Old Town Infant School and Nursery

Coastal Learning PARTNERSHIP

MATHS MEDIUM TERM PLANNING

Year 1 – Place Value within 100 (Approximately 2 weeks)	
Objectives from Progression Document	**count to and across 100, forwards, beginning with 0 or 1** **count to and across 100, forwards and backwards, beginning with any given number** **count to and across 100, backwards, beginning with any given number** **identify and represent one and two digit numbers using objects and pictorial representations*** **identify and represent numbers using the number line** **count, read and write numbers to 100 in numerals** **read and write numbers from 1 to 20 in words** **given a number, identify one more and one less** **use the language of equal to, more than, less than, most, least, (fewer)** know and use <, > and = signs for numbers within 10 **solve problems related to place value and number**
Previous Learning	**count to and across 20/50, forwards and backwards, beginning with any given number** **identify and represent one and two digit numbers to 20/50 using objects and pictorial representations*** **count, read and write numbers to 20/50 in numerals** **given a number to 20/50, identify one more and one less** **use the language of equal to, more than, less than, most, least, (fewer)**
Vocabulary	digit, numeral, figure(s), compare, order/a different order, size, value, between, halfway between, above, below, tens, ones
Key fact(s)	To know that numbers to 100 are made up from some tens and some more tens and/or ones
Number facts for fluency	Halve numbers to 10 Number neighbours: 4-3, 5-3, 5-4, 6-4, 7-6, 8-6, 8-7, 9-7, 9-8
DfE Ready to Progress Guidance Pages https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/897806/Maths_guidance_KS_1_and_2.pdf	**1NPV-1** Count within 100, forwards and backwards, starting with any number pages 11-13
NCETM Ready to Progress Exemplification https://www.ncetm.org.uk/classroom-resources/exemplification-of-ready-to-progress-criteria/	**1NPV-1** Count forwards and backwards within 100
Problem Solving and Reasoning Skills Objectives	give reasons to justify what might come next in a simple sequence of shapes or numbers
Pre-assessment:	Year 1 – place value with 10, 20, 50

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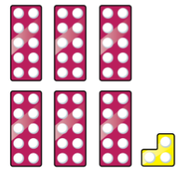
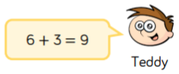
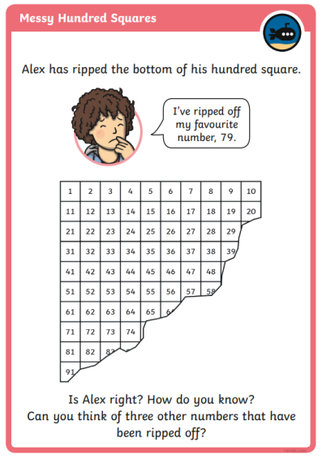
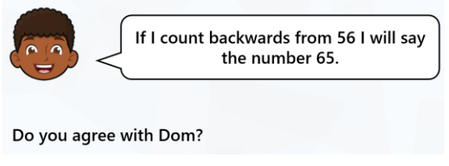
Sequence of Learning

