



Year 1 Long Term Planning Maths

Autumn Term 1		
Spine 1: Number, addition and subtraction		Knowledge
Wk 1	<p>1.1 Comparison of quantities Explores the relationship between numbers and introduces children to the important concept of equivalence; focuses on the correct use of comparative language, as well as use of mathematical symbols (<, = and >). Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> Know that items can be compared according to attributes such as length (or height or breadth), area, volume/capacity or weight/mass. Know that when comparing two sets of objects, one set can contain more objects than the other and one set can contain fewer objects than the other, or both sets can contain the same number of objects. Know that the symbols <, > and = can be used to express the relative number of objects in two sets, or the relative size of two numbers.
Wks 2-3	<p>1.2 Introducing 'whole' and 'parts': part-part-whole Introduces children to the concept of partitioning which underpins many of the subsequent segments, and builds towards use of the part-part-whole model. Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> Know that a 'whole' can be represented by one object; if some of the whole object is missing, it is not the 'whole'. Know that a whole object can be split into two or more parts in many different ways. Know that the parts might look different; each part will be smaller than the whole, and the parts can be combined to make the whole. Know that a 'whole' can be represented by a group of discrete objects. If some of the objects in the group are missing, it is not the whole group – it is part of the whole group. Know that a whole group of objects can be composed of two or more parts and this can be represented using a part-part-whole 'cherry' diagram. The group can be split in many different ways. The parts might look different; each part will be smaller than the whole group and the parts can be combined to make the whole group.
Wk 4	Measures:	<ul style="list-style-type: none"> Know how to compare, describe & solve practical problems involving lengths, heights, mass and weight.
Spine 1: Number, addition and subtraction		Knowledge
Wks 5-6	<p>1.3 Composition of numbers: 0-5 Applies the partitioning structure to the numbers to five, and introduces children to new concepts such as subitising, ordinality and the bar model. Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> Know that numbers can represent how many objects there are in a set; for small sets we can recognise the number of objects (subitise) instead of counting them. Know that ordinal numbers indicate a single item or event, rather than a quantity. Know that each of the numbers one to five can be partitioned in different ways. Know that each of the numbers one to five can be partitioned in a systematic way. Know that each of the numbers one to five can be partitioned into two parts; if we know one part, we can find the other part. Know that the number before a given number is one less; the number after a given number is one more. Know that partitioning can be represented using the bar model.
Wk 7	Geometry - Properties of Shape:	<ul style="list-style-type: none"> Know how to recognise and name common 2-D shapes (e.g. rectangles (including squares), circles and triangles)
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Year 1 Long Term Planning Maths

		Autumn Term 2
Spine 1: Number, addition and subtraction		Knowledge
Wks 8-9	<p>1.4 Composition of numbers: 6-10 Extends the partitioning structure to the numbers six to ten, explores the five-and-a-bit structure of the numbers, and introduces children to the concept of odd and even numbers.</p> <p>Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> • Know that the numbers six to nine are composed of 'five and a bit'. • Know that ten is composed of five and five. • Know that six, seven, eight and nine lie between five and ten on a number line. • Know that numbers that can be made out of groups of two are even numbers; numbers that can't be made out of groups of two are odd numbers. Even numbers can be partitioned into two odd parts or two even parts; odd numbers can be partitioned into one odd part and one even part. • Know that each of the numbers six to ten can be partitioned in different ways. The numbers six to ten can be partitioned in a systematic way. • Know that each of the numbers six to ten can be partitioned into two parts; if we know one part, we can find the other part.
Wks 10-11	<p>Measures - Money: Recognises and knows the value of different denominations of coins & notes.</p>	<ul style="list-style-type: none"> • Know and recognise the value of different denominations of coins and notes. <p><i>Consolidated and extended in Summer Term 2.</i></p>
Wk 12	<p>Measures - Capacity and Volume:</p>	<ul style="list-style-type: none"> • Knows how to compares, describe and solve practical problems relating to capacity & volume. • Knows how to use the following vocabulary correctly in context: full, empty, more than, less than, half full, quarter full. • Knows how to compare two containers and say which is full, empty and half full.
Wk 13	<p>Measures – Time</p>	<ul style="list-style-type: none"> • Know that events can be sequenced in order using precise language: before, after, next, first, today, yesterday, tomorrow, morning, afternoon, evening. • Know and use language relating to dates: days, weeks, months and years.



