Mathematics Year 1 Summer Term

Block 1

Step 1 Count in 2s	In this small step, children explore counting both forwards and backwards in 2s. This builds on understanding from Autumn Block 2, when children added 1 and 2, as well as previous knowledge of doubles and finding 1 more and 1 less. Begin by practically exploring counting in 2s using things that come in pairs, such as socks and wheels on a bicycle. Number lines and a 1–50 number grid are useful representations that allow children to spot patterns when counting in 2s. They should count both forwards and backwards in 2s, but always starting from an even number. Begin to introduce children to the language of multiplication, for example "There are …equal groups of 2. There are …altogether." This will be built on in future steps.
Step 2 Count in 10s	In this small step, children count forwards and backwards in 10s. This builds on previous learning where children explored the multiples of 10 up to 50 as well as counting by making groups of 10. Use of ten frames, bundles of straws, bead strings and number grids will reinforce children's understanding of the multiples of 10. Introduce the language associated with multiplication, such as " …groups of 10 are equal to… " to begin to develop understanding of multiplication, although children are not introduced to the multiplication symbol until Year 2. Focus on multiples up to 50, as children have not yet been exposed to numbers greater than 50. They may then begin to explore counting forwards and backwards from numbers that are not multiples of 10, for example 42, 32, 22, 12, 2
Step 3 Count in 5s	In this small step, children are introduced to counting in 5s. Children practise counting on and back in 5s using a range of different representations such arms on a starfish or a dice showing 5. They will need lots of practice orally to embed this skill. Rhymes such as 'Five eggs and five eggs' can be sung to help reinforce this learning. Ten frames can also be used, showing children the five-wise patterns. The 1–50 grid is another useful representation that can be used for children to spot and discuss patterns that emerge when counting in 5s. Continue to use the language associated with multiplication, for example "There are… equal groups of 5. There are… altogether."
Step 4 Recognise equal groups	In this small step, children begin by using stories that link to pictures and concrete resources to help support them in recognising equal groups. They recognise and explain how they know when there are equal groups and when there are not. In order to do this, children need to see lots of different examples of equal groups in different contexts, for example trays of buns or bunches of flowers. It is important for children to see equal groups that are arranged differently, so they understand that groups can look different but still be equal in number. For example, 5 dots arranged as on a dice, 5 dots in a row close together and 5 dots spaced further apart are all groups of 5. Children can begin to explore ways of making unequal groups equal by adding to or removing from some of the groups.
Step 5 Add equal groups	In this small step, children use their knowledge from previous learning of recognising equal groups to now add equal groups together to find a total. Children focus on counting equal groups of 2, 5, and 10 and explore this within 50. They move on to identifying and recording the number sentence to match the groups. For example, show children 5 pairs of socks and allow them to represent them in a different way, such as with counters, then encourage them to write the number sentence to represent it: $2 + 2 + 2 + 2 + 2 = 10$

