

## Year 5 Maths Medium Term Planning

### SPRING

Unit A2   2 weeks   Number – place value; addition and subtraction; multiplication and division	
<b>Weeks 1-2</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	<ul style="list-style-type: none"> <li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li> </ul>
	Strand: Number – place value
	<ul style="list-style-type: none"> <li>Count from any given number (up to at least one million) in whole number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line</li> </ul>
	<ul style="list-style-type: none"> <li>Explain what each digit represents in whole numbers and decimals with up to three places, and partition, round and order these numbers</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>
	<ul style="list-style-type: none"> <li>Recall quickly multiplication facts up to <math>12 \times 12</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>Identify pairs of factors of two-digit whole numbers and find common factors and common multiples, e.g. for 6 and 9</li> </ul>
	<ul style="list-style-type: none"> <li>Know and use the vocabulary of prime numbers, prime factors, composite numbers (non-prime)</li> </ul>
	<ul style="list-style-type: none"> <li>Recognise and use square numbers and cubed numbers and use the notation squared (<math>^2</math>) and cubed (<math>^3</math>)</li> </ul>
	<ul style="list-style-type: none"> <li>Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	<ul style="list-style-type: none"> <li>Extend mental methods for whole-number calculations, for example to multiply a two-digit number by a one-digit number (e.g. <math>12 \times 9</math>), to multiply by 25 (e.g. <math>16 \times 25</math>), to subtract one near-multiple of 1000 from another (e.g. <math>6070 - 4097</math>)</li> </ul>
<ul style="list-style-type: none"> <li>Use efficient written methods to add and subtract whole numbers with more than four digits and decimals with up to two places</li> </ul>	
<ul style="list-style-type: none"> <li>Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000</li> </ul>	

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|  | <ul style="list-style-type: none"><li>• Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li></ul> |
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## Year 5 Maths Medium Term Planning

Unit B2   3 weeks   Number – addition and subtraction, multiplication and division, geometry	
<b>Weeks 3-5</b>	<b>Learning Objectives</b>
	<b>Strand: Using and applying mathematics</b>
	<ul style="list-style-type: none"> <li>• Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem</li> </ul>
	<ul style="list-style-type: none"> <li>• Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false</li> </ul>
	<b>Strand: Number- addition and subtraction; multiplication and division</b>
	<ul style="list-style-type: none"> <li>• Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>
	<ul style="list-style-type: none"> <li>• Recall quickly multiplication facts up to <math>12 \times 12</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	<b>Strand: Geometry</b>
	<ul style="list-style-type: none"> <li>• Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3-D solids; use knowledge of properties to draw 2-D shapes and identify and draw nets of 3-D shapes</li> </ul>
<ul style="list-style-type: none"> <li>• Complete patterns with up to two lines of symmetry; draw the position of a shape after a reflection in lines parallel to the axes only or translation in first quadrant only</li> </ul>	

## Year 5 Maths Medium Term Planning

Unit C2   2 weeks   Statistics and measurement	
Weeks 6-7	<b>Learning Objectives</b>
	Strand: Statistics
	<ul style="list-style-type: none"><li>Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask</li></ul>
	<ul style="list-style-type: none"><li>Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time- solve problems using information presented in a line graph and in tables</li></ul>
	Strand: Measurement
	<ul style="list-style-type: none"><li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li></ul>
	<ul style="list-style-type: none"><li>Interpret a reading that lies between two unnumbered divisions on a scale</li></ul>
	Strand: Using and applying mathematics
<ul style="list-style-type: none"><li>Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry</li></ul>	
<ul style="list-style-type: none"><li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li></ul>	

## Year 5 Maths Medium Term Planning

Unit D2   2 weeks   Number – addition and subtraction; multiplication and division, measurement and geometry	
<b>Weeks 8-9</b>	<b>Learning Objectives</b>
	<b>Strand: Using and applying mathematics</b>
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	<b>Strand: Number – addition and subtraction; multiplication and division</b>
	<ul style="list-style-type: none"> <li>Use efficient written methods to add and subtract whole numbers with more than four digits and decimals with up to two places</li> </ul>
	<ul style="list-style-type: none"> <li>Use understanding of place value to multiply and divide whole numbers and decimals by 10, 100 or 1000</li> </ul>
	<ul style="list-style-type: none"> <li>Refine and use efficient written methods to multiply and divide HTU x U, TU x TU, U.t x U, and HTU ÷ U</li> </ul>
	<ul style="list-style-type: none"> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li> </ul>
	<b>Strand: Measurement</b>
	<ul style="list-style-type: none"> <li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy, (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li> </ul>
	<ul style="list-style-type: none"> <li>Interpret a reading that lies between two unnumbered divisions on a scale</li> </ul>
	<ul style="list-style-type: none"> <li>Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area and estimate area of irregular shapes</li> </ul>
	<ul style="list-style-type: none"> <li>Estimate volume and capacity</li> </ul>
	<b>Strand: Geometry</b>
<ul style="list-style-type: none"> <li>Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides</li> </ul>	
<ul style="list-style-type: none"> <li>Estimate, draw and measure acute and obtuse and reflex angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line, at a point and one whole turn, and half a turn including other</li> </ul>	

