

Year 4 Maths Curriculum Overview

<u>Curriculum Strand</u>	<u>Learning Objectives</u>	<u>Areas of Fluency</u>
Number Place Value	<ul style="list-style-type: none"> • Count in multiples of 7, 8, 9, 25 and 1000 • Recognise the place value of each digit in a 5 digit numbers (ten thousand, thousands, hundreds, tens, and ones) • Represent numbers using different representations for number beyond 1000 • Identify numbers using different representations for number beyond 1000 • Count backwards through zero to include negative numbers • Order numbers beyond 1000 • Compare numbers beyond 1000 • Estimate numbers using different representations up to 1000 • Find 1000 more or less than a given number • Round any number to the nearest 10, 100 or 1000 • Find missing numbers in scales up to 10000 • Solve number and practical problems that involve all of the above and with increasingly large positive numbers • To identify and describe rules within number sequences 	<ul style="list-style-type: none"> • Count from any number forwards and backwards in multiples of 4, 6, 11, 12, 50, 100 • Count in multiples of 7, 8, 9, 1000 and also through negative numbers from 0 • Recognise the place value of each digit in a 5 digit numbers (ten thousand, thousands, hundreds, tens, and ones) • Order and compare numbers beyond 1000 • Count backwards through zero to include negative numbers • Find 1000 more or less than a given number • Round any number to the nearest 10, 100 or 1000
Number Addition	<ul style="list-style-type: none"> • Add numbers with up to three digits, using formal written methods of columnar addition where appropriate • Add numbers mentally, including: <ul style="list-style-type: none"> - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds • Use inverse operations to check answers • Solve missing number problems, • Solve problems using number facts 	<ul style="list-style-type: none"> • Number bonds to 100 • Add numbers mentally, including: <ul style="list-style-type: none"> - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds

	<ul style="list-style-type: none"> • Solve problems using place value • Solve problems using more complex addition and subtraction • Use symbols and letters to represent variables and unknowns in mathematical puzzles, such as function machines. 	
<p>Number Subtraction</p>	<ul style="list-style-type: none"> • Subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction where appropriate • Subtract numbers mentally, including: <ul style="list-style-type: none"> - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds • Use inverse operations to check answers • Solve missing number problems, • Solve problems using number facts • Solve problems using place value • Solve problems using more complex addition and subtraction • Use symbols and letters to represent variables and unknowns in mathematical puzzles, such as function machines. 	<ul style="list-style-type: none"> • Subtract numbers mentally, including: <ul style="list-style-type: none"> - a three-digit number and ones - a three-digit number and tens - a three-digit number and hundreds • Use inverse operations to check answers
<p>Number Multiplication</p>	<ul style="list-style-type: none"> • Recall multiplication and division facts for multiplication tables (7,8,9) up to 12×12 • Recognise and use factor pairs and commutativity in mental calculations • Multiply whole numbers, including numbers to one decimal place by 10 and 100 Use place value, known and derived facts to multiply mentally, including: <ul style="list-style-type: none"> - multiplying by 0 and 1 - multiplying together three numbers • Divide two-digit and three-digit numbers by a one-digit number using formal written layout • Use three-digit numbers to derive facts, (for example, $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). 	<ul style="list-style-type: none"> • Continue to recall \times and \div facts up to 12×12 and derive related facts using knowledge of place value • Use place value, known and derived facts to multiply and divide mentally, including: <ul style="list-style-type: none"> - multiplying by 0 and 1 - dividing by 1 - multiplying together three numbers • Multiply and divide whole numbers and by 10 and 100 • Combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$.

