

Maths Recovery Curriculum

Autumn Term 2020

Medium Term Plan

Year 1/2

This learning schedule is based on the Hampshire Mathematics Scheme of Learning and is designed to take account of the national school closures between March 2020 and July 2020. Learners will begin a new academic year in need of catch-up and consolidation, together with some new learning from the previous academic year that has been missed. This document focusses on the core skills, knowledge and understanding that an 'on-track' learner would be expected to bring to the next stage of their learning and acknowledges that, for many, the habits of learning and the facility to recall previously embedded knowledge will need attention. For this reason, the first elements of this Autumn Term plan address the end of year objectives from the previous year. As the term progresses, the plan seeks to integrate expected prior learning, previously assumed and now no longer can be, into the standard units from the original scheme. In this way, the aim is to build on what is known and recalled in a moderately accelerated way to help learners get back on track for the end of the 20/21 academic year.

Teachers will need to adapt this schedule to meet the needs of their learners

National curriculum statements are in bold type and Hampshire Maths team guidance is in standard type.

The links to the Hampshire Assessment Model have been retained so that teacher assessment in each domain can be made at Milestone 1.

The Hampshire Mathematics team full scheme of learning for KS1 (Year 1 and Year 2) offers long and medium-term maps with more detail, with end of year expectations broken down into smaller steps, plus linked units of work with key tasks and teaching points. This is available to schools subscribing to Moodle Plus <https://maths.hias.hants.gov.uk/>

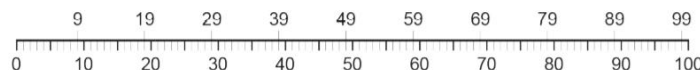
Specific to the Year 1 document only, the appendix that follows the Year 1 Scheme of Learning for Autumn Term 2020 gives guidance for year 1 teachers on continuing Early Years Pedagogy.

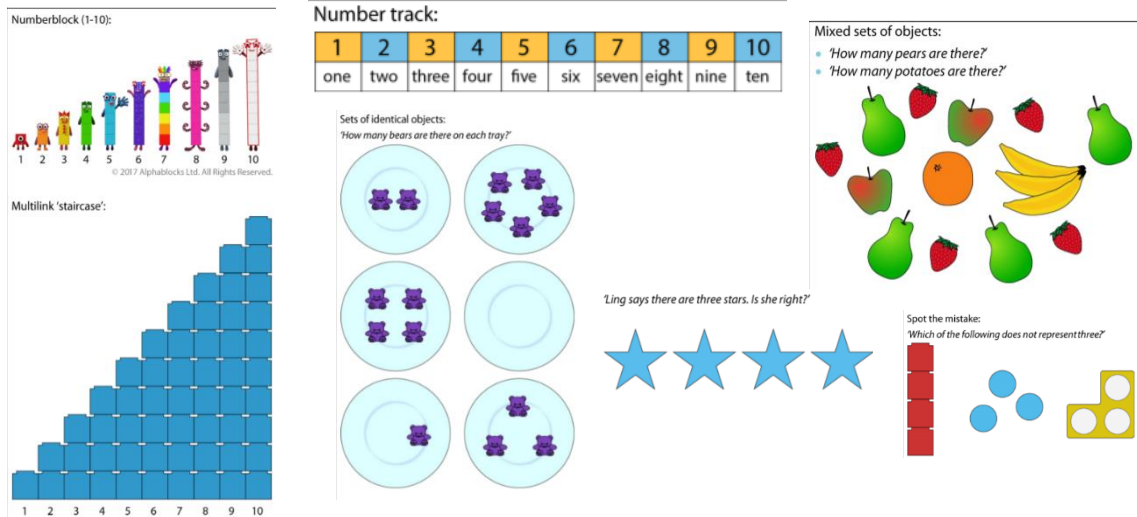
These plans will need to be adapted to meet the needs of pupils. Number of lessons provides a suggested structure, based on hourly lessons. It is expected that domains within units will be connected and integrated. The structure enables pupils to make links and connections across domains. Pupils should develop reasoning through solving problems in each unit of work.

M1	M2	M3	ARE

Year 1	Year 2
Measurement: Find everyday opportunities to develop children's understanding of time (hours) and language (yesterday, today, tomorrow, morning, afternoon and evening). Ensure comparative language is used regularly (quicker, slower, earlier, later). Know the days of the week, introduce months and dates.	Measurement: Find everyday opportunities to develop children's understanding of telling the time (quarter past and to the hour) and language (days of the week and months of the year).
	Calculation: Find everyday opportunities to develop children's fluency with counting and addition and subtraction facts to 20 in context. E.g lunch/sandwiches

Subsequent units should continue to revisit material from previous units to deepen learning, encourage automaticity and allow rich connections to be made across the year.