	At this point, children do not need to use the multiplication symbol and should record number sentences as repeated additions. However, they should be exposed to the language of multiplication, for example "There are 5 equal groups of 2, so there are 10 in total."
Step 6 Make arrays	In this small step, children use their knowledge of recognising and adding equal groups to arrange objects in columns and rows as arrays. This arrangement helps children to see the equal amounts and how they are grouped. An effective way to introduce arrays to children is by using real-life examples such as bun trays and egg boxes that have these patterns already built in. Once they are confident with describing given arrays, encourage children to build and draw their own arrays to represent a story. They may begin to explore the fact that they can describe arrays in two ways, for example 3 rows of 2 and 2 columns of 3. Children could continue to practise writing repeated addition number sentences to describe the arrays.
Step 7 Make doubles	In this small step, building on learning from Spring Block 2, children again explore doubles. They progress from describing doubling as the addition of the same amount to describing it as 2 equal groups, linking to the work done on multiplication in this block so far. They should now be more confident with doubling numbers up to 20. Give children opportunities to build doubles and explain what a double is using real objects, mathematical equipment and pictures. This will help to reinforce understanding of a double being 2 groups of a number. Encourage children to say doubles as they build them, for example "Double… is …" They can use repeated addition to represent doubles in the abstract. Give children opportunities to look at representations and decide whether they show doubles or not. Now that children have explored numbers to 50, they could also start to explore doubles beyond 20, for example double 12 or double 20.
Step 8 Make equal groups-grouping	In this small step, children build on their knowledge of recognising equal groups to begin to explore division through grouping. This is the first time that they are explicitly introduced to the idea of division. Children start with a given total and make groups of an equal amount. Give them opportunities to make groups with concrete resources. Circling groups when using pictures can also help them to see the groups and identify if they are equal. Further develop children's understanding of equal groups by exposing them to numbers that do not group equally. At this stage, children do not need to be introduced to the division symbol, but they should become familiar with the language of division, for example "There …are groups of… in …"
Step 9 Make equal groups-sharing	In this small step, children explore division in the form of sharing. Children first explore this practically using concrete resources and physically sharing them into groups. They should see that each group will then have the same amount. At this stage, children do not need to write number sentences using the division symbol, but they should be encouraged to explain what is happening using the language of division, for example "There are… counters shared equally into …groups. There are… in each group." It may be helpful to explore the similarities and differences between sharing and grouping, once children are confident with the two structures separately. As an extension, children can look at situations where the objects cannot be shared equally and there are some left over.
Block 2 Fractions	
Step 1 Recognise a half of an object or a shape	In this small step, children explore recognising a half or two halves for the first time, looking at both objects and shapes. Children need lots of opportunities to practically make halves and identify a half and a whole. They need to be shown various types of representations to develop a full understanding of a half. They also need to be shown half of these shapes and objects in different ways. For example, a square can be split in half vertically, horizontally or diagonally. It is important that children know that a half means "one of two equal parts" and are able to count them. In this step, they are supported to recognise when a shape or object is or is not a half, in addition to identifying the whole. At this stage, children do not use the fractional notation of 1/2
Step 2 Find a half of an object or a shape	In this small step, children build on the knowledge from the previous step, where they recognised a half of an object or shape, to now find a half of shapes or objects for themselves. Give children lots of opportunities to practically find halves and make a half using pictures, objects and shapes. They need to be shown lots of varied examples and experiment with different ways of making a half using a range of resources. It is important that children know that a half means "one of two equal parts" and can count them. At this stage, they are still only finding half of one object or shape. They will explore finding half of a set of objects in the next steps.

Step 3 Recognise a half of a quantity	In this small step, children use their previous learning of recognising and finding a half, and apply this to recognising half of a quantity. Children need to have a good sense of cardinality so that they can find a total and then relate this to finding half the amount of the total. They need to show how the total can be shared equally into two groups, using learning covered in the previous block on multiplication and division. They can use concrete resources such as cubes, beads, counters and other small world objects to support this. Children may also find it helpful to relate finding a half to classroom contexts. For example, they can find half the number of children in a group, so that they see what half of an amount looks like.
Step 4 Find a half of a quantity	In this small step, children build on the previous step to find half of a quantity. Children should see that to find a half, they need two equal groups, and should explore practically sharing a given quantity of objects into two groups using skills developed in the previous block on multiplication and division. Encourage children to check the amounts in each group after sharing to ensure that there is an equal amount in each group. Children then progress to circling or shading half of a given quantity. Understanding that half can mean "one out of every two objects" is important for this. Finally, they may begin to explore finding the whole from a half. For example, if 3 is half, what is the whole? Knowledge of doubles from prior learning can support this.
Step 5 Recognise a quarter of an object or a shape	In this small step, children are introduced to recognising a quarter of an object or a shape. This is the first time that they explore quarters. Children develop their understanding of equal parts and non-equal parts and relate this to a shape or object being split into four equal parts. They need to see quarters explicitly being made in lots of different contexts, such as being split horizontally, vertically and diagonally, as well as using a range of different shapes and objects. Children use the words "quarter" and "parts" at this stage, but do not use the fractional notation of 1/4
Step 6 Find a quarter of an object or a shape	In this small step, children build on the learning in the previous step to find a quarter of an object or a shape. Children begin by shading a shape that has already been split into four equal parts, before moving on to splitting shapes into four equal parts themselves. They need lots of practice looking at and manipulating shapes and pictures to find the four equal parts. Children also need to see many representations of quarters in different orientations using a range of different shapes and pictures. At this stage, children are still only finding a quarter of one object. They will explore finding a quarter of a set of objects in the next steps.
Step 7 Recognise a quarter of a quantity	In this small step, children build on previous learning of finding a quarter of an object or shape and finding half of a quantity, and relate this to recognising a quarter of a quantity. Using skills developed in the previous block on multiplication and division, children use their knowledge of how a number can be shared equally into four groups. To decide if a quarter has been found, encourage them firstly to check that there are four groups and then that there is an equal amount in each group. Emphasise that a quarter refers to just one of these groups. They will need to see this in lots of different contexts. Children can also explore representing the whole when they are given a quarter. For example, if one quarter contains two counters, to show the whole they need to put two counters in each of the remaining three groups.
Step 8 Find a quarter of a quantity	In this small step, children use all the learning from this block to explore finding a quarter of a quantity. Children find a quarter of a quantity through their understanding of how to share a set of objects equally. Use of stem sentences supports their understanding that one quarter refers to one of the four equal groups. It is important that children use a wide range of manipulatives to show the groups clearly, drawing around quantities or physically sharing objects. Encourage children to see the link between finding half of an amount and half again to find a quarter. At this stage, children do not use the fractional notation of 1/4
Block 3 Position and direction	
Step 1 Describe turns	In this small step, children use the terms "full", "half", "quarter" and "three-quarter" to describe turns. They will be familiar with "half" and "quarter" from the previous block on fractions, but "three-quarter" will be a new concept to them. Children should be given lots of opportunities to practically turn objects as well as experience the motion of turns themselves. Giving them opportunities to play games and follow simple instructions will support this. Children should be able to identify the size of a turn by looking at the starting and finishing position of a shape as well as drawing the result of a turn. This provides a useful opportunity to revisit learning on 2-D and 3-D shapes. Children should investigate whether they can end up facing the same direction if they complete different turns, but they do not need to describe the direction of turns at this stage.

