

Moorgate Primary Academy

Year 4 Maths Long Term Overview



Year 4 – Autumn				
<u>Geometry – angles and 2D shapes</u>	<u>Place Value (I)</u>	<u>Place Value (II)</u>	<u>Addition and Subtraction</u>	<u>Area</u>
<p>Compare angles and identify acute, obtuse and right angles.</p> <p>Identify acute and obtuse angles, using what they already know about angles. They will compare the sizes of angles and use their comparisons to order them.</p> <p>Identify the three different types of triangles. They will understand the properties of scalene, isosceles and equilateral triangles in relation to their angles and the length of their sides.</p> <p>Name, describe and identify quadrilaterals, recognising their similarities and differences. They will use their knowledge to classify and compare quadrilaterals</p> <p>Recognise the similarities and differences between regular and irregular polygons. They will use this vocabulary to help</p>	<p>Count in 1,000s from 0 to 10,000, forwards and backwards and recognise multiples of 1,000 in different representations.</p> <p>Develop their understanding of place value by working with 4-digit numbers and understanding the place value of the 1,000s position</p> <p>Explore the value of each digit in a 4-digit number by partitioning into 1,000s, 100s, 10s and 1s.</p> <p>Explore partitioning 4-digit numbers in various ways, not necessarily just into 1,000s, 100s, 10s and 1s.</p> <p>Find 1,000 more or less than a given number, using their knowledge of place value to help them.</p>	<p>Locate and identify multiples of 1,000, 100 and 10 on number lines.</p> <p>Identify numbers in a range between two multiples of 1,000, 100 or 10. They also identify the previous and next multiple of 1,000, 100 or 10 that a given number lies between</p> <p>Make sensible estimates on a number line.</p> <p>Order 4-digit numbers, focusing on the value of the digits and using a place value grid to support understanding.</p> <p>Learn the Roman numerals for 1, 5, 10, 50 and 100 and use this knowledge to convert between modern-day numerals and Roman numerals.</p> <p>Round 3- and 4-digit numbers to the nearest 100.</p>	<p>Use their knowledge of place value to add and subtract 1, 10, 100 and 1,000 to and from 4-digit numbers.</p> <p>Add 4-digit numbers using the column method (without exchanging)</p> <p>Add 4-digit numbers using the column method with an exchange in one column.</p> <p>Add 4-digit numbers using the column method with exchanges across more than one column.</p> <p>Subtract 4-digit numbers using the column method where there are no exchanges.</p> <p>Subtract 4-digit numbers using the column method where an exchange is required.</p>	<p>-Know what area is to the concept of the area of a 2D shape</p> <p>- use squares as a standard unit of measuring the area of squares and rectangles.</p> <p>- find areas of more complex rectilinear shapes (including those drawn on squared grids) by counting squares.</p> <p>-Apply understanding of the concept of area by making shapes with given areas</p> <p>-Compare shapes according to their areas.</p>

Moorgate Primary Academy

Year 4 Maths Long Term Overview



<p>inform their reasoning about 2D shapes.</p> <p>explore reflective symmetry. They will identify lines of symmetry within regular and irregular polygons.</p> <p>complete symmetric patterns when the lines of symmetry are given. They will reason about how shapes are affected by different lines of symmetry</p>		<p>Children are rounding to the nearest multiple of 10.</p> <p>Children will build on their knowledge of rounding to 1,000, 100 and 10, including working out numbers that round to a particular degree of accuracy.</p>	<p>Subtract 4-digit numbers using the column method where more than one exchange is required.</p> <p>Subtract 4-digit numbers using the column method with exchanges, when there is a zero in the column to be exchanged from.</p> <p>Consider different methods for solving calculations, thinking about how to work efficiently and accurately.</p> <p>Learn the equivalent difference method of subtraction.</p> <p>Learn to make choices about whether to round to the nearest 10, 100 or 1,000 and how to use that to decide if a calculation is accurate.</p> <p>Learn strategies for checking answers, using the inverse operation and estimating by rounding.</p>	
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--