Date	Unit Focus Lessons	Year 1 Objectives Unit 1.1	Year 2 Objectives Unit 2.1	Types of tasks, Key teaching points, prior learning, Mastery – Year 1	
	20 Lessons			Types of tasks, Key teaching points, prior learning, Mastery– Year 2	
START OF NEW ACADEMIC YEAR					
Mon 7 th Sept - Fri 2nd October	- NPV - Add & Sub	- Count to at least 50 forwards, beginning with 1 and backwards from 10 - Count in 10s to 50.	Types of task Counting forwards and backwards aloud starting from 0-50 Counting aloud to/from any number up to 20 starting at different points. Use sets of items grouped in tens to count in tens 0-50. Daily routines- counting items as they are given out/collected. ‘stock check’ activities. Completing number tracks with missing numbers counting on/back in 1s, from different starting points. Plotting numbers on number lines – horizontal and vertical and curved where some numbers are given. Count & label sets of items and record the number in numerals. Key teaching points and prior learning – Year 1 Ensure pupils can rote count and count objects accurately and fluently from 1- 10, then 20. On-going practice is needed for counting – pay attention to correct pronunciation – especially “teen” numbers. checking understanding and use of: - one to one principle-assigning one number name to each object that is counted, Pay particular attention to 11, 12, 13, 15 as the number names don’t follow a set pattern. - stable order principle- when counting the numbers have to be said in a certain order - the cardinal principle- number name assigned to the final object in a group is the total number of objects on that group - the abstraction principle- anything can be counted including things that cannot be touched including sounds and actions - the order- irrelevance principle- the order we count a group of objects is irrelevant. There will still be the same number		ELG 11 Children count reliably with numbers from 1-20, place them in order and say which number is one more or one less than a given number. Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf When counting backwards, pupils often find it challenging to identify which number they should say after they have said a multiple of 10. A partially marked number line can be used for support.  Figure 4: 0 to 100 number line to support backwards counting
		EOY Y1: Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Count in steps of 10 from any number, forward or backward	Types of task - Continue to practice whole class counting in different steps from different starting points. E.g. • “Counting Orchestra” – assign groups to count forwards or backwards in tens, fives or ones. As the “conductor” points to a group, they pick up the count. - Reasoning about counting sequences – e.g. “If I count back in tens from 89, will I say the number 59? 99? 37?” “Get on the bus” – the bus conductor sets the “rules” for getting on the bus – but keeps them secret. Each pupil writes a number down, then is invited to get on the bus if their number fits the rules. (Rules might be odd numbers, even numbers, multiples of 2, 5, 10, under 50, over 50 etc.) - Give pupils opportunities to write “number riddles” for pupils to “guess the number”. Include language such as “greater than” “less than”, “lies between”, “multiple of two”, multiple of 10”. - Give pupils opportunities to label empty number lines with a start and finish number marked – “roughly, where would XX be?” “What number would sit here?” “Estimate how many” – Use wrapping paper or posters with repeated images on – can you estimate, for example, how many minions there are on the wrapping paper? Use multilink cubes to then match a cube to each minion, then group in tens to find how many - Count in groups, asking one pupil to count aloud then point to next child to carry on. This will encourage children to think about the ‘next’ number and count on from any number. Complete a number line with missing numbers from 0- 100. To make it more challenging for some pupils place more missing numbers where boundaries change or start with 1 at different places on square. - Show 100 square and talk about the patterns. Cut it up into a linear number track and vice versa so pupils can see how they work. Complete missing numbers from 100 square too.	- Look at where pupils start. Do they have to complete, starting at 1 or can they use patterns to help them? Practise counting backwards aloud from 10 then 20 up to 50 (starting from). Complete parts of 100 squares showing numbers before or after a number missing and number tracks. Ten more and ten less: Continue to solve problems involving “ten more” and “ten less”. Encourage pupils to solve these mentally. Ensure pupils are developing confidence and depth of understanding so that they do this fluently and are moving on from counting on in ones to find ten more. Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897800/Maths_guidance_year_2.pdf EOY1 Mastery questions: Compare amounts. What’s the same? What’s different? Children compare the bead strings and notice: One has 9 beads and the other has 6 beads. 9 is 3 more than 6. 6 is 3 less than 9. Pupils should be able to successfully respond to questions such as: - Count forwards from 36, etc. - Point to the third object in the line. - Show me 8 cubes. Pupils should demonstrate one to one correspondence, cardinality and conservation of number EOY1 Mastery with GD questions: I am going to count on from 20. Will I say the number 19? Convince me. I am going to count on in twos from 3. Will I say an even number? Convince me. I am going to count backwards from 20. How many steps will it take to reach 0? Convince me. I am going to count backwards in twos from 20. How many steps will it take to reach 0? Convince me.	

Date	Unit Focus Lessons 20 Lessons	Year 1 Objectives Unit 1.1	Year 2 Objectives Unit 2.1	Types of tasks, Key teaching points, prior learning, Mastery – Year 1 Types of tasks, Key teaching points, prior learning, Mastery– Year 2	
Mon 7 th Sept - Fri 2 nd October	- NPV - Add & Sub	- Read numbers from 1 to 20 in numerals - Identify and represent numbers using objects, mathematical manipulatives and pictorial representations. - Introduce the number-line with practical objects to develop understanding of how numbers relate to one another and to support ordering. Make collections of 10, 20 and 30 objects.	Types of task Use counting objects e.g. straws and count them out. Make bundles of ten straws as a new unit. Look at images or sets of objects and say which has more items/fewer items. Count real life items and represent them using a variety of other mathematical manipulatives. Ask pupils to guess how many objects they think will be in a set. Reading and writing numbers Write labels for sets of objects in the classroom. Match numbers to images of sets of objects to 10 then 20. Count objects out relating to a number. E.g. in role play. Key teaching points and prior learning – Year 1 Check use and understanding of key vocabulary: - more than / less than/ compare - before/ after/ order - number bond/ pair - altogether/ total/ combine/ left - number/ digit - all ‘teen’ numbers Check able to write with correct formation all units numbers and numbers to 20 Can independently use a range of resources to build a concrete number line showing consecutive numbers to 10 and then 20, explaining ‘one more’ and ‘one less’ using the resources eg numicon, towers of multi-link	Reference documents to support subject knowledge and CPA approach https://www.ncetm.org.uk/files/63120725/ncetm_mm_sp1_y1_se03_teach.pdf https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf 	
		- Read and write numbers to at least 100 in numerals and in words. - Identify, represent and estimate numbers using different representations including the number line - Compare and order numbers from 0 up to 100, use < , > and = signs - Given a number, identify one/ten more and one/ ten less (include writing as a number sentence) - Use the language of two more than 19 is 21; two less than 31 is 29. • Use a context to solve problems involving ten more and ten less	Types of tasks - Make and represent numbers using Numicon, Diennes etc to help pupils articulate their reasoning, explanations and proof. - Ensure pupils use correct and precise place value language and can talk about, for instance “4 tens” being the same as “forty” – and can use this language accurately when describing numbers they have made, represented and ordered. - Introduce pupils to the symbols for <> and remind them of “=” which means “equivalent to”. Give pupils sets of numbers to order and compare - ask them to make and represent each number using a structured resource and explain how they know the relative size of numbers. Numberline: Focus on where numbers sit within the number system and position numbers on a partially completed blank number line. Use the number line to count on in steps of ten. Start from zero at first. Notice “multiples of ten” - marked in red on a number line. Can we start at other numbers and count in steps of ten? What do you notice? Use a range of resources to show which digit changes and why – e.g. arrow cards, alongside Numicon, dienes, tens frames etc. Start at a given number and work out jumps of ten on a number line. Problem solving: Begin to pose problems involving adding or subtracting ten to or from a number, expecting this to be done mentally, but checking / proving with resources. Ten more and ten less: Continue to solve problems involving “ten more” and “ten less”. Encourage pupils to solve these mentally. Ensure pupils are developing confidence and depth of understanding so that they do this fluently and are moving on from counting on in ones to find ten more. Mental strategies: Extend problems to a range of calculations involving 1 more / less, 2 more / less and 10 more / less. Ensure pupils are solving these mentally and not counting on or back in ones each time. Include a range of problems – e.g. Sam’s chickens lay 23 eggs on one day. The next day, he has a total of 33 eggs. Can you write this as a number sentence? (23 + ? = 33) How many eggs were laid on the second day? Complete the number sentence. Encourage pupils constantly to solve these problems mentally – using known facts (1 more/ less, 2 more/less, 10 more / less). Use resources to support if necessary, particularly for 10 more / less Key teaching points and prior learning – Year 2 EOY Y1: 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. - Revise representations for NPV and recording calculation eg number sentences (expressions and equations) two part ‘cherry’ and bar models and number lines	- Use the number-line with structured resources to develop understanding of how numbers relate to one another and to support ordering. e.g. Explore place value patterns such as 7,17,27.... and 57,47,37..... On a number-line marked in multiples of 10, explore ‘nearly numbers’ such as those ending in ‘8’ or ‘9’. E.g. ‘18 is close to (or nearly) 20’. - Develop a number sequence with missing numbers. Challenge your friend to describe your number sequence and identify the missing numbers. - If you ordered these numbers, which would be the fourth? Explain why: 33, 53, 38, 27, 34, 43. NCETM https://www.ncetm.org.uk/classroom-resources/primm-1-10-composition-of-numbers-11-19/ - composition of numbers 11-19 https://www.ncetm.org.uk/classroom-resources/primm-1-09-composition-of-numbers-20-100/ - composition of numbers 20-100	