Step 2 Describe position- left and right	In this small step, children are introduced to the terms "left" and "right" for the first time, although they may have experienced this language outside of the classroom before. Children often confuse the two directions, so look for ways to support children in remembering them, such as rhymes, the "L" shape shown between the index finger and thumb on the left hand and perhaps what hand they use to write with. Explore the positional language of left and right by playing games and singing rhymes and songs. Asking children to follow simple instructions throughout the day is a great way to support this skill. Children also explore describing the direction of movement as being to either the left or the right, then describing the position of one object in relation to another, for example "The… is to the left/right of the… ".
Step 3 Describe position- forwards and backwards	In this small step, children develop their precision when describing positions by introducing "forwards" and "backwards". Children describe the positions of objects and shapes from different starting positions. To begin with, they move their bodies in line with instructions to move forwards and backwards and understand what these terms mean in a practical context. Instructions can then become more specific, such as "3 steps forwards". Using pre-programmable electronic toys or playing a range of simple games where children must move forwards and backwards, including small-scale dice games or large-scale outdoor track games, will support this understanding. Once confident, children can then combine prior knowledge of "left" and "right" with "forwards" and "backwards" to describe more complex movements.
Step 4 Describe position- above and below	In this small step, children build on the directional language developed in previous steps, extending to include "above" and "below". They use this language to firstly describe the position of objects in relation to each other, for example, "The… is above/below the… ". This could also include learning from previous steps on left and right. They then follow and give positional instructions and clues to others, for example to build a tower of cubes. Children develop their ability to recognise and represent direction using marks and symbols. They explore the position of objects and shapes from different starting points. Where possible, this concept should be explored practically both inside and outside the classroom. Children can also start to explore the terms "top" and "bottom".
Step 5 Ordinal numbers	This small step covers a non-statutory statement in the Year 1 curriculum. It has been included to support children to recognise numbers used to describe the position of something. It also links to previous learning such as ordering numbers. Children may be familiar with the language relating to ordinal numbers from lining up, playing games or competing in races. Ensure that children have experience of not only 1st, 2nd, 3rd, but also identifying and representing other ordinal numbers and using them to explain events. They can record positions using numerals and the endings "st", "nd", "rd" and "th" as well as the words "first", "second", "third", "fourth" and so on. Children may also use the word "last" to denote the final position in a group.
Block 4 Place Value	
Step 1 Count from 50 to 100	In this small step, children practise counting to 100, building on their knowledge of place value to 50 from the Spring term. They may have already explored counting within 100 in different ways through classroom routines or experiences at home. Children explore oral counting of numbers 50 to 100, both forwards and backwards. Provide opportunities for them to hear the patterns in the sequence of numbers and to help them get used to the sound of the number names. They also explore counting quantities of objects and think about counting as a way of finding "how many?" Use representations such as hundred squares to point to the numbers written in numerals while counting. This supports children to link the numeral to the sound of the number name.
Step 2 Tens to 100	In this small step, children continue to develop their understanding of numbers to 100 Children begin by extending their knowledge of multiples of 10 from the Spring term to include 60, 70, 80, 90 and 100. They then explore the efficiency of counting in ones compared to grouping in tens. The use of practical equipment such as ten frames, base 10 and bead strings supports this. Provide children with a range of different practical experiences where they can explore counting by grouping in tens and counting by leaving items as ones. This lays the foundation and underpins children's understanding of tens and ones. It is crucial for future learning that they are provided with opportunities to explore and understand that 1 ten is equal to 10 ones.
Step 3 Partition into tens and ones	In this small step, children further develop their understanding of place value for 2-digit numbers from the Spring term, as they now partition numbers to 100 Children identify how many tens and how many ones make a number. They begin by investigating partitioning with concrete resources, such as base 10, followed by abstract numbers and other representations such as part-whole models. They need to recognise that it does not matter whether they

