

## Second Level: Understanding/ Use With Understanding [Second \*\*]

	Term 1	Term 2	Term 3	Term 4
<b>Estimating and Rounding</b>	<ul style="list-style-type: none"> <li>Round any number to nearest 1,000, 10,000, 100,000</li> </ul>	<ul style="list-style-type: none"> <li>Estimate the answer to a problem</li> <li>Know that <math>+</math>/<math>-</math> and <math>\times</math>/<math>\div</math> are inverse operations</li> <li>Estimate and check solutions to a problem using the inverse operation</li> </ul>	<ul style="list-style-type: none"> <li>Solve problems using estimation and check using the inverse</li> <li>Justify answers</li> </ul>	<ul style="list-style-type: none"> <li>Round decimals to the nearest whole number</li> <li>Round decimals to the nearest tenth</li> </ul>
<b>Awareness of Number</b> <ul style="list-style-type: none"> <li>Counting</li> <li>Numerals</li> <li>Quantities</li> <li>Place Value</li> </ul>	<ul style="list-style-type: none"> <li>Read numbers beyond 10,000</li> <li>Write numbers beyond 10,000</li> <li>Count in tens of thousands, thousands, hundreds, tens, units</li> <li>Order and compare numbers beyond 10,000</li> <li>Read and write decimal fractions up to 2 decimal places</li> <li>Understand and provide examples of the numbers before and after a given number</li> <li>Use concrete resources to represent different numbers (decimals)</li> <li>Use pictorial representations to show different numbers (decimals)</li> <li>Match numerals to pictorial representations or concrete materials (decimals)</li> <li>Estimate numbers using different representations (decimals)</li> <li>To make 5 digit numbers and beyond recording in numbers and words</li> <li>To represent 6 digit numbers (beyond 100,000 concrete)</li> <li>To recognise the place value of each digit in a 6 digit number</li> <li>Represent numbers to at least 2 decimal places using tenths and hundredths</li> </ul>	<ul style="list-style-type: none"> <li>Sequence numbers 0-10,000 forwards and backwards</li> <li>Understand and count in tenths</li> <li>Describe and extend number sequences</li> <li>Use concrete resources to represent different numbers (decimals)</li> <li>Use pictorial representations to show different numbers (decimals)</li> <li>Match numerals to pictorial representations or concrete materials (decimals)</li> <li>Estimate numbers using different representations (decimals)</li> <li>Compare and order numbers to at least 100,00</li> </ul>	<ul style="list-style-type: none"> <li>Understand and count in hundredths</li> <li>Count beyond 0 forwards and backwards on a number line</li> <li>Position decimal fractions on a number line</li> <li>Use concrete resources to represent different numbers (decimals)</li> <li>Use pictorial representations to show different numbers (decimals)</li> <li>Match numerals to pictorial representations or concrete materials (decimals)</li> <li>Estimate numbers using different representations (decimals)</li> <li>Understand thousandths and represent the value (concrete)</li> </ul>	<ul style="list-style-type: none"> <li>Convert between tenths and hundredths</li> <li>Solve problems involving negative numbers</li> <li>Order decimal fractions up to 2 decimal places</li> <li>Describe and extend number sequences involving decimal fractions with 2 decimal places</li> <li>To recognise and describe linear number sequences</li> <li>To find the rule for a number sequence</li> </ul>