Moorgate Primary Academy

Year 4 Maths Long Term Overview



			<p>Apply addition and subtraction strategies they have learnt previously to solve simple problems</p> <p>Apply addition and subtraction strategies that they have learnt previously, to solve two-step problems.</p>	
Year 4 – Spring				
<p><u>Multiplication and Division</u></p> <p>-Name and find multiples of 3 and non-multiples of 3</p> <p>-Learn what it means to multiply and divide by 6. They will use a range of strategies to support their understanding.</p> <p>-Learn their 6 times-table. Children should be able to recite it and also learn the associated multiplication and division facts.</p> <p>- Understand how they can multiply and divide a number by 9. Children will make links to the 3 and 6 times-tables.</p> <p>- Explore the relationship between multiples of 3, multiples of 6 and multiples of 9, and develop strategies to</p>	<p><u>Multiplication and Division</u></p> <p>Find and compare factor pairs of numbers and will show that they have found all the possible factor pairs of any given product.</p> <p>Explore multiplication and division by 10 and will identify what happens to the place value of the digits in a number when it is multiplied or divided by 10. Develop their understanding of place value to efficiently and accurately multiply and divide numbers by 100.</p> <p>Multiply by multiples of 10 and 100 using known facts and place value knowledge.</p>	<p><u>Length and Perimeter</u></p> <p>Convert between m and km</p> <p>-Find the perimeter of rectilinear shapes where not all side measurements are given</p> <p>-Use knowledge about the properties of polygons to calculate perimeters efficiently</p>	<p><u>Fractions (1)</u></p> <p>-Use mixed numbers to count beyond 1. Learn that a mixed number has a whole part and a fraction part</p> <p>-Partition mixed numbers into their whole part and fraction part</p> <p>-Count up in fractional steps and identify each whole and fraction parts in between.</p> <p>-Compare and order mixed numbers</p>	<p><u>Fractions (II)</u></p> <p>-Add and subtract fractions with the same denominator, including those where the answer is greater than 1</p> <p>-Add proper fraction to mixed numbers with the same denominator. Use fraction strips and number lines to help them to visualise what is happening.</p> <p>- Subtract proper fractions from mixed numbers with the same denominator by counting back with support from fraction strips and number lines.</p>

Moorgate Primary Academy

Year 4 Maths Long Term Overview



<p>improve their own times-tables knowledge.</p> <ul style="list-style-type: none"> - Learn what it means to multiply and divide by 7. They will apply their knowledge to finding solutions involving real-life contexts -Learn and recite the 7x table -Learn their 11 and 12x table. -Multiply 0 and 1 -Divide a number by 1 and itself - Use the commutative properties of multiplication to calculate 'in a different order', such as $2 \times 7 \times 5 = 7 \times 10$, to increase their ability to calculate mentally 	<p>Divide multiples of 10 and 100 using known facts and place value knowledge.</p> <p>Solve addition and multiplication problems. They will discover that multiplying a number by two numbers added together is the same as doing separate multiplications and then adding the answers (known as the distributive law).</p> <p>Multiply a 2 digit and 3 number by a 1 digit number using a formal written method. Including with exchanges.</p> <p>Solve a mixture of problems by using the formal written method. Bar models are used to reveal the structure of more complex problems.</p> <p>Divide a 2-digit number where the 10s digit and the 1s are divisible by the divisor (for example, 96 divided by 3, 48 divided by 4, 55 divided by 5).</p> <p>Solve division problems that leave a remainder.</p>		<ul style="list-style-type: none"> -Identify the total number of fraction parts in a mixed number and apply this as they start to write mixed numbers as improper fractions -Convert improper fractions to mixed numbers -Use fraction walls and fraction strips to identify equivalent fractions -Simplify fractions with the aid of images and then with abstract fractions 	<ul style="list-style-type: none"> - Subtract fractions from a whole number and explore different methods. -Apply their understanding of adding and subtracting fractions to solve problems -Calculate a fraction of an amount. They will use fraction strips to help them visualise the concept and then use their knowledge of finding a unit fraction of an amount to find non-unit fractions of an amount. -Solve multi-step problem-solving questions involving finding a fraction of an amount and finding the whole.
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Moorgate Primary Academy