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## Year 5 Maths Medium Term Planning

Unit E2   3 weeks   Number – fractions; addition and subtraction	
<b>Weeks 10-12</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem</li> </ul>
	<ul style="list-style-type: none"> <li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li> </ul>
	Strand: Number - fractions
	<ul style="list-style-type: none"> <li>Find fractions using division, (e.g. 1/100 of 5 kg), and percentages of numbers and quantities, e.g. 10%, 5% and 15% of £80)</li> </ul>
	<ul style="list-style-type: none"> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li> </ul>
	Strand: Number – addition and subtraction
	<ul style="list-style-type: none"> <li>Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>
	Strand: Number - Fractions
<ul style="list-style-type: none"> <li>Express a smaller whole number as a fraction of a larger one, (e.g. recognise that 5 out of 8 is <math>\frac{5}{8}</math>); find equivalent fractions, (e.g. <math>\frac{7}{10} = \frac{14}{20}</math>, or <math>\frac{19}{10} = 1\frac{9}{10}</math>); relate fractions to their decimal representations</li> </ul>	
<ul style="list-style-type: none"> <li>Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages</li> </ul>	
<ul style="list-style-type: none"> <li>Use sequences to scale numbers up or down; solve problems involving proportions of quantities,  e.g. decrease quantities in a recipe designed to feed six people</li> </ul>	

## Year 5 Maths Medium Term Planning

### Summer

Unit A3   2 weeks Number – place value, addition and subtraction; multiplication and division	
<b>Weeks 1-2</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	<ul style="list-style-type: none"> <li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li> </ul>
	Strand: Number – place value
	<ul style="list-style-type: none"> <li>Count from any given number in whole number and decimal steps, extending beyond zero when counting backwards; relate the numbers to their position on a number line</li> </ul>
	<ul style="list-style-type: none"> <li>Explain what each digit represents in whole numbers and decimals with up to two places, and partition, round and order these numbers</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>Refine and use efficient written methods to multiply and divide HTU x U, TU x TU, U.t x U, and HTU “÷ U”</li> </ul>
	<ul style="list-style-type: none"> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g); interpret the display correctly in the context of measurement</li> </ul>
<ul style="list-style-type: none"> <li>Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>	
<ul style="list-style-type: none"> <li>Recall quickly multiplication facts up to <math>12 \times 12</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>	
<ul style="list-style-type: none"> <li>Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>	

## Year 5 Maths Medium Term Planning

Unit B3   3 weeks   Number – addition and subtraction; multiplication and division, geometry	
<b>Weeks 3-5</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>• Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem</li> </ul>
	<ul style="list-style-type: none"> <li>• Explore patterns, properties and relationships and propose a general statement involving numbers or shapes; identify examples for which the statement is true or false</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>• Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences and doubles and halves of decimals e.g. <math>6.5 \pm 2.7</math>, half of 5.6, double 0.34</li> </ul>
	<ul style="list-style-type: none"> <li>• Recall quickly multiplication facts up to <math>12 \times 12</math> and use them to multiply pairs of multiples of 10 and 100 and derive quickly corresponding division facts</li> </ul>
	<ul style="list-style-type: none"> <li>• Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	Strand: Geometry
	<ul style="list-style-type: none"> <li>• Identify, visualise and describe properties of rectangles, triangles, regular polygons and 3 – D solids; use knowledge of properties to draw 2 – D shapes and identify and draw nets of 3 – D shapes</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>• Use efficient written methods to add and subtract whole numbers and decimals <b>with more than four digits</b> with up to two places</li> </ul>
<ul style="list-style-type: none"> <li>• Solve problems, including those involving decimals or fractions "(e.g. to find <math>\frac{3}{4}</math> of 150 g); interpret the display correctly in the context of measurement</li> </ul>	

## Year 5 Maths Medium Term Planning

Unit C3   2 weeks   Statistics and measurement	
Weeks 6-7	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"><li>Plan and pursue an enquiry; present evidence by collecting, organising and interpreting information; suggest extensions to the enquiry</li></ul>
	<ul style="list-style-type: none"><li>Explain reasoning using diagrams, graphs and text; refine ways of recording using images and symbols</li></ul>
	Strand: Measurement
	<ul style="list-style-type: none"><li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li></ul>
	<ul style="list-style-type: none"><li>Interpret a reading that lies between two unnumbered divisions on a scale</li></ul>
	Strand: Statistics
<ul style="list-style-type: none"><li>Answer a set of related questions by collecting, selecting and organising relevant data; draw conclusions, using ICT to present features, and identify further questions to ask</li></ul>	
<ul style="list-style-type: none"><li>Construct frequency tables, pictograms and bar and line graphs to represent the frequencies of events and changes over time- solve problems using information presented in a line graph and tables</li></ul>	