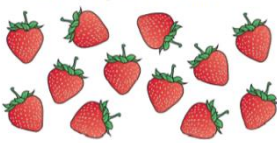
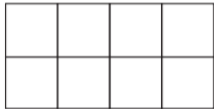
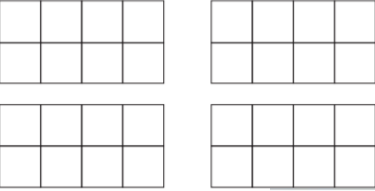
Date	Unit Focus Lessons	Year 1 Objectives Unit 1.1	Year 2 Objectives Unit 2.1	Types of tasks, Key teaching points, prior learning, Mastery – Year 1																				
	20 Lessons			Types of tasks, Key teaching points, prior learning, Mastery– Year 2																				
Mon 7 th Sept - Fri 2nd October	- NPV - Add & Sub	- Order numbers up to 30 starting from any number between 1 and 10. - Given a number, identify one more and one less by counting out objects and augmenting or reducing the group by one. - Use the language of one more than 6 is 7; one less than 7 is 6. - Use a context to solve problems involving one more and one less - Sequence events in chronological order using language such as before and after, next and first (M) - Partition 5 into two parts in different ways using concrete objects (e.g.2-coloured counters or 2-coloured multi-link bars). Record pictorially. - Use a context to problem-solve with number bonds to 5.	Types of task Ordering and comparing Talk about what number comes next, after, before a number and make it using manipulatives. Talk about the difference and what is the same. Order a set of consecutive number cards Order a set of random number cards. Make own cards for numbers missing from sequence. Solve problems such as: I am thinking of a number. It is bigger than 5 but less than 10. What could it be? Subitise small numbers of objects without counting, particular in familiar arrangement such as on dice. Talk about which numbers come ‘next/after, before’ in sequence. Continue simple number sequences. Problem solving Solving real life problems involving 1 more/1 less. E.g. There are 7 sweets in the bag and I ate 1. How many are left now? On the train there are 3 carriages. At the station they add another carriage. How many carriages are there now? Act out using objects and adding to the group. Show alongside on a number line. Sequencing Order events in the day using a visual timetable and describe using ordinal and prepositional language ‘before, after, next, first’ etc. Talk about own routines using language. Sequence pictures of routines Partitioning Numbers Partition collection of objects in different ways for 2, 3, 4, 5 Use sentences to talk about part and whole e.g. my whole number is 4, 3 is a part and 1 is the other part. 1 and 3 is equal to 4. Learn the facts: 0 + 2, 1 + 1 and corresponding subtraction 3-1 etc. 0 + 3, 1 + 2 0 + 4, 1 + 3, 2 + 2 0 + 5, 1 + 4, 2 +3 Displayed pictorially. Use a tens frame or other manipulatives that show the whole clearly. Can you partition 5 into more than 2 parts. E.g. 2, 2, 1	Solving problems How can you score 5 with the following skittles 1, 2, 3, 4 depending on how many are bowled down? Tina has 5 sweets. She has 3 red and 2 green. Raki says he has the same amount. He has 2 green, 1 red and 2 yellow. Is he correct? Reference documents to support subject knowledge and CPA approach NCETM Spine 1.3 Composition of numbers 0-5 -https://www.ncetm.org.uk/classroom-resources/primm-1-03-composition-of-numbers-0-5/ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf Key teaching points and prior learning – Year 1 Can independently use a range of resources to build a concrete number line showing consecutive numbers to 10 and then 20, explaining ‘one more’ and ‘one less’ using the resources eg numicon, towers of multi-link Can count out accurately any number to 10 and partition in more than one way showing results with concrete resources and pictorial recording.																				
		Use place value and number facts to solve problems - Partition all numbers up to 10 into two parts in different ways using concrete objects (e.g.2-coloured counters or 2-coloured multi-link bars). Record pictorially.	Y1:Revise and develop fluency in : - the use of partitions of all numbers up to 20, recalling and deriving associated subtraction facts to solve problems. - using partitioning and part-whole diagrams to read, write and interpret mathematical statements to 20 when solving problems. - using known or derived number facts. - solving problems that involve addition and subtraction to 20, using concrete objects and pictorial representations. Types of task Number bonds: Following on from mental calculation adding / subtracting 1,2 or 10, revisit number bonds to 10 and then 20. Remind pupils that the purpose of learning these is so that we can calculate quickly and fluently without having to count. Problem solving: Use a problem to model use and application of number bonds to solve a problem – e.g. “Abigail has 13 sweets in one bag and 4 in another. How can we work out how many she has altogether? Explain how you know”	Emphasise the use of 4 + 3 = 7, then adding the 10 etc. Involve pupils to draw a bar model to show the relationship (17 is the whole, 13 is a part and 4 is a part). Ask pupils to write the associated subtraction facts (17 – 4 = 13, 17 – 13 = 4). Present pupils with a range of addition and subtraction contextual problems that involve: 2 digit + / - single digit (no bridging) E.g. 25 + 4 2 digit + / - 10 (e.g. 64 – 10) - Adding / subtraction within 20. Emphasise mental fluency – recalling and using known facts. Give pupils a range of missing number problems using number bonds to ten and 20, e.g. 25 + ? = 29 ? = 20 – 8 10 + 2 > 3 + ? This will recap on comparing numbers, and the use of “equivalence” in different places within a number sentence. EOY1 Add and Sub Mastery questions: Use the pattern to complete the number sentences. <table><tr><td>●●●●●</td><td>0 + 5 = 5</td></tr><tr><td>●●●●●</td><td>1 + 4 = 5</td></tr><tr><td>●●●●●</td><td>2 + 3 = 5</td></tr><tr><td>●●●●●</td><td>3 + 2 = 5</td></tr><tr><td>●●●●●</td><td>4 + 1 = 5</td></tr><tr><td>●●●●●</td><td>5 + 0 = 5</td></tr></table> Now do the same for rows of 6 counters, 7 counters, 8 counters, 9 counters and 10 counters. Use the first number sentence to complete the second number sentence. <table><tr><td>4 + 3 = 7</td><td>7 + 4 = 11</td></tr><tr><td>7 - 4 = 3</td><td>11 - 4 = 7</td></tr><tr><td>5 + 2 = 7</td><td>7 + 5 = 12</td></tr><tr><td>7 - 5 = 2</td><td>12 - 5 = 7</td></tr></table> If you know one fact, what other facts do you know? Complete: 3+2 5 10-5 Write a pair of numbers in the boxes to add to 12. □ + □ = 12 And another pair, and another, and another. Can you find all possibilities? Convince me! EOY1 add and sub Mastery with GD questions:	●●●●●	0 + 5 = 5	●●●●●	1 + 4 = 5	●●●●●	2 + 3 = 5	●●●●●	3 + 2 = 5	●●●●●	4 + 1 = 5	●●●●●	5 + 0 = 5	4 + 3 = 7	7 + 4 = 11	7 - 4 = 3	11 - 4 = 7	5 + 2 = 7	7 + 5 = 12	7 - 5 = 2	12 - 5 = 7
		●●●●●	0 + 5 = 5																					
●●●●●	1 + 4 = 5																							
●●●●●	2 + 3 = 5																							
●●●●●	3 + 2 = 5																							
●●●●●	4 + 1 = 5																							
●●●●●	5 + 0 = 5																							
4 + 3 = 7	7 + 4 = 11																							
7 - 4 = 3	11 - 4 = 7																							
5 + 2 = 7	7 + 5 = 12																							
7 - 5 = 2	12 - 5 = 7																							