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Spring Term 1		
Spine 1: Number, addition and subtraction		
Wks 1-2	<p>1.5 Additive structures: introduction to aggregation and partitioning Progresses to the use of abstract notation (+, – and =) as a way of representing the part–part–whole structure. Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> • Know that combining two or more parts to make a whole is called aggregation; the addition symbol, +, can be used to represent aggregation. • Know that the equals symbol, =, can be used to show equivalence between the whole and the sum of the parts. • Know that each addend represents a part, and these are combined to form the whole/sum; we can find the value of the whole by adding the parts. • Know that we can represent problems with missing parts using an addition equation with a missing addend. • Know that breaking a whole down into two or more parts is called partitioning; the subtraction symbol, –, can be used to represent partitioning.
Wks 3-4	<p>1.6 Additive structure: introduction to augmentation and reduction Introduces children to addition as augmentation, and subtraction as reduction (take away), using a ‘first..., then..., now...’ story representation and abstract notation (+, – and =); explore the inverse nature of the two operations. Click to watch a short NCETM Video.</p>	<ul style="list-style-type: none"> • Know that an addition context described by a ‘first..., then..., now...’ story is an example of augmentation. • Know that we can link the story to a numerical representation – each number represents something in the story. • Know that a subtraction context described by a ‘first..., then..., now...’ story is an example of reduction. • Know that we can link the story to a numerical representation – each number represents something in the story. • Know that given any two parts of the story we can work out the third part; given any two numbers in the equation we can find the third one. • Know that addition and subtraction are inverse operations.
Wk 5	<p>Geometry - Properties of Shape: Identifies and describes common 2D shapes.</p>	<ul style="list-style-type: none"> • Know how to recognise and name common 2-D shapes (e.g. rectangles (including squares), circles and triangles).
Wk 6	<p>Measures – Money: Makes given amounts up to 20p using coin combinations.</p>	<ul style="list-style-type: none"> • Know and recognise the value of different denominations of coins and notes. <p><i>Consolidated and extended in Summer Term 2.</i></p>
Wk 7	<p>Geometry – Position and Direction. See guidance.</p>	<ul style="list-style-type: none"> • Know how to describe position, direction and movement including whole, half, quarter and three-quarter turns.
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Year 1 Long Term Planning Maths

Spring Term 2		
Spine 1: Number, addition and subtraction		Knowledge
Wks 8-10	<p>1.7 Addition and subtraction: strategies within 10 Equips children with a range of useful strategies for addition within ten, including adding and subtracting zero and one, commutativity, adding and subtracting two to/from odd and even numbers, and doubling and halving.</p>	<ul style="list-style-type: none"> • Know that addition is commutative: when the order of the addends is changed, the sum remains the same. • Know that ten can be partitioned into pairs of numbers that sum to ten. • Know that recall of these pairs of numbers supports calculation. • Know that adding one gives one more; subtracting one gives one less. • Know that consecutive numbers have a difference of one; <i>we can use this to solve subtraction equations where the subtrahend is one less than the minuend.</i> • Know that adding two to an odd number gives the next odd number; adding two to an even number gives the next even number. • Know that subtracting two from an odd number gives the previous odd number; subtracting two from an even number gives the previous even number. • Know that consecutive odd / consecutive even numbers have a difference of two; <i>we can use this to solve subtraction equations where the subtrahend is two less than the minuend.</i> • Know that when zero is added to a number, the number remains unchanged; when zero is subtracted from a number, the number remains unchanged. • Know that subtracting a number from itself gives a difference of zero. • Know that doubling a whole number always gives an even number and can be used to add two equal addends; halving is the inverse of doubling and can be used to subtract a number from its double. • Know that memorised doubles/halves can be used to calculate near-doubles/halves. • Know that addition and subtraction facts for the pairs five and three, and six and three, can be related to known facts and strategies.
Wks 11-12	<p>1.8 Composition of numbers: multiples of 10 up to 100 Explores multiples of ten, including counting in tens to 100; apply number facts within ten to addition and subtraction for multiples of ten.</p>	<ul style="list-style-type: none"> • Know that one ten is equivalent to ten ones. • Know that multiples of ten can be represented using their names or using numerals. • Know that we can count in multiples of ten. • Know that a 0–10 number line can be used to estimate the position of multiples of ten on a 0–100 number line. • Know that adding ten to a multiple of ten gives the next multiple of ten; subtracting ten from a multiple of ten gives the previous multiple of ten. • Know that known facts for the numbers <i>within</i> ten can be used to add and subtract in multiples of ten by unitising.
Wk 13	<p>Measures – Time.</p>	<ul style="list-style-type: none"> • Know how to use the following vocabulary correctly in context: earlier/later. • Know how to compare the movements of two objects and describes which is slower/quicker. • Begins to know about measuring time in hours, minutes and seconds.



