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Year 1

Small Steps Breakdown

Block 4 – Place Value

White Rose Maths

Year 1 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		Consolidation
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50) (Multiples of 2, 5 and 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)			Number: Fractions		Geometry: position and direction	Number: Place Value (within 100)		Measurement : money	Time		Consolidation

Overview

Small Steps

NC Objectives

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.

Count, read and write numbers to 100 in numerals.

Given a number, identify one more and one less.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.

Counting to 100

Partitioning numbers

Comparing numbers (1)

Comparing numbers (2)

Ordering numbers

One more, one less

Counting to 100

Notes and Guidance

Children build on their previous learning of numbers to 50. They continue grouping in 10s to make counting quicker and more efficient.

Children are introduced to the hundred square and use it to count forwards and backwards within 100

Mathematical Talk

What is the most efficient way to count the objects?

How many are in each group?

What do you notice about the layout of the hundred square?

Is there an efficient way to find numbers?

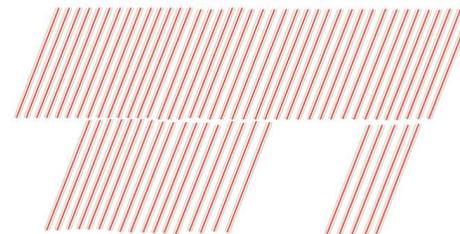
Will I count the number ___ if I am counting from ___ to ___?

Varied Fluency

- How many flowers are there altogether?
Can you represent the flowers using ten frames and counters?



- How many straws are there?
Bundle the straws in tens to make them easier to count.



- Use the hundred square to:
 - Count forwards from 80 to 92
 - Count backwards from 73 to 65
 - Write down the numbers between 68 and 81
 - Find what number comes between 76 and 78

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Counting to 100

Reasoning and Problem Solving

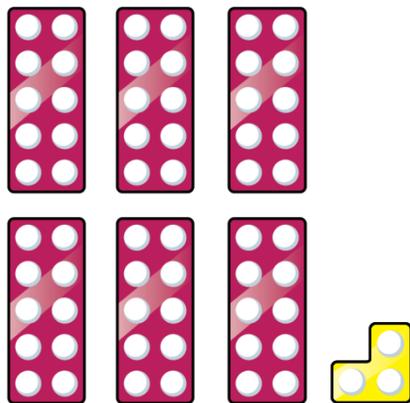
$$6 + 3 = 9$$



Reuben

Reuben has counted the six 10s as 1s and added it to the 3.

Reuben represents his calculation with number shapes.



Explain the mistake Reuben has made.

Circle the mistake in each sequence.

- 34, 35, 36, 38, 39
- 98, 97, 96, 95, 93
- 78, 79, 18, 81, 82

- 38 instead of 37
- 93 instead of 94
- 18 instead of 80

Partitioning Numbers

Notes and Guidance

Children continue grouping in 10s to identify how many tens and ones are within a number. Children should be given the opportunity to use concrete resources to group objects.

Children are introduced to place value charts when reading and recording tens and ones within a number.

Mathematical Talk

Can you make groups? How many could we put in each group?

What happens when we have 10 ones?

How many groups of 10 are there?

How many ones are there?

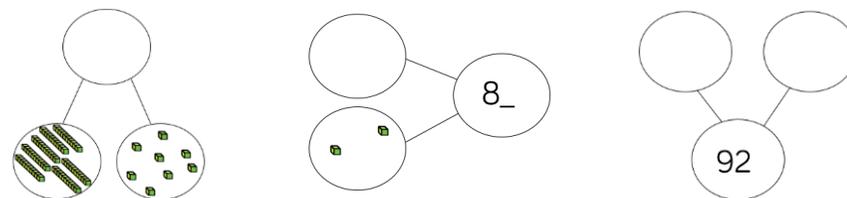
Varied Fluency

- 1 Use Base 10 to make these numbers then complete the stem sentences.

70 96 64 81 92 66 99

70 has **7** tens and **0** ones.

- 2 Complete the part whole models.



- 3 Show these numbers using a place value chart and Base 10 or straws.

Tens	Ones

73	50
88	79
91	85
62	93

Partitioning Numbers

Reasoning and Problem Solving



I have 9 ones

Marvin



Scott

I only have 4 tens so your number must be bigger than mine

Is Scott correct?
Prove it.

Scott is incorrect. Each of his ten is worth more than each of Marvin's ones therefore he has a larger number.