Date	Unit Focus Lessons	Year 1 Objectives Unit 1.2	Year 2 Objectives Unit 2.2	Types of tasks, Key teaching points, prior learning, Mastery – Year 1	
	15 Lessons			Types of tasks, Key teaching points, prior learning, Mastery– Year 2	
START OF NEW ACADEMIC YEAR					
Mon 5 th October Fri 23 rd October	Measurement (money / length)	• Recognise and know the value of different denominations of coins e.g.1p and 10p coins. Include £10 notes for counting in 10s. • Compare and describe lengths and heights using non-standard units. • Use comparative language long/short; longer/shorter; tall/short; double/half. • Solve problems in a practical context	<u>Types of task</u> • Put pennies on a number-line and step-count as in Unit 1.1 • Use everyday opportunities to compare lengths and height using accurate comparative language eg taller than/ shorter than; same length as, same height as; • Link the number line model with the use of rulers and tape measures • Sort sets of coins and use in role play set up.Sort a set of coins and explain why you have sorted in that way. Now sort a different way. • Children may talk about size, colour, how numbers are written (numerals/words). • Revise counting from earlier in unit using £10 or 10 or £1 or 1p coins to count in 1s or 10s alongside number line. • Plot coins on number line showing their value. • Match to image e.g. using numicon/tens frame. • Show how 10 x 1p coins fill a tens frame. This can be exchanged for 10p. • Record how much money is in wallets using 1p coins or 10p coins encouraging pupils to count in10s. Show pupils prices of objects in a ‘shop’ and ask them to show the coins they could use to pay. Focus on 1s or 10s and 1s for teen numbers and prices under 20p. • Length and Height Order groups of children or toys by height. Who is tallest/shortest? Answer comparison questions e.g. which children are taller than....? • Order lengths of ribbon- shortest, longest. Write some sentences and comparisons about them. e.g. the blue ribbon is longer than the red but shorter than the green. • Investigation - Provide sets of objects e.g. cubes to use as non-standard unit. The table is longer than the sideboard. True or false? How do you know? How will you investigate this? Find items that are shorter than..../longer than...	<u>Key teaching points and prior learning – Year 1</u> • Build on and make links with NPV and calculation from Unit 1.1 • Counting sequences (number word order) starting from any number between 0- 20 • Encourage pupils to count on from a number and back from a number with small numbers eg +/- 1; +/-2, +/- 3, relating this to adding and subtracting (taking away) • 1p coins to represent number making links with representations as above and use as a context for addition and subtraction • Sort coins into different types. Note what is the same and what is different. 6. How much money is in each purse?  2p coins 10p coins 5p coins Mahmood is using 10cm paper strips to measure things in the classroom.  10cm a. How long do you think the eraser is? 	
	Addition and Subtraction			Find everyday opportunities to read the time – Year 2’s - tell the time to the hour and half past the hour	<u>Key teaching points and prior learning</u> • Build on and make links with NPV and calculation from Unit 2.1 • Use 10p and 1p to represent place value and make links with representations as above • Y1: Recognise and know the value of different denominations of coins and notes • Y1: Revise the language for lengths and height (long/ short; longer/ shorter; tall/short) • Link the number line model with the use of rulers and tape measures What is the total value of these coins?   EOY Mastery questions: Which line is longer? Explain your reasoning.  EOY Mastery with GD questions: A long brick is twice the length of a short brick. Which is longer: 2 long bricks or 3 short bricks? 3 long bricks or 5 short bricks? 