<b>Addition &amp; Subtraction</b>	<ul style="list-style-type: none"> <li><math>+</math> and <math>-</math> 4 digit numbers and beyond (regrouping in the 1,000s, 100s, 10s, and 1s etc.)</li> <li>Use rounding to check answers to calculations</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract decimals up to 2 decimal places</li> <li>Use a variety of strategies to solve <math>+</math> and <math>-</math> problems</li> </ul>	<ul style="list-style-type: none"> <li>To find the missing value in addition and subtraction calculations</li> <li>To solve two step word problems for <math>+</math> and <math>-</math></li> </ul>	<ul style="list-style-type: none"> <li>To solve two step word problems for <math>+</math> and <math>-</math></li> <li>To solve multi-step word problems for <math>+</math> and <math>-</math></li> </ul>
<b>Multiplication &amp; Division</b>	<ul style="list-style-type: none"> <li>Multiply numbers up to 4 digits by a 1 digit number</li> <li>Divide numbers up to 4 digits by a one digit number (with remainders)</li> </ul>	<ul style="list-style-type: none"> <li>Identify common factors of 2 numbers</li> <li>Divide whole numbers by 10, 100 and 1,000</li> <li>To <math>\div</math> by powers of 10</li> </ul>	<ul style="list-style-type: none"> <li>To solve division problems with decimals using place value counters</li> <li>Multiply whole numbers up to 4 digits by a 2 digit number</li> <li>Divide by powers of 1,000</li> </ul>	<ul style="list-style-type: none"> <li>Know prime numbers, prime factors and composite numbers (non-prime)</li> <li>Recognise and use squared and cubed numbers</li> <li>To understand and use the distributive law to simplify problems  <math>3x(2+4) = 3x2 + 3x4</math> or  <math>3x204 = 3x200 + 3x4</math></li> <li>Solve multi-step word problems</li> </ul>
<b>Fractions, Decimals and Percentages</b>		<ul style="list-style-type: none"> <li>Identify equivalent fractions (including tenths and hundredths)</li> <li>Compare and order fractions (whose denominators are multiples of the same number)</li> <li>Calculate fractions of quantities.</li> </ul>	<ul style="list-style-type: none"> <li>Read and write decimal numbers as fractions</li> <li>Understand and use the term percentage %</li> </ul>	<ul style="list-style-type: none"> <li>Add and subtract decimals</li> <li>Convert fractions to %</li> </ul>

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	Term 1	Term 2	Term 3	Term 4
<b>Measurement:</b> <ul style="list-style-type: none"> <li>▪ Money</li> <li>▪ Time</li> <li>▪ Length</li> <li>▪ Mass</li> <li>▪ Perimeter</li> <li>▪ Area</li> <li>▪ Volume</li> <li>▪ Patterns and Relationships</li> <li>▪ Expressions and Equations</li> <li>▪ Impact of Maths</li> </ul>	<ul style="list-style-type: none"> <li>▪ Can tell the time to the minute in both 12 and 24 hour clocks</li> <li>▪ Measure/ estimate the length, width and height using mm</li> <li>▪ Choose appropriate unit of measure when estimating weight</li> <li>▪ Know perimeter is the distance round the outside of a shape</li> <li>▪ Calculate the area of squares and rectangles using the formula <math>A=l \times b</math></li> <li>▪ Know that <math>1\text{ml} = \text{cm}^3</math></li> <li>▪ Apply knowledge to generate a number sequence</li> <li>▪ Research historical number systems and how they have changed over time</li> </ul>	<ul style="list-style-type: none"> <li>▪ Solve money problems using 4 operations</li> <li>▪ Converts fractions of an hour to minutes, e.g. <math>1\frac{3}{4}</math> hours = 105 mins</li> <li>▪ Use and create timetables set out in both 12 and 24 hour clock</li> <li>▪ Measure and estimate distance using kms</li> <li>▪ Know that <math>1\text{km}=1,000\text{m}</math></li> <li>▪ Measure accurately using <math>1/4\text{kg}</math>, <math>1/2\text{kg}</math> and g</li> <li>▪ Measure accurately perimeter of regular shapes using cm</li> <li>▪ Measure larger areas using <math>\text{m}^2</math></li> <li>▪ Convert <math>\text{cm}^3</math> to ml to l</li> <li>▪ Apply knowledge to generate a number sequence</li> </ul>	<ul style="list-style-type: none"> <li>▪ Compare costs from different retailers to determine affordability</li> <li>▪ Introduce different ways of paying for services (bank cards/ credit