

Moorgate Primary Academy

Year 3 Maths Long Term Overview

Year 3 - Autumn				
<u>Geometry – Properties of Shape</u>	<u>Place Value</u>	<u>Addition and Subtraction (I)</u>	<u>Addition and Subtraction (II)</u>	<u>Multiplication and Division (I)</u>
<ul style="list-style-type: none"> -Understand angles as a measure of a turn. Learn that a right angle is a quarter turn, two right angles make a half turn and four right angles make a whole turn -Learn the symbol that indicates a right angle and mark this on different shapes -Recognise angles that are greater than, less than or equal to a right angle -Draw and measure accurately in cm and mm -Identify and draw horizontal and vertical lines -Identify and construct parallel and perpendicular lines -Apply understanding of types of line and angle to the properties of 2D shapes 	<p>Recognise the place value of each digit in a two-digit number (tens, ones)</p> <p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number</p> <p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)</p> <p>Compare and order numbers up to 1000</p> <p>Identify, represent and estimate numbers using different representations</p>	<p>Use their knowledge of number bonds within 10 to add and subtract multiples of 100, up to 1,000.</p> <p>Add and subtract a 1-digit number to and from a 3-digit number, using their understanding of place value</p> <p>Add and subtract multiples of 10 to and from a 3-digit number by using their knowledge of number bonds to add and subtract the 10s digits.</p> <p>Add a multiple of 100 to a 3-digit number by using their knowledge of number bonds to add the 100s digits</p> <p>Explore patterns in addition and subtraction and the effect on different digits of adding or subtracting 1s, 10s or 100s</p> <p>Understand how to recognise additions where they will cross</p>	<p>Add two 3-digit numbers where no exchange is necessary. They will use a written column method and begin with the 1s, then the 10s and then the 100s.</p> <p>Subtract a 3-digit number from another 3-digit number where no exchange is necessary. They represent the subtraction as a written column subtraction</p> <p>Add two 3-digit numbers where exchange may be necessary, and to recognise when it is or is not necessary</p> <p>Subtraction of 3-digit numbers to include calculations where exchange is necessary across one or two columns.</p>	<ul style="list-style-type: none"> -Use arrays and represent arrays as a multiplication sentence -Secure understanding of 2, 5 and 10 times table.

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<ul style="list-style-type: none"> -Sort 3D shapes based on their properties. -Construct 3D shapes by considering their properties in relation to different construction material 	<p>a 10, and know how to use exchange of 10 ones for 1 ten.</p> <p>Adding 10s to a 3-digit number, including examples which require exchange of 10 tens for 1 hundred.</p> <p>Subtract a 1-digit number where the subtraction crosses a 10. Children understand how to exchange 1 ten for 10 ones.</p> <p>Subtract a multiple of 10 from a 3-digit number, including where they have to exchange 1 hundred for 10 tens.</p>	<p>Make number bonds to 100</p> <p>Use inverse operations and fact families as checking strategies. They will also use them to help make appropriate calculations more efficient as mental strategies</p>	
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Year 3 - Spring

<u>Multiplication and Division (2)</u>	<u>Multiplication and Division (III)</u>	<u>Length and Perimeter</u>	<u>Fractions (I)</u>	<u>Mass</u>
<ul style="list-style-type: none"> -Know times table facts for the 3, 4 and 8 times table -Know related division facts for the 3, 4 and 8 times table -Multiply and divide by 3, 4 and 8 -Use derived facts to help solve more complex times tables eg. Double 4 x 2 = 8 x 2 	<p>Find multiples of 10 by counting in 10s. They will begin to understand what happens when you multiply 1- and 2-digit numbers by 10. Children will also work out how many 10s are in 3-digit multiples of 10</p> <p>Use known multiplication facts to solve related multiplication problems, particularly involving multiplying by 10.</p>	<p><u>Length and Perimeter</u></p> <p>Accurately measure and record length using a combination of metres and centimetres</p> <p>Use a ruler to measure different objects using mm and cm</p> <p>Convert between mm, cm and m</p>	<p><u>Fractions (I)</u></p> <p>Learn and understand that the denominator of a unit fraction tells you the number of equal parts the whole is made up of</p> <p>Compare and order unit fractions</p> <p>Understand what the numerator of a non-unit fraction represents.</p>	<p><u>Mass</u></p> <p>Work on number lines and explore their connection to scales on different measuring devices, such as weighing scales or jugs</p> <p>read a range of scales relating to mass, including those with missing intervals.</p> <p>Read a range of scales in which kilograms and grams</p>