Date	Unit Focus Lessons	Year 1 Objectives Unit 1.2	Year 2 Objectives Unit 2.2	Types of tasks, Key teaching points, prior learning, Mastery – Year 1	
	15 Lessons			Types of tasks, Key teaching points, prior learning, Mastery– Year 2	
Mon 5 th October Fri 23 rd October	Measurement (money / length) Addition and Subtraction Find everyday opportunities to read the time – Year 2’s - tell the time to the hour and half past the hour	Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	Types of task - Encourage pupils to create their own problems to solve using ‘first, then now’ language to describe change eg ‘First there were 3 people on the bus, then two more people got on, now there are 5 people’. Record with small world resources, pictures and simple number sentence - Partition 5,6 and 7 into two parts in different ways using concrete objects (e.g.2-coloured counters or 2-coloured multi-link bars). Record pictorially. Note double 3 is 6. Use these partitions to solve problems Partition collections of objects in different ways for 5, 6, 7. Using coloured counters or multilink. Start to arrange in tens frames- filling 5 strip first or using pairs arrangements. Talk about 6 is 5 and a one more when placing in tens frames. Use sentences to talk about part and whole e.g. my whole number is 7, 3 is a part and 4 is the other part. 3 and 4 is equal to 7. Record pictorially using part/whole ‘cherry model’ and write the numbers of the parts under each set/part showing how the number sentence matches. E.g. 4 and 3 is equal to 7. Say aloud: The 4 represents the red counters and the 3 represents the yellow. There are 7 altogether. Reinforce language: 3 is and 4 are parts of 7 which is the whole.	I have 6p to spend on a snack. What could I buy? (give set of priced shopping items). I know 3 + 2 is equal to 5 so what is 3 + 3? How do you know? Represent it. Record as picture. Talk about the = sign and use language ‘is equal to’ If I know 4 + 3 = 7 what else do I know? Explain it, draw it and model using manipulatives. Write the number sentence. Key teaching points and prior learning – Year 1 Pupils can subitise small amounts up to about 4. They may see other arrangements if it is arranged in a familiar way e.g. numicon, dice pattern. Touching and moving objects to count carefully and keep track Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf	
		Solve problems in a practical context involving addition and subtraction of money of the same unit	Types of task Problem solving: Once pupils show that they know coin values, present them with problems that involve making an amount of money with different combinations of coins. E.g. How could you pay for something that costs 20p? Find one way, find another way, have you found them all? Prove it! Kila has 23p in her purse. What could she have? Give pupils problems related a price list to provide addition and subtraction practice in a context. Keep amounts within the range worked on in 2.1 (addition and subtraction) – i.e: • 2 digit + / - single digit (no bridging) E.g. 25p + 4p • 2 digit + / - 10 (e.g. 64p – 10p) • Adding / subtraction within 20 (e.g. 16p + 3p) For subtraction, as pupils to solve problems such as “Philip has 79p He spends 20p. how much money has he left?” Keep these amounts to: • 2 digit – single digit (no bridging) e.g. 28p – 7p. • 2 digit – multiple of 10 e.g. 67p – 20p. • Multiple of 10 – single digit e.g. 60p – 9p Include adding together amount involving 3 single digit numbers – e.g. 5p + 3p + 5p. Use amounts that require pupils to use number facts and explain how they know. (E.g. “I know that 5p + 3p + 5p is 13p because I know that 5 and 5 is ten, then there are three more.” Relentlessly focus on mental fluency and applying known facts - not counting in ones.	Key teaching points and prior learning – Year 2 - Solve problems with addition and subtraction, applying their increasing knowledge of mental recall of number bonds to 20. - Add and subtract numbers using concrete objects, pictorial representations and mentally, including a 2- digit number and ones; a 2-digit number and tens - Add thee one-digit numbers Check Children can ... - Count and understand place value in 2-digit numbers - The concept of “standard measures”	