Year 4 Maths Long Term Overview



	<p>Divide a 2-digit number by a 1-digit number using flexible partitioning and by focusing on mental methods.</p> <p>Use partitioning to divide a 3-digit number by a 1-digit number.</p> <p>Solve more complex correspondence problems, working out how n objects relate to m objects, finding all solutions and noticing how to use multiplication to solve these problems.</p> <p>Simplify multiplications by finding factor pairs of 2-digit numbers and then using commutativity to help them to perform mental calculations.</p>				
Year 4 - Summer					
<u>Decimals (I)</u>	<u>Decimals (II)</u>	<u>Money</u>	<u>Time</u>	<u>Statistics</u>	<u>Geometry – Position and Direction</u>
- Children will learn how to recognise tenths and	- Given a number of tenths or hundredths	-Record amounts of money in pounds and pence	-Find the equivalences between years, months,	- Extend their knowledge of bar charts, tables and	Describe relative positions on a map,

Moorgate Primary Academy

Year 4 Maths Long Term Overview



<p>represent them as fractions.</p> <ul style="list-style-type: none"> - Children will be introduced to the decimal point and how it can be used to write tenths as decimals. Children also count in tenths and record these as decimals. - Children will build on their understanding of tenths and extend this to numbers greater than 1. They will explore the place value of numbers with one decimal place, using a place value grid. - Learn how to place decimal numbers with tenths between two whole numbers on a number line. - Represent tenths as fractions and decimals on a number line extending beyond 1 and will count on and count back in tenths to solve 	<p>they can make the number bond up to 1.</p> <ul style="list-style-type: none"> - Learn that a number with up to two decimal places can be made up of some 10s, 1s, tenths and hundredths. - Find a range of different ways to partition a given decimal number. - Children will compare decimal numbers by looking at the largest place value and then moving to the next largest place value. - Order numbers with up to two decimal places. - Round a decimal to the nearest whole number by looking at the tenths digit. They will place decimal numbers on a number line. 	<ul style="list-style-type: none"> - Add pence, crossing the pounds and pence boundary - Compare and put in order the most and least expensive amounts of money - Make estimates with money. Look at differences between prices and work out how much money remains. - Solve problems involving pounds and pence. Solve addition and subtraction problems and work out change. - Use previous learnt strategies and methods to solve multi-step problems. 	<p>weeks and days applying their knowledge to convert between units of times</p> <ul style="list-style-type: none"> - Convert between hours, minutes and seconds - Convert between analogue and digital times - Convert between 12-hour and 24-hour times. - Apply their knowledge of units of time to problem-solving contexts. 	<p>pictograms to interpret data with larger numbers and a wider range of scales</p> <p>Use their knowledge of bar charts, tables and pictograms to answer increasingly complex problems, including those that involve differences and totals.</p> <p>Apply their data interpretation and analysis skills to a range of increasingly challenging problems.</p> <p>read values from a line graph.</p> <p>Explore line graphs, and will make statements and comparisons based on data presented in line graphs.</p> <p>Draw their own line graphs from given information.</p>	<p>initially without a grid and then with a grid.</p> <p>Use coordinates in the first quadrant to describe positions on a grid, using the conventional order and notation.</p> <p>Use the properties of shapes and points to help them make constructions on the coordinate grid.</p> <p>Carry out simple translations on a coordinate grid, following instructions given in the form 'left/right, up/down'.</p> <p>Work out the translations (expressed in the form 'right/left, up/down') that are needed to move from one position on the coordinate grid to another.</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Moorgate Primary Academy

Year 4 Maths Long Term Overview



<p>problems in the context of measurement and length.</p> <p>- Divide a 1-digit number by 10, making connections with tenths during this process.</p> <p>Divide 2-digit numbers by 10.</p> <p>Understand that a hundredth as a fraction is $\frac{1}{100}$ and will use a hundredths grid to make the connection between hundredths and tenths</p> <p>Write hundredths as decimals and count on and back in hundredths from a given number.</p> <p>Build on their understanding and recognise that a number with two decimal places has a number of tenths plus some hundredths. They will use counters on a place value grid to represent this.</p>	<p>-Represent fractions and decimals using a number line and a hundredths grid. Learn the decimal equivalents for $\frac{1}{2}$ $\frac{1}{4}$ and $\frac{3}{4}$</p>				
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--

Moorgate Primary Academy

Year 4 Maths Long Term Overview



<p>Divide 1- and 2-digit numbers by 100, building on their understanding of dividing by 10.</p> <p>Divide numbers by 10 and 100 and see the connection between dividing by 10 and then 10 again and dividing by 100.</p>					
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--	--	--	--	--