White Rose Small Steps	Learning Intention	Key Questions	Sentence Stems	Problem-solving links	Comments	Extension and Greater Depth Opportunities
Count from 50 to 100 (1NPV 1)	**To count forward and back from any number within 100**	What number comes after ___? What number comes before ___? Do you always need to start counting from 1? When you count from to ___, will you say the number ___? Which number comes after 9/19/49/59/99? Which number comes before 50/60/70/80 /90/100? Which numbers sound similar?	The number that comes after ___ is ___. The number that comes before ___ is ___. I want to count to ___, so I could start counting from ___. I will/will not say the number ___ because…		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. Children may struggle to count when crossing a tens boundary. Children may confuse the pronunciation of the "teen" numbers with the "ty" numbers, for example fifteen and fifty	Teddy has made a number using the number shapes.  He says  What mistake has Teddy made? Correct the mistake in each sequence. • 34, 35, 36, 38, 39 • 98, 97, 96, 95, 93 • 78, 79, 18, 81, 82
Tens to 100 (1NPV 1)	**To practise counting to 100 in groups of ten**	How can you show 1 one/10 ones? How can you show 1 ten? How many tens are there in _____? If you have 7 full ten frames, what number have you made? Is there more than one way to count the objects? What is the most efficient way to count the objects?	___ ten frames are full, so I know that I have made ___. There are ___ tens. This is equal to ___. There are ___ more ones. The number is ___.		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. Provide plenty of opportunities to explore and understand that 1 ten is equal to 10 ones. Children may rely on counting items individually as ones, rather than grouping objects into tens – this is not efficient.	
Partition into tens and ones	To understand that numbers to 100 are made up from some tens and some ones	How many tens are there? How many ones are there? What is the number? What is the whole? What are the parts? Does it matter which way round the parts are? How does partitioning a number help you to read and write it?	There are ___ tens. There are ___ ones. The number is ___. ___ is the whole. ___ is a part and___ is a part.	Shut the Box (maths.org) Although the numbers are small, the adding will be more of a challenge.	**At this stage, children do not need to describe the part-whole model as an addition number sentence.** Children identify how many tens and how many ones make a number. 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. Children may partition the number into its digits, rather than considering the value of each digit.	Complete the number tracks. a) 67 68 71 b) 89 92 c) 97 96 94  Do you agree with Dom?
The number line to 100 (1NPV 1)	**To identify and represent numbers using the number line**	What number comes after/before ___? What is the value of the start/end of the number line? How much is each jump on the number line? How do you know? What number is halfway along the number line? Should _____ be to the left or right of halfway? How do you know? Is _____ closer to _____ or _____?	I know the number line is going up in ___s because … The number halfway along the number line is ___. ___ is to the left/right of halfway.		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 confident, Children can then progress to estimating the positions of numbers on blank number lines.	

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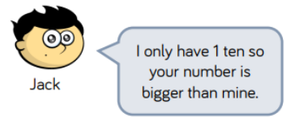
					Children may assume that all number lines start from zero or count in 1s. Children may label the intervals rather than the divisions.
1 more, 1 less (1NPV 1)	**To give one more or one fewer of any number within 100, represented in different ways**	How can you show the number _____? What does 1 more/less mean? How can you find 1 more/less? How can you use a number line to find 1 more/less? How does this change the number? What digit(s) change? Is it only ever the ones digit that changes?	1 more than _____ is _____ 1 less than _____ is _____ _____is 1 more than _____ _____is 1 less than _____		Children 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 Children can find counting backwards more challenging and miss out numbers or say them in the wrong order. Children may struggle to identify 1 more or 1 less when the number crosses a multiple of 10.
Compare numbers with the same number of tens	To compare numbers with the same number of tens	How can you use base 10 to show the numbers? How many tens does each number have? How many ones does each number have? Is _____ greater/less than _____? How do you know? How can a number line help you to compare numbers?	_____ is equal to _____ tens and _____ones. _____tens is _____ to _____ tens. _____ ones is greater/less than _____ones. So _____ is greater/less than _____ _____ is greater/less than _____because …	Same Length Trains (maths.org) Finding different solutions.	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. Children may confuse the inequality signs.
Compare any two numbers	To compare numbers within 100	Which is greater, 7 tens or 3 tens/70 or 30? How do you know? How can you make both numbers using base 10? Which number has more/fewer tens? Which number has more/fewer ones? Which number is greater? How do you know? Why is it important to look at the tens before the ones?	_____ tens are greater/less than _____ tens. When I compare numbers, I need to compare the _____ first. _____is equal to ____ tens and _____ones. _____is greater/less than _____ because …		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. Children use the terms "greater than", "less than" and "equal to" alongside the corresponding inequality symbols >, < and =. Children may compare numbers by only looking at either the ones digit or the tens digit.

Alin says, 'If I start at 5 and count in fives I will say the number 100.'
Is he correct?

Explain your reasoning.

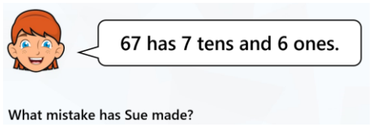
Sita says, 'If I start at 17 and count in twos I will say the number 28.'
Is she correct?