Half Term

Date	Unit Focus Lessons	Year 1 Objectives Unit 1.3 15 Lessons	Year 2 Objectives Unit 2.3 15 Lessons	Types of tasks, Key teaching points, prior learning, Mastery – Year 1	
Types of tasks, Key teaching points, prior learning, Mastery– Year 2					
Mon 2 nd Nov - Fri 21st Nov	Multiplication and Division (10 Lessons) Fractions/ Geometry (5 Lessons)	- Count reliably in 2s. - Share objects equally by counting how many in each group - Recognise and name a half as one of two equal parts of a quantity	Types of task Counting Collect sets of 2 objects and place on number line. - Use bead strings to count in 2s, moving 2 beads at a time. Count in 1s, quietly saying non-multiples of 2 and loudly saying multiples. - Count aloud using number line. Cover some numbers. Can children identify the missing multiples when counting in 2s? Count in pairs and say the next multiple of 2 after their partner. - Count in different contexts e.g. money Problem solving- Multiplication - Solve real life problems using counting in 2s. e.g. Sophia had £2 a week pocket money. She saved her money for 6 weeks. How much did she save? Act out with sets of single objects if pupils cannot count in 2s or recognise the value of a £2 coin. - Reinforce language: There are groups of.... There are altogether. Problem solving- Division- sharing Introduce fair sharing. - Share quantities of items and ask if it is fair. Do they both have the same? E.g. I have 12 sweets and share them between myself and a friend (2 people), how many will we each have? “If I share.....equally between Groups, there will be.... In each group”. What if I shared the same sweets between 3 people? Would I each person have more or fewer? Explain why. - Model similar problems using manipulatives and real- life objects. Children can record by drawing pictures to solve the problems - Can you find an amount that can/cannot be shared equally between....? Prove it. Start to introduce language of even/odd and relate even numbers to sharing equally by 2.	Key teaching points and prior learning – Year 2 - Look at doubles of numbers in contexts eg on a ladybird and measures eg double the number of cubes, lengths of ribbon, find pairs - Find numbers which can be shared equally into two groups and those which cannot using the vocabulary ‘odd’ and ‘even’ - Relate to work in Unit 1.1 on number - Find half of shapes by folding and quantities by equal sharing - Practise putting a group of objects into ‘equal sized groups’ and counting ‘how many groups’ ELGs 11 They solve problems by doubling, halving and sharing Check Children can ... - Counting in 1s from any number forwards and backwards. - Regular practise of numbers bonds to 3, 4, 5, 6, 7 Watch out for: - Pupils who think sharing is always between 2 (which comes with practice of sharing with a ‘friend’ and connecting to counting in 2s). - Pupils who do not understand halving and relate it to splitting/dividing something into 2 groups, equal or not Reference documents to support subject knowledge and CPA approach https://www.ncetm.org.uk/classroom-resources/primm-2-01-counting-unitising-and-coins/ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf	
Mon 2 nd Nov - Fri 21st Nov	Multiplication and Division (10 lessons)	- Count reliably in 2s, 5s and 10s from zero. Introduce counting in 3s from zero. (multiples) - Construct arrays with concrete objects. Notice that 2 x 5 = 5 x 2 etc. (Commutativity). Record pictorially. - Develop the concept of sharing and grouping into different sized groups (not just 2s) - Recognise, name and write a half as one of two equal parts of a quantity - Write a half as a word and as a number.	Types of task Practise counting in steps of 2, 5 and 10 (from Year 1). - Accompany rote counting with drawing attention to the jumps along a number line, and also link to counting collections of things. Explore the patterns when counting in 2’s, 5’s and 10’s from zero. What do you notice? - Explore the patterns when starting at other numbers. What do you notice and explain why this happens? Introduce pupils to counting in 3’s from zero. Use a number line, numicon tiles etc to support counting in 3’s. - Discuss if this is easier / harder than counting in 2’s, 5’s or 10’s. Why? Use different contexts for finding how many groups of “X” there are in a collection of things. E.g. There are 24 pupils in the hall. Could they get into teams of 2/3/4/5 with none left over? If they are in groups of 4, then we need groups of 3, will there be more groups or fewer groups? Do this practically with pupils. Organise pupils into arrays. Use practical counting objects to solve problems involving putting things into equal sized groups e.g. Sid has 25 marbles. He wants to put them in boxes of 5. How many boxes will he need? Explore arrays – egg boxes, baking trays, photographs of windows, arrays in walls etc. Discuss how many are in each row / column. How many altogether? - Label the arrays to show repeated addition calculations, then model how we can simplify this using the “x” symbol (so 5 + 5 + 5 + 4 becomes 5 x 4). - Use the different written algorithms to draw attention to commutativity (5 + 5 + 5 = 3 + 3 + 3 + 3 + 3, or 5 x 3 = 3 x 5). Ensure practical tasks give opportunities for sharing and grouping (e.g. 20 apples shared between 2 people / 20 apples sold in bags of two). Key teaching points and prior learning – Year 2 Y1: Count in multiples of 2s, 5s and 10s. Y1: 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. - Link counting in 2s, 5s ,10s to grouping objects and to the pattern of numbers on a number-line. - Solve problems involving groups of 2, 5 and 10 objects using pictorial recording. - Rehearse together the language of ‘How many groups of 2 (5, 10) are there?’ ~ ‘There are 3 groups of 2 (5,10)’	Check Children can ... - Rote counting in 2’s, 5’s and 10’s from zero. - Using counting in 2’s, 5’s and 10’s to solve problems Watch out for: - Insecurity with counting in 2’s, 5’s and 10’s. - Pupils who can rote count in 2’s, 5’s and 10’s but are unable to use this to count a collection of objects efficiently of solve a problem. - Pupils who are not spotting patterns in multiples – therefore won’t be able to generalise or predict. - Pupils confused over “number of groups” and “group size”. Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897800/Maths_guidance_year_2.pdf https://www.ncetm.org.uk/classroom-resources/primm-2-02-structures-multiplication-representing-equal-groups/ https://www.ncetm.org.uk/classroom-resources/primm-2-03-times-tables-groups-of-2-and-commutativity-part-1/ https://www.ncetm.org.uk/classroom-resources/primm-2-04-times-tables-groups-of-10-and-of-5-and-factors-of-0-and-1/ EOY1 Mastery questions: Show pupils pictures or groups of objects like the examples below. Ask questions such as ‘How many biscuits are there altogether?’ ‘How many cherries are there altogether?’ Observe how pupils count the objects. Do they count in twos, fives etc. or do they count in ones?  Anna is counting in fives: 5, 10, , 20, , , ... Fill in the missing numbers. EOY1 Mastery with GD questions: If I start on 0 and count on in fives will I say the number 55? If I start on 4 and count on in twos will I say the number 17? If I start at 10 and count on in tens will I say 100? If you counted back from 50 in tens, would you say 0? Can you explain?	

