

End of Year 2 Mathematics Objectives

Essential Objective	Key Indicators	Working at the expected standard	Working at greater depth within the expected standard
To know and use numbers	Counting <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 to 100 in numerals; count in multiples of 2, 5 and 10. Given a number, identify one more and one less. Count in steps of 2, 3, 5 and 10 from 0 or 1 and in tens from any number, forwards and backward 	<ul style="list-style-type: none"> With prompts, there is counting to and across 100, forwards and backwards from any given number. When reminders are provided, there is counting in steps of 2, 3, 5 and 10 from 0 or 1 and in tens from any number, forwards or backwards. Generally, numbers between 0 and 100 are ordered correctly. One more and one less than a given number are identified 	<ul style="list-style-type: none"> Independently, there is counting to and across 100, forwards and backwards, from any given number. Numbers between 0 and 1000 are ordered correctly. One more and one less than a given number are identified independently. There is independent counting in steps of 2, 3, 5 and 10 from 0 or 1 and in tens from any number, forwards and backwards. One more and one less than a given number are identified without support, even when using negative integers.
	Representing <ul style="list-style-type: none"> Identify, represent and estimate numbers using different representations, including the number line. Read and write numbers initially from 1 to 20 and then to at least 100 in numerals and in words. 	<ul style="list-style-type: none"> Generally, numbers are identified, represented and estimated using different representations. Numbers from 1 to 100 are generally read and written correctly in numerals and words. 	<ul style="list-style-type: none"> Independently, numbers are identified, represented and estimated using different representations. Numbers from 1 to 100 are read and written correctly in numerals and words without support.
	Comparing <ul style="list-style-type: none"> Use the language of equal to , more than , less than (fewer), most and least . Compare and order numbers from 0 up to 100; use <, > and = signs. 	<ul style="list-style-type: none"> Generally, numbers between 0 and 100 are ordered correctly. The signs <, > and = are used to compare numbers from 0 up to 100. The language of equal to , more than , less than , most and least is generally used correctly. 	<ul style="list-style-type: none"> Numbers between 0 and 1000 are ordered correctly. The signs <, > and = are used to compare numbers from 0 up to 1000 independently. The language of equal to , more than , less than , fewer , most and least is used correctly and independently.

	Place value <ul style="list-style-type: none"> Recognise the place value of each digit in a two-digit number (tens, ones). 	<ul style="list-style-type: none"> The place value of each digit in a two-digit number is recognised. Generally, the place value of each digit in a two-digit number is recognised. 	<ul style="list-style-type: none"> The place value of each digit in a two-digit number is recognised without support.
	Solving problems <ul style="list-style-type: none"> Use place value and number facts to solve problems. 	<ul style="list-style-type: none"> When reminders are provided, place value and number facts are used to solve problems. Generally, the starting point in a problem is found. 	<ul style="list-style-type: none"> Place value and number facts are used to solve problems. The starting point in a problem is found independently.

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To add and subtract	Checking <ul style="list-style-type: none"> Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. 	<ul style="list-style-type: none"> When prompts are provided, the inverse relationship between addition and subtraction is used in calculations to check for correct answers. The subtraction facts linked to addition facts are recognised and calculated. 	<ul style="list-style-type: none"> Number problems are solved and answers are checked independently by using the inverse relationship between addition and subtraction. Missing number problems are solved independently by using the inverse relationship between addition and subtraction
	Using Number facts <ul style="list-style-type: none"> Represent and use number bonds and related subtraction facts to 20. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. 	<ul style="list-style-type: none"> Addition and subtraction facts to 20 are fluently used and number bonds within 20 are represented and used. Addition and subtraction facts to 20 are recalled fluently. Addition and subtraction facts to 100 are recalled independently. 	<ul style="list-style-type: none"> Addition and subtraction facts to 1000 are fluently used and recalled.
	Complexity <ul style="list-style-type: none"> Solve one-step problems with addition and subtraction, using: --- Concrete objects and pictorial representations including those involving numbers, quantities and measures --- The addition (+), subtraction (-) and equals (=) signs 	<ul style="list-style-type: none"> Generally, one-step problems with addition and subtraction (including those involving numbers, quantities and measures) are solved. The addition (+), subtraction (-) and equals (=) signs are understood and generally used correctly. 	<ul style="list-style-type: none"> One-step problems with addition and subtraction are solved independently. Two-step problems involving addition and subtraction are tackled and solved without support. The addition (+), subtraction (-) and equals (=) signs are used correctly and independently