	record the tens part or the ones part first, as the whole remains the same. Children explore the link between the number names, the digits used and the tens and ones structure to support their understanding of numbers up to 100 At this stage, children do not need to describe the part-whole model as an addition number sentence
Step 4 The number line to 100	Children have previously encountered number lines to 10, 20 and 50. In this small step, this is extended to number lines up to 100 Children see examples of number lines with different start and end point values that have intervals in both 1s and 10s. They use their knowledge of counting both forwards and backwards to label number lines counting up in 1s, then in 10s. They identify missing values on a number line, as well as marking the positions of given numbers on unlabelled number lines. Once they are confident with labelling and finding numbers on unlabelled number lines, children can progress to estimating the positions of numbers on blank number lines.
Step 5 1 more, 1 less	In this small step, children revisit the concept of 1 more and 1 less. They explore this in the context of numbers from 50 to 100 by applying the counting skills developed earlier in the block. To support children in understanding the meaning of the words "more" and "less", provide opportunities for them to hear and use these words in context, for example "Please pass me 1 more pen." They need to know that 1 more is the number after the given number, and 1 less is the number before the given number. Base 10, hundred squares and number lines can be useful representations to support children in exploring this concept.
Step 6 Compare numbers with the same number of tens	In this small step, children build on their learning from earlier in the year to compare numbers within 100. In previous blocks, children were introduced to the terms "greater than", "less than" and "equal to" alongside the corresponding inequality symbols >, < and =. Children will need to practise using the words "fewer" and "less" accurately. Fewer is used when talking about a number of objects, whereas less is used when talking about values. Children use their understanding of the values of the digits in a 2-digit number to compare numbers with the same number of tens but a different number of ones. Encourage them to notice that when the tens digit is the same, they only need to compare the number of ones to decide which number is greater.
Step 7 Compare any two numbers	In this small step, children build on their learning from the previous step to compare any two numbers. To begin with, children compare multiples of 10. They then use their understanding of the value of the digits in a 2-digit number to firstly compare two numbers with the same number of ones and different tens, before comparing two numbers with different numbers of tens and ones. They use their knowledge of partitioning to support them in this. It is important for children to explore a range of concrete resources to make comparisons more visual. Children use the terms "greater than", "less than" and "equal to" alongside the corresponding inequality symbols >, < and =. It is important that they have the opportunity to use all the symbols, in order to reinforce the meaning of each one.
Block 5 Money	
Step 1 Unitising	In this small step, children are introduced to the idea that groups containing or representing the same number of things can be treated as ones. For example, a 5 pence coin represents five 1 pence coins. One item does not need to represent a value of one – this is called "unitising". Pre-money counters are used in this step to support children's understanding. These counters are all the same size and colour and have dots on one side to represent their value. This helps children to see the value (cardinality) before they move on to coins where the value is not shown as a visual. By using objects that are the same size and colour, the focus is on exploring the different values that one counter can represent. This supports children to then understand that the value of coins is independent of size, shape, mass or colour.
Step 2 Recognising coins	In this small step, children formally explore coins for the first time. In the previous step, they identified the value of different counters and began to transfer that understanding to coins. They continue to explore and recognise the value of different denominations of coins. Discuss equivalence, showing children that a 20p coin is equivalent to twenty 1p coins and also two 10p coins. This helps them to see why we unitise and use coins with different values rather than using single pennies for everything. Once children are confident with recognising pence, introduce the £1 and £2 coins, explaining that they have a greater value than pence. Although children do not need to formally convert pounds to pence, it may be useful for them to see that £1 is equivalent to 100p. At this stage, children do not need to be introduced to the notation £ and p, as this is covered explicitly in Year 2