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Mon 2 nd Nov - Fri 21st Nov	Multiplication and Division Fractions/ Geometry (5 Lessons)	- Recognise and name common 2D shapes including squares and circles - Recognise and name a half as one of two equal parts of a shape	Types of task - Halving - Link halving to equal sharing between 2. Find half of a whole object in practical contexts e.g. using role play area and food or models. - Share sets of objects equally into 2 groups. - Find numbers that you can/cannot halve equally and sort them into 2 groups. 5 - ort shapes where half is coloured or there is not exactly half coloured although they are split into 2 - Recognising 2D shapes - Shape hunt. Collect as many circles, squares, triangles as you can from the environment. - How do you know this shape is a? - Use everyday language such as straight, corners, sides, points, curved to help explain. - Start to model the mathematical vocabulary of sides and vertices. - Give shapes in different orientations such as a square or triangle tilted. Is this still a square/triangle? Show how to rotate it to show it is still the same shape. - Get pupils to sort shapes which are triangles, squares and circles of different sizes and displayed in different orientations. - Use table Is a (circle, square, triangle) or not a (circle, square, triangle) D - escribe using language such as; “I know this is a ... because it has....” Give other key words to select from e.g. sides, vertices, straight, curved	Key teaching points and prior learning – Year 2 - Link counting in 2s to grouping objects and to the pattern of numbers on a number-line. - Solve problems involving pairs of objects, groups of 2 using pictorial recording. Rehearse together the language of ‘How many groups of 2 are there?’ ~ ‘There are 3 groups of 2’ Watch out for: - Children not recognising shapes when presented in different orientations or of different sizes Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf https://www.ncetm.org.uk/classroom-resources/primm-3-0-guidance-on-the-teaching-of-fractions-in-key-stage-1/
Mon 2 nd Nov - Fri 21st Nov	Multiplication and Division Fractions/ Geometry (5 lessons)	- Recognise, name and write a half as one of two equal parts of a quantity - Write a half as a word and as a number. - Identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line - Identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid. - Recognise, find, name and write fractions as equal parts of a shape (link to symmetry and folding). Focus on $\frac{1}{2}$, $\frac{1}{4}$, $2/4 = \frac{1}{2}$ - Measurement: tell and write the time to five minutes, including quarter past/ to the hour and draw the hands on the clock face to show these times	Types of task - Use food packaging boxes alongside 3D shapes to discuss the properties of the shapes they can see. Draw attention to the 2D shapes that make up the faces of the 3D shapes. Use this to recap the properties of common 2D and 3D shapes, ensuring that correct mathematical vocabulary is modelled and then used. - Show pupils pictures that show reflective symmetry in a vertical line – e.g. butterflies, the Taj Mahal, symmetrical buildings, windows, flowers etc. Emphasise the reflective nature of the “sameness” by folding over symmetrical shapes and using mirrors on the line of symmetry. - When folding shapes on the line of symmetry, use the language of folding in “half” and checking that both halves are the same size. - Continue to fold a range of 2D shapes to find a “half” and a “quarter” of each shape. Emphasise that each “half” or “quarter” must be equal in in size. Give pupils time to fold shapes so that they can explore different ways to find a quarter of a square and a rectangle. - Make coloured “puzzle pieces” – halves and quarters. Ask pupils to use the pieces to make “wholes” Encourage them to notice that $2/4 = \frac{1}{2}$. (Shapes can be contextual – e.g. pizzas, cakes). - Set contextual problems e.g. “Sam and Tom have the same sized pizza each. Tom cuts his pizza into 2 equal pieces and eats one piece. Sam cuts his into 4 equal pieces and eats two pieces. Who has eaten the most pizza?” Explain / prove your thinking. - Count in fractional steps of $\frac{1}{2}$ and $\frac{1}{4}$ using representations and a number line. - Place fractions ($1/2$, $\frac{1}{4}$, $2/4$) on a number line marked 0 – 1. What do you notice? What would happen after 1? Key teaching points and prior learning – Year 2 - Y1: Recognise find and name a half as one of two equal parts of an object, shape or quantity. - Y1: Recognise find and name a quarter as one of four equal parts of an object, shape or quantity Check Children can ... - Pupils use of mathematical language to name and describe 2D and 3D shapes. - Pupils understanding that fractions are about “equal parts of a whole”. Watch out for: - Pupils who cannot explain and prove that a fractions of a shape must be equal in size. - Pupils who cannot accurately place the fractions they know on a number line.	Reference documents to support subject knowledge and CPA approach https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897800/Maths_guidance_year_2.pdf https://www.ncetm.org.uk/classroom-resources/primm-3-0-guidance-on-the-teaching-of-fractions-in-key-stage-1/ EOY1 Mastery questions: Circle half of this group of strawberries.  Shade to show half of the whole shape.  Have a range of shapes in a ‘feely bag’. Can you feel for the triangle, the square, the rectangle? Explain how you know. Sort a range of 3-D objects into groups:  Explain how you have sorted them using mathematical names for the shapes. Sam leaves for school at 8 o'clock. Jay leaves half an hour later than Sam. Circle the clock which shows when Jay leaves for school. Explain your reasoning.  Circle the times which are shorter than 1 week. 1 year 1 day 1 minute 1 hour 1 month EOY1 Mastery with GD questions: Shade each whole shape to show half in four different ways.  What is half of this amount?  What's the same and what's different about these shapes?  Which could be the odd one out and why? Could each one be the odd one out? Provide children with a variety of 3-D shapes and ask: What's the same and what's different between these shapes? Children make comparisons, drawing out the properties of shape and using language such as straight, curved, number of vertices. Tom says, 'My shape has 4 rectangular faces and 2 square faces. What is my shape?' Sam says, 'My shape has 2 triangular faces and 3 rectangular faces. How many vertices does my shape have?' I walk to school every day. On Monday my journey takes 10 minutes. On Tuesday I walk more slowly. Does my journey take more or less time than on Monday? Explain your answer. On Wednesday it takes me 8 minutes to walk to school. On which of the 3 days do I walk quickest? On which of the 3 days do I walk slowest? Explain your reasoning.