	<p>Methods</p> <ul style="list-style-type: none"> Add and subtract numbers using concrete objects and pictorial representations, and mentally, including: One-digit and two-digit numbers to 20, including zero A two-digit number and ones A two-digit number and tens Two two-digit numbers Adding three one-digit numbers Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 	<ul style="list-style-type: none"> Generally, two-digit and one-digit numbers can be added and subtracted independently. A two-digit number and tens, two two-digit numbers and three one-digit numbers are added and subtracted (using concrete objects, pictorial representations and mentally) when reminders are provided. Generally, there is an understanding that two numbers can be added in any order but subtraction of one number from another cannot. 	<ul style="list-style-type: none"> Using concrete objects, pictorial representations and mentally, the following are added and subtracted independently: - One-digit and two-digit numbers to 20, including zero A two-digit number and ones A two-digit number and tens Two two-digit numbers Three one-digit numbers are added mentally. An understanding that two numbers can be added in any order but subtraction of one number from another cannot is secured.
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To multiply and divide	<p>Methods</p> <ul style="list-style-type: none"> Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals ($=$) signs. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Solve problems involving multiplication and division using mental methods. 	<ul style="list-style-type: none"> When reminders are provided, mathematical statements for multiplication and division are calculated. Generally, repeated addition is used to solve multiplication problems and repeated subtraction is used to solve division problems. Generally, the signs \times, \div, $=$ are used correctly. Generally, an understanding that multiplication of two numbers can be done in any order and division of one number by another cannot is shown. Mental methods are developing in order to solve multiplication 	<ul style="list-style-type: none"> Independently, repeated addition is used to solve multiplication problems and repeated subtraction is used to solve division problems. Independently, mathematical statements for multiplication and division are calculated and the signs \times, \div, $=$ are used correctly. There is a secure understanding that multiplication of two numbers can be done in any order and division of one number by another cannot. Problems involving multiplication and division are solved without prompts or guidance. Mental calculations can be recorded as number sentences and problems involving multiplication and division, using mental methods, can be solved correctly and independently
	<p>Checking</p> <ul style="list-style-type: none"> Use known multiplication facts to check the accuracy of calculations. 	<ul style="list-style-type: none"> Generally, multiplication facts are applied to check the accuracy of calculations. 	<ul style="list-style-type: none"> Multiplication facts are applied independently to check the accuracy of calculations.

	Complexity <ul style="list-style-type: none"> Solve one-step problems involving multiplication and division. 	<ul style="list-style-type: none"> When reminders are provided and with the use of arrays if necessary, one-step problems involving multiplication and divisions are solved 	<ul style="list-style-type: none"> One-step problems, involving multiplication and division, are solved independently and accurately. Using concrete objects, pictorial representations and arrays independently to support, two step problems, involving multiplication and division, are solved accurately.
	Using multiplication and division facts <ul style="list-style-type: none"> Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. Recognise odd and even numbers. Use multiplication and division facts to solve problems. 	<ul style="list-style-type: none"> Multiplication and division facts for the 2, 5 and 10 multiplication tables are recalled and used independently, with support if necessary. Generally, odd and even numbers are recognised. Generally, problems are solved independently using multiplication and division facts. 	<ul style="list-style-type: none"> The recall and use of multiplication and division facts for the 2, 5 and 10 multiplication tables are fluently applied. Problems are solved independently using multiplication and division facts. Odd and even numbers are recognised without support.

