

Mathematics Medium Term Plan

Aims:

The national curriculum for mathematics aims to ensure that all pupils:

- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Teaching Requirements:

- **daily mathematics lessons** to be taught in line with the Medium Term Plans, with each unit incorporating calculation methods (where relevant), fluency, reasoning and problem solving
- **counting session** to take place daily
- **early learning sessions** to include mathematics tasks to rehearse and recall previously taught objectives ensuring skills are embedded.

YEAR 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value			Number: Addition and Subtraction			Geometry-Shape	Number: Place value		Number: Addition and Subtraction		
Spring	Time		Number : Place Value	Number: Addition and Subtraction		Measures: Length and Height	Number: Multiplication		Number: Division		Number: Fractions	
Summer	Number: Place Value		Number: Four Operations				Number: Fractions	Measurement: Money		Measurement: Weight and Volume		

YEAR 1 AUTUMN TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
<p>Number: Place Value</p> <ul style="list-style-type: none"> Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 10 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Given a number, identify one more or one less. Count in multiples of twos. 			<p>Number: Addition and Subtraction</p> <ul style="list-style-type: none"> Represent and use number bonds and related subtraction facts (within 10) Add and subtract one digit numbers (to 10), including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems. 			<p>Geometry: Shape</p> <ul style="list-style-type: none"> Recognise and name common 2D and 3D shapes, including rectangles, squares, circles and triangles, cuboids, pyramids and spheres. Describe position, direction and movement, including whole, half, quarter and three quarter turns 		<p>Number: Place Value</p> <ul style="list-style-type: none"> Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. Count, read and write numbers from 1 to 20 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Count in multiples of twos and fives 		<p>Number: Addition and Subtraction</p> <ul style="list-style-type: none"> Represent and use number bonds and related subtraction facts within 20. Add and subtract one digit and two digit numbers to 20, including zero. Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ 		

YEAR 1 SPRING TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	
<p>Time</p> <ul style="list-style-type: none"> Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Recognise and use language relating to dates, including days of the week, weeks, months and years. Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] and measure and begin to record time (hours, minutes, seconds) Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. 		<p>Place Value</p> <ul style="list-style-type: none"> Count to 40 forwards and backwards, beginning with 0 or 1, or from any number. Count, read and write numbers from 1-40 in numerals and words. Identify and represent numbers using objects and pictorial representations. Given a number, identify 1 more or 1 less. 		<p>Number: Addition and Subtraction</p> <ul style="list-style-type: none"> Add and subtract one digit and two digit numbers to 20, including zero Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems. 		<p>Measures: Length and height</p> <ul style="list-style-type: none"> Compare, describe and solve practical problems for: lengths and heights for example, long/short, longer/shorter, tall/short, double/half Measure and begin to record lengths and heights. 			<p>Number: Multiplication and Division</p> <ul style="list-style-type: none"> Count in multiples of twos, fives and tens. Solve one step problems involving multiplication, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. 	<p>Number: Multiplication and Division</p> <ul style="list-style-type: none"> Count in multiples of twos, fives and tens. Solve one step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. 	<p>Number: Fractions</p> <ul style="list-style-type: none"> Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

YEAR 1 SUMMER TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<p>Number: Place Value</p> <ul style="list-style-type: none"> Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers from 1-100 in numerals and words. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least. Given a number, identify one more and one less. 		<p>Number: Four operations</p> <ul style="list-style-type: none"> Represent and use number bonds and related subtraction facts within 20. Add and subtract one digit and two digit numbers to 20, including zero. Read, write and interpret mathematical statements involving addition (+) subtraction (-) and equals (=) signs. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. 				<p>Number: Fractions</p> <ul style="list-style-type: none"> Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. 		<p>Measurement: Money</p> <ul style="list-style-type: none"> Recognise and know the value of different denominations of coins and notes. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. 		<p>Measurement: weight and volume</p> <ul style="list-style-type: none"> Compare, describe and solve practical problems for mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] Measure and begin to record mass/weight, capacity and volume. 	

YEAR 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction				Measurement: Length and Mass		Graphs	Number: Multiplication and Division		
Spring	Fractions			Time		Money	Number: Addition and Subtraction		Number: Multiplication and Division			
Summer	Properties of shape		Measurement: Capacity, Volume and Temperature		SATS REVISION AND CONSOLIDATION							

YEAR 2 AUTUMN TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
<p>Number – place value</p> <ul style="list-style-type: none"> Count in steps of 2, 3 and 5 from 0 and in tens from any number, forward and backward. Recognise the place value of each digit in a two-digit number (tens, ones) Identify, represent and estimate numbers to 100 using different representations including the number line. Compare and order numbers from 0 up to 100; use $<$, $>$ and $=$ signs. Read and write numbers to at least 100 in numerals and words. Use place value and number facts to solve problems. 		<p>Number – addition and subtraction</p> <ul style="list-style-type: none"> Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two digit numbers; adding three one digit numbers. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. 				<p>Measurement: length and mass</p> <ul style="list-style-type: none"> Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) and mass (kg/g) to the nearest appropriate unit, using rulers and scales. Compare and order length and mass and record the results using $>$, $<$ and $=$. 		<p>Graphs</p> <ul style="list-style-type: none"> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data 		<p>Multiplication and Division</p> <ul style="list-style-type: none"> Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) sign. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. 		

YEAR 2 SPRING TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	
Number – fractions <ul style="list-style-type: none"> • Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. • Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 • Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ 			Measurement: Time <ul style="list-style-type: none"> • Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. • Know the number of minutes in an hour and the number of hours in a day. • Compare and sequence intervals of time. 		Measurement: Money <ul style="list-style-type: none"> • Recognise and know the value of different denominations of coins and notes. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems. 		Number – addition and subtraction <ul style="list-style-type: none"> • Add and subtract numbers using written methods, and mentally, including: a two digit number and ones; a two digit number and tens; two two digit numbers; adding three one digit numbers. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. • Solve problems with addition and subtraction: using written methods including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods 		Multiplication and Division <ul style="list-style-type: none"> • Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (\div) and equals (=) sign. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. • Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. 		

YEAR 2 SUMMER TERM

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Geometry- properties of shape <ul style="list-style-type: none"> • Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. • Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Identify 2D shapes on the surface of 3D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.] • Compare and sort common 2D and 3D shapes and everyday objects. • Order and arrange combinations of mathematical objects in patterns and sequences. 		Measurement: Capacity, volume and temperature <ul style="list-style-type: none"> • Choose and use appropriate standard units to estimate and measure capacity (litres/ml) and temperature (°C) to the nearest appropriate unit, using thermometers and measuring vessels. • Compare and order volume/capacity and record the results using $>$, $<$ and $=$. 		<h3>SATS REVISION</h3>			<h3>POST SATS PROJECT WORK</h3>				