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Types of tasks, Key teaching points, prior learning, Mastery– Year 2					
Mon 23 rd Nov - Fri 18 th Dec	NPV (5 Lessons) Addition and Subtraction (10 Lessons)	- Count in 2s to 20, modelling on a number-line - Count in 10s to 100, modelling on a number-line - Count back from any given number between 11-20 to zero - Given a number, identify one more and one less to 20 - read, write and interpret mathematical statements to 10. - Solve one-step problems that involve addition and subtractions, using concrete objects and pictorial representations.	<u>Types of task</u> - Counting in 1s - Counting aloud in 1s starting from any number. Start to estimate position of numbers on different number lines with a decreasing number of markers. E.g. roughly where would 47 go? What about 16? Use different number lines to place numbers. - Counting in 2s - Count in 2s collecting pairs of items. - Counting in 10s. - Make bundles of ten straws to reinforce ten as a new unit. Make links with other manipulatives and coins. - Reading and recognising Numbers - Make numbers using concrete resources and talk about value of tens and ones. What number is this? How do you know? - Ordering - Ordering numbers in sequence on number lines or sets of number cards. - Place numbers on washing lines- which is missing? 1 more/1 less. - Make numbers using resources and show reducing or increasing the group size of objects by 1. Explain the effect. When you do this with teen numbers what changes/stay the same? - Partitioning - Talk about parts and whole of numbers 5, 6, 7 and range from previous units and represent using concrete resources and start to write mathematical statements. - Solve problems e.g. If I knock down 2 skittles (moving to 3 skittles) and my score is.... What could I have knocked down? - Draw images to solve the problem using concrete objects first to represent the problem alongside a number track. - Demonstrate taking away using the concrete resources on the number line as the skittles get ‘knocked down’. - Give opportunities for children to play games where they practise counting on and back on number tracks. Give a range of real-life problems with everyday themes that children can act out. - Present totals in a systematic way and ask children to look for patterns and relationships. e.g. be a postman posting letters starting with 7 letters in his sack. How many are left in the sack after posting to 4 houses? - Change the start amount e.g. what if he started with 6 letters? Next change posted amount. What if he posted an extra letter each time?	- Act out buying shopping items and placing in shopping bag. How many items were bought? Represent all problems by using a resource to represent part of the problem. - Reinforce representation orally with the children e.g. “1 counter represents 1 item bought in the shop” - Addition: Show children how to combine two groups of objects, moving to counting on and encourage them to use facts they know. Subtraction: Use concrete objects alongside number lines to show ‘taking away’ and then reinforcing as counting back. - Draw attention to known facts and relationship to addition by ‘undoing’ problems. <u>Key teaching points and prior learning – Year 2</u> - Build on and make links with Unit 1.1 and Unit 1.2 ELG 11 - Children count reliably with numbers from 1-20, place them in order and say which number is one more or one less than a given number. - Using quantities and objects, they add and subtract 2 single digit numbers and count on or back to find the answer - They solve problems involving doubling, halving and sharing - Count to at least 50 forwards, beginning with 1 and backwards from 30 - Read numbers from 20 to 50 - Order numbers up to 50 starting from any number between 1 and 10. - Use partitions of 5,6 and 7to derive associated subtraction facts. - Use partitioning and part-whole diagrams to show number bonds for all numbers <u>Check and refresh ...</u> - Counting 2s forward and backwards. - Number Bonds to 5 <u>Watch out for:</u> - Pupils finding it difficult to count over boundaries e.g. 29 to 30 or backwards from 30 to 29. - Pupils who can only count forwards that need to practise counting backwards more. - Pupils not pronouncing ‘ty’ and ‘teen’ correctly. <u>Reference documents to support subject knowledge and CPA approach</u> https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897799/Maths_guidance_year_1.pdf https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development/number-addition-and-subtraction/ - All Year 1 spine documents	
Mon 23 rd Nov - Fri 18 th Dec	NPV Addition and Subtraction (10 lessons) Statistics (10 lessons)	- Count in steps of 10 from any number forward or backwards, modelling on a number-line - Read and write numbers to at least 100 in numerals and in words - Compare and order numbers from zero up to 100 using <, > and =. - Count back from any given number - Given a number, identify one (ten) more and one (ten) less within 100. - Solve one-step problems that	<u>Types of task</u> - Explore what happens when we start at any number and count forwards ten? What do you notice? Show on a structured number line. Predict the next number...and the next? Use Numicon / Diennes alongside arrow cards. Which digit changes and which stays the same? Explain why. - Set challenges such as “When I add a multiple of ten to any number, the ones digit will always stay the same...always, sometimes, never.” Ensure pupils reason about their solutions and develop a proof using resources - Revisit the use of the < > and = symbols. - Combine the use of these with other number facts – e.g. ask pupils to compare the numbers of days in a week with the number of hours in a day – so generating “7 < 24” or 24 > 7”. - Ensure counting is part of on-going routine practice – building in appropriate challenge e.g. different starting / finishing / turning around points, forward AND backwards. - Ensure that counting backwards becomes as fluent as forwards, particularly across tens boundaries. - Set mental maths challenges – e.g. “my starting number is 27. I add 1, subtract 10, then subtract 1. What is my new number? Encourage mental recall and the use of quick jottings if necessary. - Set problems that require pupils to add / subtract a single digit number to / from a two-digit number. E.g. Toni has 28 friends at her party. Six have to leave early. How many are left? - Pupils should do this mental and explain that they know 8 – 6 is 2, so 28 – 6 is 22. Then, introduce bridging forwards and backwards where bridging through the tens number is necessary. E.g. “25 friends have already arrived at Toni’s party. Another 7 arrive. How many are there now?	<u>Key teaching points and prior learning – Year 2</u> - Y1: Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. - Y1: Solve one-step problems that involve addition and subtraction using concrete objects and pictorial representations, and missing number problems such as 7 = Δ - 9Use resources to show partitioning any two -digit number into different combinations of tens and ones, explaining their thinking Use structured number-lines to record addition and subtraction number sentences revising calculation within 20 using number bonds (not counting in ones on fingers etc). Then... - Adding 2 single digit numbers (bridging through ten) e.g. 8 + 7 - A 2-digit number and ones (no bridging +/-) e.g. 24 + 5, 38 – 6 - A 2-digit number and ten (+ / -) e.g. 34 + 10, 68 - 10 <u>Check Children can ...</u> Accurate counting skills - Accurate articulation of numbers – particularly “ty” and “teen”. - Correct formation of digits when writing numbers in numerals. - Correct place of digits in two-digit numbers. - Counting forwards and/ or backwards through a multiple of ten accurately. - Recall and use number bonds for efficient calculation. <u>Watch out for:</u> - Incorrect articulation of “teen” and “ty” numbers.	

		involve addition and subtractions, using concrete objects and pictorial representations including on the number-line, bridging through 10 using number bonds of all numbers, where appropriate	• Use a number line to model “bridging through the tens number” Be explicit about using number bonds to do this quickly and fluently – “I know that if I add 5 to 25, that makes 30, then 2 more makes 32 (I know this because I can partition 7 into 5 and 2”). • Give pupils purposeful practice opportunities to continue to do this fluently, ensuring they focus on applying known number facts to their calculation and do not revert to counting on or back in ones. • Build in opportunities for pupils to practise spelling “number” words. Pupils should be able to write numbers to twenty in words by the end of Year 2, so now need to spell multiples of ten correctly and combine these with the numbers they already know – e.g. “thirty four”	• Reversal of digits in two-digit numbers. (ask pupils to “make and represent” 2-digit numbers and find them on a number line if reversal of digits is an on-going problem.) • Pupils who revert to counting in ones to calculate rather than using and applying quickly recalled facts. • Pupils who revert to counting in ones to add/subtract ten a number. • Pupils incorrectly using “” symbols – check conceptual understanding <u>Reference documents to support subject knowledge and CPA approach</u> • https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897800/Maths_guidance_year_2.pdf https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development/number-addition-and-subtraction/ - All Year 2 spine units
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