Year 1 Long Term Planning Maths

		Summer Term 1
Spine 1: Number, addition and subtraction		Knowledge
Wks 1-2	<p>1.9 Composition of numbers: 20 – 100</p> <p>Builds on multiples of ten, by introducing non-zero values in the ones place; apply the partitioning structure to these two-digit numbers, decomposing them into tens and ones.</p>	<ul style="list-style-type: none"> • Know that there is a set counting sequence for counting to 100 and beyond. • Know that objects can be counted efficiently by making groups of ten. • Know that the digits in the numbers 20–99 tell us about their value. • Know that each number on the 0–100 number line has a unique position. • Know that the relative size of two two-digit numbers can be determined by first examining the tens digits and then, if necessary, examining the ones digits, with reference to the cardinal or ordinal value of the numbers. • Know that each two-digit number can be partitioned into a tens part and a ones part. • Know that the tens and ones structure of two-digit numbers can be used to support additive calculation.
Wks 3-4	<p>1.10 Composition of numbers: 11 – 19</p> <p>Explores the ten-and-a-bit nature of the numbers 11–19, using the partitioning structure; apply number facts within ten to addition and subtraction of single-digit numbers to/from the numbers 11–19.</p>	<ul style="list-style-type: none"> • Know that the digits in the numbers 11–19 tell us about their value. • Know that the numbers 11–19 can be formed by combining a ten and ones, and can be partitioned into a ten and ones. • Know that a number is even if the ones digit is even; it can be made from groups of two. A number is odd if the ones digit is odd; it can't be made from groups of two. • Know that doubling the numbers 6–9 (inclusive) gives an even teen number; halving an even teen number gives a number from six to nine (inclusive). • Know that addition and subtraction facts within 10 can be applied to addition and subtraction within 20.
Wk 5	<p>Measures – Capacity and Volume:</p>	<ul style="list-style-type: none"> • Know the difference between volume and capacity. • Know how to use a range of non-standard units to compare volume of containers and capacity. • Begins to measure capacity in litres.
Wk 6	<p>Geometry – Position and Direction.</p>	<ul style="list-style-type: none"> • Know how to use terms left and right in different contexts. • Know how to move objects through full-turns, half-turns, quarter-turns and three-quarter turns. • Know how to use shape apparatus to show movements through these turns in a practical setting. • Know how to describe position, direction and movement using appropriate vocabulary.
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Year 1 Long Term Planning Maths

Summer Term 2	
Spine 2: Multiplication and Division	Knowledge
Wks 7-9 2.1 Counting, unitising and coins Explores the concept of unitising by counting in units of two, five or ten; investigate how objects can be counted efficiently by counting in units other than one; apply unitising in the context of the low-denomination coins (1 p, 2 p, 5 p and 10 p).	<ul style="list-style-type: none"> • Know that we can count efficiently by counting in groups of two. • Know that we can count efficiently by counting in groups of ten. • Know that we can count efficiently by counting in groups of five. • Know that a coin has a value which is independent of its size, shape, colour or mass. • Know that the number of coins in a set is different from the value of the coins in a set; knowledge of counting in groups of two, five or ten can be used to work out the value of a set of identical low-denomination coins. • Know that counting in groups of two, five or ten can be used to work out how many identical low-denomination coins are needed to make a given value.
Wk 10 Measures – Time. Starts to tell the time.	<ul style="list-style-type: none"> • Know how to recognise o'clock times and half-past times. • Know how to draw hands on clocks to show o'clock times. • Know some key events associated with o'clock and half past times e.g. breaktime.
Wk 11 Geometry – Properties of Shape: Recognises and names common 3-D shapes: cuboids (including cubes), pyramids, spheres, cylinders. Recap the names of 2D shapes covered earlier in the year.	<ul style="list-style-type: none"> • Know how to recognise and name common 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres). <i>Consolidate previous learning on 2-D Shapes.</i> • Know how to recognise and name common 2-D shapes (e.g. rectangles (including squares), circles and triangles).

It is suggested that all KS1 Fractions (Spine 3) content is taught in Year 2. Aspects of shape and measure are covered within the spines but additional opportunities for practical measure and handling shapes will be built in.

Information based on the [NCETM](#) Teaching Sequence.