Explain your reasoning.

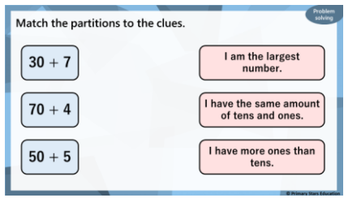


Is Jack correct?
Prove it.

Use Base 10 to make a number:
- Greater than 84
- Less than 70
- Greater than 75 but less than 87



What mistake has Sue made?



Complete the table.

Clue	Possible numbers
3 tens and less than 3 ones.	
9 ones and less than 2 tens.	
1 ten and more than 6 ones.	

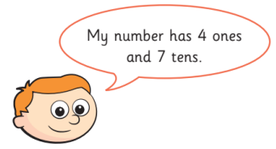
Use two of the digit cards to make a number greater than 50.
Use two of the digit cards to make a number less than 30.
Use two of the digit cards to make an odd/even number.
Use two of the digit cards to make a number between 47 and 59.
What is the smallest 2-digit number you can make?
What is the largest 2-digit number you can make?
Explain your reasoning.

Use Base 10 to make a number.

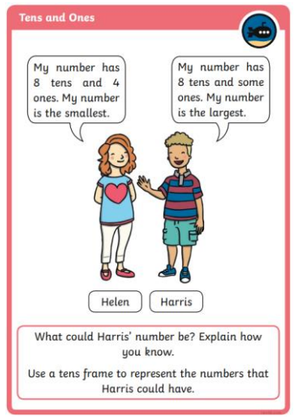
The number has 5 tens and fewer than 8 ones

How many possible numbers are there?

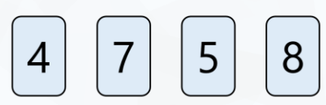
Ron is thinking of a number.



What number is Ron thinking of? ☐



Use the digit cards below to make numbers between 56 and 80. You may use the digit cards more than once.



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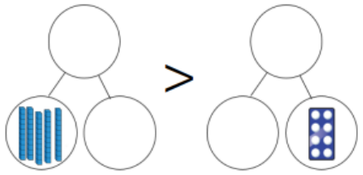
Eva and Alex have some number cards.

They both use two of their cards to make two-digit numbers.

Eva's number is bigger than Alex's number.

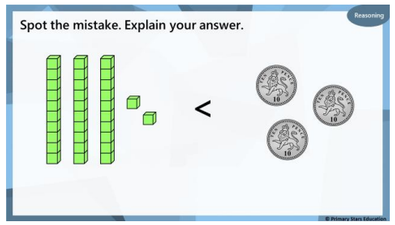
What could their numbers be? How many answers can you find?

How many ways can you complete the part-whole models to make the calculation correct?



Make a number greater than 80 but less than 100

What number did you make?



Use the digit cards.

0	1	2	3	4	5	6

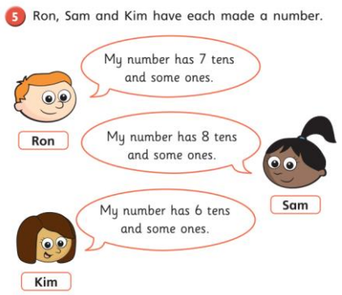
Make a number greater than 25 ☐

Make a number less than 72 ☐

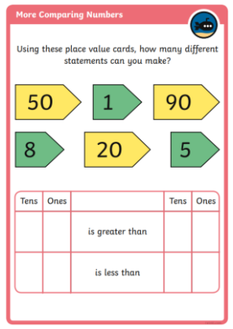
Make a number greater than 59 ☐

Talk about your answers.

5 Ron, Sam and Kim have each made a number.



Who has made the smallest/greatest number?