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To use fractions	Solving problems <ul style="list-style-type: none"> Write simple fractions. 	<ul style="list-style-type: none"> When reminders are provided, simple fractions are written, e.g. $1/2$, $1/4$ and $1/2$ of $6 = 3$. 	<ul style="list-style-type: none"> More complicated fractions are written independently, e.g. finding $1/3$, $1/6$ and $1/5$ and $1/3$ of $12 = 4$.
	Recognising fractions <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. Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity. $1/2$, $1/3$, $1/4$, $2/4$ and $3/4$ of an object, shape or quantity are recognised and named when prompts are given. 	<ul style="list-style-type: none"> $1/2$, $1/3$, $1/4$, $2/4$ and $3/4$ of a length, shape, set of objects or quantity are generally recognised, named and written. A group of objects can be split into halves and quarters independently 	<ul style="list-style-type: none"> $1/2$, $1/3$, $1/4$, $2/4$ and $3/4$ of an object, shape or quantity are recognised and named independently. $1/2$, $1/3$, $1/4$, $2/4$ and $3/4$ of a length or set of objects are recognised, named and written. A group of objects can be split into halves and quarters independently.
	Equivalence <ul style="list-style-type: none"> Recognise the equivalence of $2/4$ and $1/2$. 	<ul style="list-style-type: none"> Generally, the equivalence of $2/4$ and $1/2$ is recognised as a decimal or percentage. 	<ul style="list-style-type: none"> The equivalence of $2/4$, $1/2$ and harder fractions, such as $1/3$, $2/3$, $1/5$, etc., is recognised without prompts

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To understand the properties of shapes	<ul style="list-style-type: none"> Recognise and name common 2-D and 3-D shapes. Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes. Compare and sort common 2-D and 3-D shapes and everyday objects. 	<ul style="list-style-type: none"> Common 2-D and 3-D shapes are recognised from pictures of them. Generally, properties of 2-D and 3-D shapes, such as faces, corners and edges are identified and described and the 2-D shape on the surface of a 3-D shape is identified. 2-D and 3-D shapes and everyday objects are sorted using one criteria. 	<ul style="list-style-type: none"> Properties of 2-D and 3-D shapes are identified and described and the 2-D shape on the surface of a 3-D shape is identified. 2-D shapes and 3-D shapes and everyday objects are sorted and compared independently

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To describe position, direction and movement	<ul style="list-style-type: none"> Describe position, direction and movement, including whole, half, quarter and three-quarter turns. Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anticlockwise). 	<ul style="list-style-type: none"> Generally, position, direction and movement can be described. Generally, combinations of mathematical objects in patterns and sequences are ordered correctly. Sequences in regular steps are continued. The positions of objects in a row (first, second, third, etc.) can be described. Generally, the language half turns , quarter turns and whole turns is used to describe position, direction and movement. Reminders for the use of mathematical vocabulary to describe position, direction and movement are sometimes needed. Left and right are used correctly when directions are given. 	<ul style="list-style-type: none"> Independently, position, direction and movement can be described. Right angles in turns are recognised without support. The language half turns , quarter turns and whole turns is used to describe position, direction and movement independently. Combinations of mathematical objects in patterns and sequences are ordered and arranged correctly and independently. Predictions are made for what comes next in a pattern and reasons are given for this prediction without support. A good range of mathematical vocabulary to describe position, direction and movement is used. Left, right, clockwise and anticlockwise are used correctly when directions are given.

