



Year 4 Programme of Study for Mathematics

- The topics in this document should be taught in the order that they are written.
- All objectives should be taught through problem solving and encourage the development of reasoning and fluency.
- Please refer to the other planning documents for further guidance.
- Use the last week of each half term for addressing misconceptions and assessment.
- By the end of each half term, the children should have a firm understanding of the objectives highlighted in red.
- **Every lesson should include 10-15 minutes of daily arithmetic – focusing on previous learning, key number facts for the year group and the developing of conceptual understanding through the discussion of related examples.**

Daily Arithmetic

Each maths lesson should start with daily arithmetic. The focus of this time must be mental strategies and revision of learning already covered. This session should be quick and focused with discussion over strategies used. Maximum of 15 minutes before the main teaching session begins. Refer to examples in the maths folder.

Daily Ten

At the end of each day, children should be practising use key mental strategies using Daily Ten on Topmarks.

Multiplication Tables Check

In June, all year 4 children will take the government multiplication tables check. The test will focus on the fluent recall of multiplication facts only from the 2 to 12 tables. Throughout the year teaching should focus on developing quick recall and fluency of facts using a variety of methods, for example counting, Times Tables Rockstars and Daily Ten.

Mastery Checker		
Taught in the context of number through problem solving over the year	Discrete and continuous data	<ul style="list-style-type: none"> • solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs • interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs
Transition Fortnight. (1st 2 weeks of July.) Consolidation and assessment of key number based objectives from the previous year.	<ul style="list-style-type: none"> • recall multiplication and division facts for 3 and 4 times tables • read and write numbers up to 1000 in numerals and in words • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) 	



1st Half of Autumn term	Reasoning with number (3 weeks)	<ul style="list-style-type: none"> recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 find 1000 more or less than a given number round any number to the nearest 10, 100 or 1000 place number up to 1000 accurately on a number line count backwards through zero to include negative numbers count in multiples of 6, 7, 9, 25 and 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers identify, represent and estimate numbers using different representations read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value
	Problem solving using addition and subtraction (3 weeks)	<ul style="list-style-type: none"> number bonds to 10, 20 and 100 add and subtract numbers with up to 4 digits using number lines. estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.

2nd Half of Autumn term	Week of Inspirational Maths / Problem solving week	Use Youcubed website/NRich to begin half term focusing on these areas: <ul style="list-style-type: none"> Problem solving, reasoning, fluency Mindset in Maths
	Multiplication and division (5 weeks)	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers multiply two-digit and three-digit numbers by a one-digit number using the arrays and the grid method divide two and three-digit numbers by one-digit using the number line solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects recognise and use factor pairs and commutativity in mental calculations
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.



1st Half of Spring term	Proportionality [Fractions] (4 weeks) Relate all of these objectives to decimals	<ul style="list-style-type: none"> • add and subtract fractions with the same denominator • recognise and show, using diagrams, families of common equivalent fractions • count up and down in hundredths and tenths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten • solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number • solve simple measure and money problems involving fractions
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.

2nd Half of Spring term	Proportionality [Decimals] (3 weeks)	<ul style="list-style-type: none"> • 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 • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places • solve problems involving numbers up to two decimal places • solve simple measure and money problems involving decimals to two decimal places
	Area and perimeter (2 weeks)	<ul style="list-style-type: none"> • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares • convert between different units of measure [for example, kilometre to metre]
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.



1st Half of Summer term	Angles, 2D and 3D shape and transformations (3 weeks)	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify acute and obtuse angles and compare and order angles up to two right angles by size 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 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
	Time (2 weeks)	<ul style="list-style-type: none"> convert between different units of measure [for example, hour to minute] problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days write and convert time between analogue and digital 12- and 24-hour clocks
	Multiplication and division (1 week)	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.

2nd Half of Summer term Last two weeks of the term are dedicated to transition weeks	Revision of calculation methods (5 weeks)	<ul style="list-style-type: none"> revision of addition, subtraction, multiplication and division calculation methods understanding deepened through problem solving and reasoning
	Assessment and addressing misconceptions (1 week)	Assess at the beginning of the week then plan to address misconceptions for the remainder of the sessions.