## Year 5 Maths Medium Term Planning

Unit D3   2 weeks   Number – addition and subtraction; multiplication and division, measurement and geometry	
<b>Weeks 8-9</b>	<b>Learning Objectives</b>
	Strand: Using and applying mathematics
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	Strand: Number – addition and subtraction; multiplication and division
	<ul style="list-style-type: none"> <li>Use efficient written methods to add and subtract whole numbers with more than four digits and decimals with up to two places</li> </ul>
	<ul style="list-style-type: none"> <li>Refine and use efficient written methods to multiply and divide HTU x U, TU x TU, U.t x U, and HTU + U</li> </ul>
	<ul style="list-style-type: none"> <li>Solve problems, including those involving decimals or fractions (e.g. to find <math>\frac{3}{4}</math> of 150 g)</li> </ul>
	<ul style="list-style-type: none"> <li>Use knowledge of rounding, place value, number facts and inverse operations to estimate and check calculations</li> </ul>
	Strand: Geometry
	<ul style="list-style-type: none"> <li>Read and plot coordinates in the first quadrant; recognise parallel and perpendicular lines in grids and shapes; use a set-square and ruler to draw shapes with perpendicular or parallel sides</li> </ul>
	<ul style="list-style-type: none"> <li>Complete patterns with up to two lines of symmetry; draw the position of a shape after a reflection in lines parallel to the axes only or translation in first quadrant only</li> </ul>
	<ul style="list-style-type: none"> <li>Estimate, draw and measure acute and obtuse and reflex angles using an angle measurer or protractor to a suitable degree of accuracy; calculate angles in a straight line at a point and one whole turn, and half a turn including other multiples of <math>90^{\circ}</math></li> </ul>
	Strand: Measurement
	<ul style="list-style-type: none"> <li>Read, choose, use and record standard metric units to estimate and measure length, weight and capacity to a suitable degree of accuracy, (e.g. the nearest centimetre); convert larger to smaller units using decimals to one place (e.g. change 2.6 kg to 2600 g)</li> </ul>
	<ul style="list-style-type: none"> <li>Interpret a reading that lies between two unnumbered divisions on a scale</li> </ul>
<ul style="list-style-type: none"> <li>Draw and measure lines to the nearest millimetre; measure and calculate the perimeter of regular and irregular polygons; use the formula for the area of a rectangle to calculate the rectangle's area and estimate area of irregular shapes</li> </ul>	
<ul style="list-style-type: none"> <li>Estimate volume and capacity</li> </ul>	
<ul style="list-style-type: none"> <li>Read timetables and time using 24-hour clock notation; use a calendar to calculate time intervals Solve problems involving converting between units of time</li> </ul>	

## Year 5 Maths Medium Term Planning

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Unit E3   3 weeks   Number – multiplication and division, fractions	
<b>Weeks 10-12</b>	<b>Learning Objectives</b>
	<b>Strand: Using and applying mathematics</b>
	<ul style="list-style-type: none"> <li>Solve one-step and two-step problems involving whole numbers and decimals and all four operations, choosing and using appropriate calculation strategies</li> </ul>
	<ul style="list-style-type: none"> <li>Represent a puzzle or problem by identifying and recording the information or calculations needed to solve it; find possible solutions and confirm them in the context of the problem</li> </ul>
	<b>Strand: Number – multiplication and division</b>
	<ul style="list-style-type: none"> <li>Refine and use efficient written methods to multiply and divide HTU x U, TU x TU, U.t x U, and HTU + U</li> </ul>
	<ul style="list-style-type: none"> <li>Find fractions using division, (e.g. 1/100 of 5 kg), and percentages of numbers and quantities, (e.g. 10%, 5% and 15% of £80)</li> </ul>
	<b>Strand: Number - fractions</b>
	<ul style="list-style-type: none"> <li>Express a smaller whole number as a fraction of a larger one, (e.g. recognise that 5 out of 8 is 5/8); find equivalent fractions, (e.g. <math>\frac{7}{10} = \frac{14}{20}</math>, or <math>\frac{19}{10} = 1\frac{9}{10}</math>); relate fractions to their decimal representations</li> </ul>
	<ul style="list-style-type: none"> <li>Compare and order fractions</li> <li>Identify name and write equivalent fractions</li> <li>Recognise and convert mixed numbers and improper fractions</li> <li>Add and subtract fractions with the same denominator and multiples of the same denominator</li> <li>Multiply fractions by whole numbers</li> </ul>
<ul style="list-style-type: none"> <li>Understand percentage as the number of parts in every 100 and express tenths and hundredths as percentages</li> </ul>	
<ul style="list-style-type: none"> <li>Use sequences to scale numbers up or down; solve problems involving proportions of quantities, e.g. decrease quantities in a recipe designed to feed six people</li> </ul>	

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