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To use measures	<ul style="list-style-type: none"> Compare, describe and solve practical problems for: lengths and heights, mass/weight, capacity and volume, time. Measure and begin to record: lengths and heights, mass/weight, capacity and volume, time (hours, minutes, seconds). Sequence events in chronological order using language. Recognise and use language relating to dates, including days of the week, weeks, months and years. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Use standard units to estimate and measure length/height (m/cm), mass (kg/g), temperature (°C) and capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. Compare and order lengths, mass, volume/capacity and record the results using >, < and =. Recognise and know the value of different denominations of coins and notes. Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amount of money. 	<ul style="list-style-type: none"> Generally, practical problems for a range of measures, including lengths and heights, mass/weight, capacity, volume and time, are compared, described and solved. Generally, a range of measures are measured and recorded. Events can be sequenced in chronological order, using language such as: first, second, last. Tools needed for measuring are chosen when prompted. Language relating to dates, including days of the week, weeks, months and years, is generally used correctly. The number of minutes in an hour and the number of hours in a day is known and generally used to solve problems. Generally, time to the hour, half past the hour and quarter past/to the hour is told and the hands on a clock face to show these times are drawn. With prompts, intervals of time can be compared and sequenced independently. With reminders, time to five minutes can be told and the hands on a clock face drawn to show these times. Generally, by using measuring apparatus, such as rulers, scales, thermometers and measuring vessels, the following can be measure to the nearest appropriate unit: - length/height in cm/m - mass in kg/g - temperature in °C, capacity in ml/l Generally, the signs <, > and = are used to compare and order lengths, mass and volume/capacity. The value of different denominations of coins and notes is recognised. Generally, the symbols £ (pounds) and p (pence) are recognised and used and combined to make particular values. It is understood that there are 100p in £1. Generally, combinations of coins that equal the same amounts of money are found. Simple addition and subtraction problems involving money of the same unit and giving change are solved independently – concrete objects may be needed for this. 	<ul style="list-style-type: none"> Practical problems for a range of measures including lengths and heights, mass/weight, capacity, volume and time, are compared, described and solved without help. A range of measures are measured and recorded independently. Events can be sequenced in chronological order, using language such as first, second, last, and questions about the timings of these events can be answered and asked independently. Language relating to dates, including days of the week, weeks, months, years and decades is used independently. The number of minutes in an hour and the number of hours in a day is known and used to solve problems independently. Time to the hour, half past the hour, quarter to and quarter past the hour and to five minutes is told and the hands on a clock face to show these times are drawn independently. Intervals of time can be compared and sequenced independently. By using measuring apparatus, such as rulers, scales, thermometers and measuring vessels, the following can be measure to the nearest appropriate unit: - length/height in mm/cm/m - mass in kg/g - temperature in °C - capacity in ml/l. The signs <, > and = are used to compare and order lengths, mass and volume/capacity independently. A wider range of measures, such as right angle checker and timeline, are used without support. Tools needed for measuring are chosen independently. Independently, scales to the nearest labelled division can be read. The value of different denominations of coins and notes is recognised and used to solve problems without support.

	<ul style="list-style-type: none"> Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. 		<ul style="list-style-type: none"> The symbols £ (pounds) and p (pence) are recognised, used and combined to make particular values. It is securely understood that there are 100p in £1 and this knowledge can be used to convert pence into pounds and pence. Combinations of coins that equal the same amount of money are found without support. More complicated addition and subtraction problems involving pounds and pence and giving change, are solved independently
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Essential Objective	Key Indicators	Working at the expected standard	Working at greater depth within the expected standard
To use statistics	<ul style="list-style-type: none"> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and 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. 	<ul style="list-style-type: none"> When reminders are provided, simple pictograms, tally charts, block diagrams and simple tables are constructed. Generally, questions about totalling and comparing categorical data are answered correctly. Data can be collected and sorted to test a simple question. Vocabulary such as sort , group , set , table , most common and least popular is understood. Generally, questions about results that have been gathered can be answered. 	<ul style="list-style-type: none"> Pictograms, tally charts, block diagrams and simple tables are constructed and interpreted independently. Questions about totalling and comparing categorical data are asked and answered accurately and without support. Questions about any information gathered can be asked for other children to answer. Venn and Carroll diagrams are used to sort and record information independently. Responding to more complex questions, such as ‘How many people took part in this survey?’ are answered.

Essential Objective	Key Indicators	Working at the expected standard	Working at greater depth within the expected standard
To use algebra	<ul style="list-style-type: none"> Solve addition and subtraction problems involving missing numbers. 	<ul style="list-style-type: none"> When reminders are given, addition and subtraction problems, involving missing numbers, are solved. 	<ul style="list-style-type: none"> More complex addition and subtraction problems, involving missing numbers, are solved independently and accurately