Step 3 Recognising notes	In this step, children further develop their understanding of money by recognising and investigating the value of notes. Children use their understanding of place value to compare the value of different notes, for example recognising that a £20 note has a greater value than a £5 note because 20 > 5. They recognise that the larger the size of the note, the higher the value. Children explore how one note can have the value of many coins and/or notes. For example, a £10 note has the same value as two £5 notes or five £2 coins or ten £1 coins. Discuss why we use notes as well as coins. Children are less likely to have encountered a £50 note, as these are much less common in everyday life.
Step 4 Count in coins	In the previous small steps, children recognised and identified the value of coins and notes and saw how one note or coin could have the same value as a combination of a number of other notes or coins. In this step, they use their knowledge of the values of coins to solve problems by counting in 2s, 5s and 10s. This allows children to count money more efficiently. Although they do not need to count in 20s or 50s, they will count on from them. For example, with a 20p coin and three 2p coins, they need to start at 20 and count on in 2s. Encourage children to draw coins or representations to match a given amount and use previous learning to compare amounts of money.

Block 6 Time

Step 1 Before and after	In this small step, children are introduced to key vocabulary relating to time. Provide children with opportunities to explore the vocabulary in context, relating to their everyday routines. A visual timetable can support children to keep track of events and support discussions around the order of events. Children use "before", "after", "first", "next" and "finally" to describe, sort and order events. When talking about the day, they use "morning", "afternoon" and "evening". This can be explored through daily discussion of everyday routines, for example "After story time, we will go home." Story books can be used to support this in a different context and allow children to relate to events that happen within a story.
Step 2 Days of the week	In this small step, children relate the vocabulary used in the previous step, "before" and "after", to the days of the week. Children learn the sequence of the days in a week and know that there are 7 days that repeat in a cycle. Rhymes and songs can be a useful aid in remembering the correct order of the days. Children also describe events using the vocabulary "today", "yesterday" and "tomorrow". Support children's developing understanding of time by regularly referring to a calendar displaying the days of the week. This will help them to relate the reoccurring weekly timetable of events to specific days of the week, for example PE lessons on a Tuesday and a Thursday, and to record and count down to key activities and events.
Step 3 Months of the year	In this small step, children name and sequence the months within a year. As with the previous step, they continue to develop their understanding and use of "before" and "after" and apply this to the calendar year. They learn to relate events to months, noting when familiar celebrations, such as birthdays, occur. A classroom calendar allows children to explore the sequence of the months of the year and to begin to learn the number of days in each month. Familiar rhymes and songs can support children to remember this. Exploring monthly calendars with the days of the week and dates allows children to further develop understanding from the previous step.
Step 4 Hours, minutes, seconds	In this small step, children develop their understanding of hours, minutes and seconds. Children learn that seconds are a shorter period of time than minutes and minutes are a shorter period of time than hours. Although they do not need to convert between different units, it is helpful for them to know that an hour is composed of 60 minutes and that a minute is composed of 60 seconds. Children make decisions about which unit of time would be most appropriate to measure a given activity. They compare time using vocabulary such as "quicker" and "slower". When comparing durations, they need to understand that the smaller number of seconds, minutes or hours is the quicker time. Learning can be supported by practical investigations in which children use suitable equipment to measure the length of the activity, for example a stopwatch or a sand timer.
Step 5 Tell the time to the hour	In this small step, children are introduced to telling the time to the hour using an analogue clock. They are formally introduced to the term "o'clock" for the first time, although they may already have encountered this. Initially, children explore time using a number line and learn that an analogue clock face is a special type of number line. When pointing to numbers, ensure that the hand points exactly to the number and not to the side of it. Explain that when we use the word "hand", we are referring to the arrow/pointer; this is specific to the topic of time. To begin with, children focus on reading time to the hour using only the hour hand. Once they are confident with this, they learn about the minute hand and that the hour hand is shorter than the minute hand. They recognise that when the minute hand is pointing directly to 12, they need to look at the shorter hand to see which hour it is.

Step 6 Tell the time to the half hour	In this small step, children build on the previous step of telling time to the hour to now tell the time to the half hour. Initially, they tell the time to the half hour using only the hour hand and notice that the hour hand is halfway between numbers. They learn the term "half past", linking it to their knowledge of fractions. Once children are confident with this, look at the minute hand. Building on the knowledge that in an hour the minute hand travels all the way around the clock, they see that at half past the minute hand has travelled halfway around the clock from 12 and is now pointing at 6