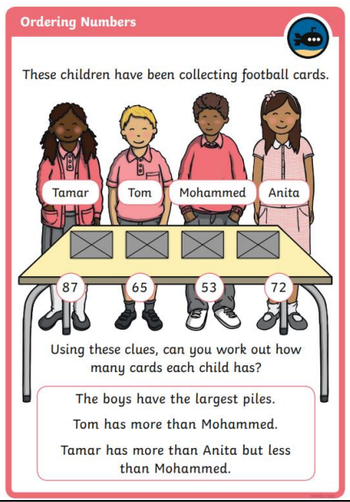
Mo creates a traffic jam using some toy cars on the carpet.
The red car is 3rd from the front.
It is also the 2nd from the back.

Use some cars or manipulatives to find out how many cars are in the traffic jam.

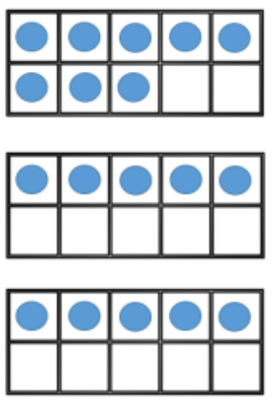
The numbers in each list are in size order.
Complete the missing numbers.

65	78		91	99
89	80	72		
		57		

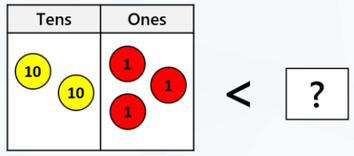
Why did you choose the numbers you did?
Are they the only numbers that could have completed the number tracks?



Can you move two of the counters so Rosie has 1 more than Alex and Whitney has 1 less than Alex?



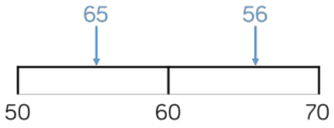
The number that goes in the box is less than 27.
What could the number be? List all possibilities.



What's the same? What's different?

45	54

Tommy has marked numbers on his number lines.
Has he made any mistakes?



Explain to a friend the mistake you think he has made.

Show the numbers on your own number line.

- 75
- 34
- 91
- 57

How many different ways can you complete the place value charts to make the statement correct?

Tens	Ones		Tens	Ones
5		<		3

Which number could be the odd one out? Why?

40	71	65

Pupils suggest their own reasoned ideas, for example 71 might be the odd one out because it's not a multiple of 5.

Sam says 40 is the odd one out. What reasons did she give?

Pupils suggest their own reasoned ideas, for example 40 might be the odd one out because it's not an odd number.

If Sam places these 5 numbers in order, starting with the smallest number, which number will be in fourth position?

46	64	24	42	50

smallest ... largest

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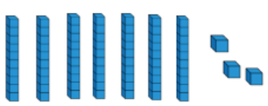
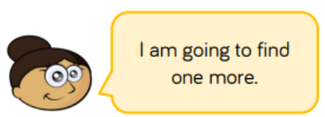
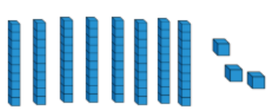
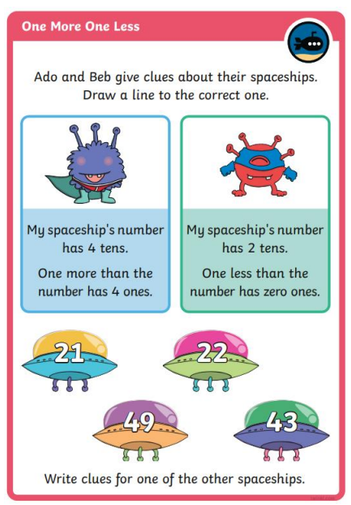
Dora started with this number.



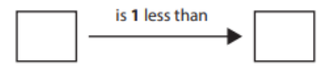




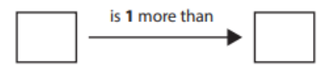
Has Dora shown the correct amount?
Explain how you know.



Complete:



Gemma thought of a number. Ten more than her number was 67.
What was her number?



Gemma thought of a number. Ten less than her number was 71.
What was her number?

Always, Sometimes or Never True?

When finding 1 less than a number, the tens digit of the number stays the same.

Post-assessment:	WRH end of block place value within 100 assessment – snip as feel appropriate