cards)</li> <li>▪ Calculate time intervals in both 12 hour and 24 hour clocks</li> <li>▪ Convert between mm/cm/m</li> <li>▪ Reads a variety of scales accurately</li> <li>▪ Measure accurately perimeter of irregular shapes using cm</li> <li>▪ Calculate the perimeter of irregular shapes using cm</li> <li>▪ Convert between <math>\text{cm}^2</math> and <math>\text{m}^2</math></li> <li>▪ Calculate volume of cubes and cuboids using <math>V = l \times b \times h</math></li> <li>▪ To express missing number problems algebraically <math>x-30=40</math> and <math>4B=20</math></li> </ul>	<ul style="list-style-type: none"> <li>▪ Buy item within a budget</li> <li>▪ Introduction to the links between speed, distance and time</li> <li>▪ Convert between m and km in writing in decimal form to 1 d.p</li> <li>▪ Knows that <math>1\text{kg} = 2.2\text{lbs}</math> and there are 14 lbs in a stone</li> <li>▪ Measure accurately perimeter of irregular shapes using cm</li> <li>▪ Calculate the perimeter of irregular shapes using cm</li> <li>▪ Convert between <math>\text{cm}^2</math> and <math>\text{m}^2</math></li> <li>▪ Calculate volume of cubes and cuboids using <math>V = l \times b \times h</math></li> <li>▪ Use well known number patterns such as square, cubed and triangular numbers</li> <li>▪ Explain a rule and extend a sequence</li> <li>▪ To use simple formula to generate, express and describe linear number sequences</li> </ul>
<b>Shape, Position and Movement</b> <ul style="list-style-type: none"> <li>▪ 2D and 3D Shapes</li> <li>▪ Angles and Symmetry</li> <li>▪ Transformation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Identify acute, obtuse, straight and reflex angles in the wider world</li> <li>▪ Name angles and measure and draw to 2 degree accuracy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Extend the range of 2D shapes</li> <li>▪ Extend knowledge of 2D shapes</li> <li>▪ Identify lines of symmetry of irregular shapes</li> <li>▪ Identify and draw up to 4 lines of symmetry</li> <li>▪ Complete and create symmetrical shapes/ patterns with vertical, horizontal and diagonal lines of symmetry</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continue and extend range of shape properties</li> <li>▪ Extend understanding of 3D shapes</li> <li>▪ Extend the range of 3D shapes</li> <li>▪ Name 8 compass rose and identify angles between them using 3 figure bearings</li> <li>▪ Draw simple triangles given angles and lengths</li> <li>▪ Complete and create symmetrical shapes/ patterns with vertical, horizontal and diagonal lines of symmetry (missing angles)</li> <li>▪ Interpret a coordinate system to locate and plot on a point on a grid</li> </ul>	<ul style="list-style-type: none"> <li>▪ Continue and extend range of shape properties</li> <li>▪ Use and create nets for 3D shapes</li> <li>▪ Extend knowledge of properties of 3D shapes</li> <li>▪ Measure and draw 3 figure compass bearings using a protractor</li> <li>▪ Apply scale to interpret maps, plans and diagrams</li> <li>▪ Interpret a coordinate system to locate and plot on a point on a grid</li> </ul>
<b>Information Handling:</b> <ul style="list-style-type: none"> <li>▪ Data Handling and Analysis</li> <li>▪ Ideas of Chance and Uncertainty</li> </ul>		<ul style="list-style-type: none"> <li>▪ Predict and explain outcomes using appropriate vocabulary: 1 in 2, 1 in 6</li> </ul>	<ul style="list-style-type: none"> <li>▪ Interpret information presented to show awareness of significance of data</li> <li>▪ Conduct experiments involving chance and probability: roll a 6</li> </ul>	<ul style="list-style-type: none"> <li>▪ Display data in a variety of more complex ways</li> <li>▪ Select appropriate questions for a survey to gather information required</li> <li>▪ Know how methods of collecting information may affect the data collected</li> </ul>