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<ul style="list-style-type: none"> -Solve simple one step multiplication and division problem -Understand some division problems leave a remainder 	<p>Compare multiplication statements. They will build on their understanding of commutativity in multiplication to spot patterns and will make comparisons using the $<$ and $>$ signs.</p> <p>Use the expanded method to solve 2-digit numbers multiplied by 1-digit numbers. They will demonstrate a secure understanding of partitioning and place value in their calculations.</p> <p>Be able to write down related division facts for a given multiplication fact and vice versa.</p> <p>Use their understanding of place value, partitioning and division to divide a 2-digit number by a 1-digit number.</p> <p>use the multiplication rule for correspondence problems.</p> <p>Solve problems that involve multiplying and dividing of 2-digit numbers.</p>	<p>Compare and order measurements given in millimetres, centimetres and metres</p> <p>Find the totals of two or more lengths given in centimetres, metres or simple combinations of both units. They will convert answers into millimetres, centimetres or metres as appropriate.</p> <p>Use subtraction to find the difference between two lengths given in centimetres, metres or simple combinations of both units. They will convert answers into either centimetres or metres as appropriate</p> <p>Measure and calculate the perimeter shapes.</p> <p>Solve problems involving length.</p>	<p>Understand what the numerator of a non-unit fraction represents.</p> <p>Compare and order non-unit fractions where the denominators are equal.</p> <p>Use number lines between 0 and 1 and understand what they increase by each time.</p> <p>Place fractions on a number line, remaining within the whole. They will recognise that the denominator represents the number of parts the number line must be partitioned into.</p> <p>recognise equivalent fractions with small denominators. They will use diagrams to represent equivalent fractions.</p>	<p>are mixed. They will also find midpoints between intervals</p> <p>Convert amounts in grams to values in both kilograms and grams.</p> <p>Compare masses by ordering them on a number line and by using the $<$, $>$ and $=$ signs.</p> <p>Add and subtract masses, which include mixed units, using a range of strategies. They will continue to convert between kilograms and grams.</p>
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	<p>Use their understanding of all four operations to solve mixed multi-step problems.</p>			
YEAR 3 – Summer				
<p>Capacity Measure volume in litres and in millilitres. They will learn how to read a variety of scales where only some of the divisions are labelled, drawing on their understanding of number, division and multiplication.</p> <p>Read mixed units of capacity given in litres and millilitres and as 1/2 litres, and convert them to millilitres. They will also read scales showing amounts over 1 litre.</p> <p>Convert between litres and millilitres, including mixed units, in the context of real-life scenarios.</p> <p>Compare capacities by first comparing the number of litres, then the number of millilitres. Children will also apply their knowledge of converting when</p>	<p>Fractions (2)</p> <ul style="list-style-type: none"> -Add and subtract fractions with the same denominator -Partition a whole into two or more fractions that have the same denominator -Reason and solve problems by adding and subtracting fractions -Find fractions of an amount -Reason with fractions of an amount -Solve problems involving fractions and money by adding and subtracting fractions 	<p>Money</p> <ul style="list-style-type: none"> -Know the value of each coin and note and understand what these values represent -Convert between pounds and pence -Add and subtract amounts of money that are given in pounds and pence -Find the change from a given coin or note 	<p>Time</p> <ul style="list-style-type: none"> -Learn the Roman numerals from 1 to 12 and use this knowledge to read clock faces that have Roman numerals -Tell the time to 5 minute intervals on an analogue clock -Tell the time using 'minutes past' and 'minutes to' and using the 12-hour analogue clock. They will read and describe times to the nearest minute. -Read time from digital clocks -Describe time using am and pm or morning and afternoon or evening -Learn what a year is and are able to explain why there is a leap year every four years. -Know there are 24 hours in a day 	<p>Statistics</p> <ul style="list-style-type: none"> -Interpret pictograms where each symbol is worth more than 1 -Solve 1 and 2 step problems based on information presented in a pictogram -Draw their own pictograms -Interpret bar charts that have a range of scales -Solve 1 and 2 step problems based on information presented in a bar chart -Interpret data that is presented in tables and use this to answer problems

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comparing capacities given in different units Know that $1l = 1000ml$ and that $1/2l = 500ml$			<ul style="list-style-type: none">-Find the start and end times to the minute for different events-Find the duration between two times using the 24 hour clock-Compare durations of time-Measure events in seconds-Choose the most appropriate unit of measure for different activities.	
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