	<ul style="list-style-type: none"> • Write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). • Use symbols and letters to represent variables and unknowns in mathematical puzzles, such as function machines. • Combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations for example, $2 \times 6 \times 5 = 10 \times 6 = 60$. • 									
Number Division	<ul style="list-style-type: none"> • Recall division facts for multiplication tables (7,8,9) up to 12×12 • Use place value, known and derived facts to divide mentally, including: <ul style="list-style-type: none"> - divide by 0 and 1 - divide together three numbers • Divide whole numbers, including numbers to one decimal place by 10 and 100 • Use three-digit numbers to derive facts, (for example, $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). • Write statements about the equality of expressions (for example, use the distributive law $39 \times 7 = 30 \times 7 + 9 \times 7$ and associative law $(2 \times 3) \times 4 = 2 \times (3 \times 4)$). • Use symbols and letters to represent variables and unknowns in mathematical puzzles, such as function machines. • Combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations 	<ul style="list-style-type: none"> • Recall division facts for multiplication tables (7,8,9) up to 12×12 • Use place value, known and derived facts to divide mentally, including: divide by 0 and 1 • Combine their knowledge of number facts and rules of arithmetic to solve mental and written calculations • Use three-digit numbers to derive facts, (for example, $600 \div 3 = 200$ can be derived from $2 \times 3 = 6$). 								
Number Algebra	<ul style="list-style-type: none"> • Use symbols and letters to represent variables and unknowns in mathematical puzzles, such as function machines. <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Input → + 3 → x 2 → Output</p> <table border="1" style="margin: auto;"> <thead> <tr> <th style="padding: 5px;">Input</th> <th style="padding: 5px;">Output</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">4</td> <td style="padding: 5px;"></td> </tr> </tbody> </table> </div> <div style="text-align: center;"> <p>Input → x 5 → - 2 → Output</p> <table border="1" style="margin: auto;"> <thead> <tr> <th style="padding: 5px;">Input</th> <th style="padding: 5px;">Output</th> </tr> </thead> <tbody> <tr> <td style="text-align: center; padding: 5px;">3</td> <td style="padding: 5px;"></td> </tr> </tbody> </table> </div> </div> <ul style="list-style-type: none"> • Number Addition and Subtraction, Multiplication and Division 	Input	Output	4		Input	Output	3		<ul style="list-style-type: none"> •
Input	Output									
4										
Input	Output									
3										

	<ul style="list-style-type: none"> To identify and describe rules within number sequences – Number Place Value 	
Number Fractions	<ul style="list-style-type: none"> Recognise and show, using diagrams, families of common equivalent fractions Count up and down in hundredths Count using simple fractions, both forwards and backwards Understand the relation between non-unit fractions and multiplication and division of quantities, with particular emphasis on tenths and hundredths. Recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten Use fractions to divide quantities, including non-unit fractions where the answer is a whole number Add and subtract fractions with the same denominator Use of the number line to connect fractions, numbers and measures. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths Use of the number line to connect fractions, numbers and measures. Use factors and multiples to recognise equivalent fractions and simplify where appropriate (for example, $\frac{6}{9} = \frac{2}{3}$ or $\frac{1}{4} = \frac{2}{8}$). 	<ul style="list-style-type: none"> Count up and down in hundredths Find the effect of dividing a one- or two-digit number by 10 and 100 Count using simple fractions and decimals, both forwards and backwards Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
Number Decimals	<ul style="list-style-type: none"> Recognise and write decimal equivalents of any number of tenths or hundredths Count using decimals, both forwards and backwards 	<ul style="list-style-type: none"> Count using decimals, both forwards and backwards

	<ul style="list-style-type: none"> • Represent numbers with one or two decimal places in several ways, such as on number lines. • Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths • Round decimals with one decimal place to the nearest whole number • Use of the number line to connect fractions, numbers and measures. • Compare numbers with the same number of decimal places up to two decimal places • Solve simple measure and money problems involving fractions and decimals to two decimal places. 	
Measures	<ul style="list-style-type: none"> • Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • Read, write and convert time between analogue and digital 12- and 24-hour clocks • Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. • Convert between mm, cm and m 	<ul style="list-style-type: none"> • Read, write time on analogue and digital 12- and 24-hour clocks • Convert between mm, cm and m
Geometry Properties of Shape	<ul style="list-style-type: none"> • Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • Find the symmetry of polygons and polyhedral shapes • Identify lines of symmetry in 2-D shapes presented in different orientations • Complete a simple symmetric figure with respect to a specific line of symmetry. • To accurately draw a line to the nearest centimetre • To understand the concept of a degree 	<ul style="list-style-type: none"> • Identify acute and obtuse angle

	<ul style="list-style-type: none"> • Identify acute and obtuse angles and compare and order angles up to two right angles by size • To compare the size of angles using the language of greater than, equal to or smaller than • To order the size of angles 	
Geometry Position and Direction	<ul style="list-style-type: none"> • Describe positions on a 2-D grid as coordinates in the first quadrant • Describe movements between positions as translations of a given unit to the left/right and up/down • Plot specified points and draw sides to complete a given polygon. 	<ul style="list-style-type: none"> • Describe positions on a 2-D grid as coordinates in the first quadrant
Algebra	<ul style="list-style-type: none"> • Understand and use the terms: expression, substitute and variable 	<ul style="list-style-type: none"> • Use the terms: expression, substitute and variable