Use Base 10 to make a number:

- Greater than 84
- Less than 70
- Greater than 75 but less than 87

Children may make a range of numbers to fit the given criteria. Ensure children are not mixing up the tens and ones.

Use Base 10 to make a number.

With 5 tens and less than 8 ones

How many possible numbers are there?

They could make 50, 51, 52, 53, 54, 55, 56 or 57
So there are 8 possibilities.

Comparing Numbers (1)

Notes and Guidance

Children use their partitioning knowledge to begin comparing numbers within 100. It is important for children to work with a range of equipment to make comparisons more visual.

Children use the language ‘more than’, ‘less than’ and ‘equal to’ alongside the inequality symbols.

Mathematical Talk

Which number has the most/least tens? Which number has the most/least ones?

If the number is greater/less which direction will we move on the number line?

How can we count efficiently?

Varied Fluency

1 Make these numbers on place value charts.

78 and 61

Tens	Ones

90 and 89

Tens	Ones

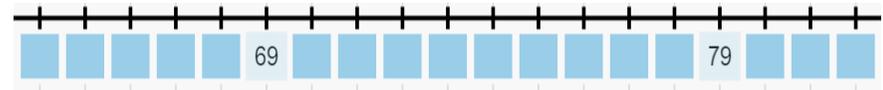
64 and 92

Tens	Ones

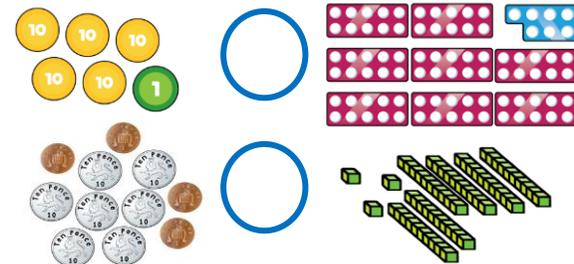
Which number from each pair is the largest?

2 On the number line, label a number:

- Less than 69
- Greater than 79
- Greater than 69 but less than 79



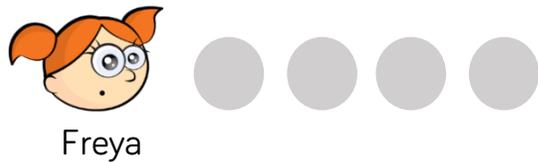
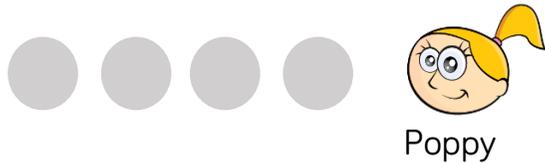
3 Compare the numbers using $>$, $<$ or $=$



Comparing Numbers (1)

Reasoning and Problem Solving

Poppy and Freya have some coins.



Poppy and Freya's coins add up to more than 50p.
Freya's amount is greater than Poppy's.

What coins could the girls have?

Children can find a variety of ways.
For example:

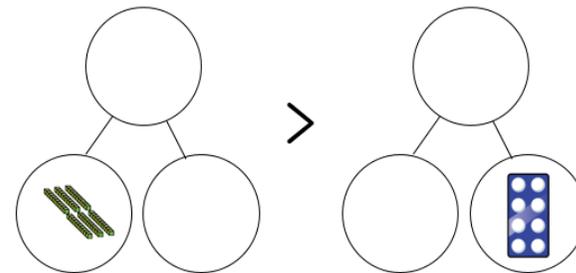
P: 20p, 20p, 20p,
20p

F: 50p, 20p, 20p,
20p

P: 20p, 20p, 20p,
10p

F: 20p, 20p, 20p,
20p

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



Children can choose a range of numbers to complete the part whole models but need to ensure the first model is greater than the second.

Comparing Numbers (2)

Notes and Guidance

Children compare numbers using comparison language and the comparison symbols (<, > and =)

Children begin to understand the value of the digits in a 2-digit number and use this to help them order numbers more efficiently.

Mathematical Talk

Which number is the biggest/smallest? How do you know?
Which digit is the most important?

Is there more than one number that could complete the statement?

What is the largest/smallest number that could complete the statement?

Varied Fluency

1 Compare the numbers using <, > or =

Tens ●●●●	Ones ●●	○	Tens ●●●●	Ones ●
Tens ●●●	Ones	○	Tens ●●	Ones ●●●●
Tens ●●●	Ones ●●●	○	Tens 5	Ones 1

2 Complete the statements.

70 < 86 > > 91
 < 52 64 < < 100

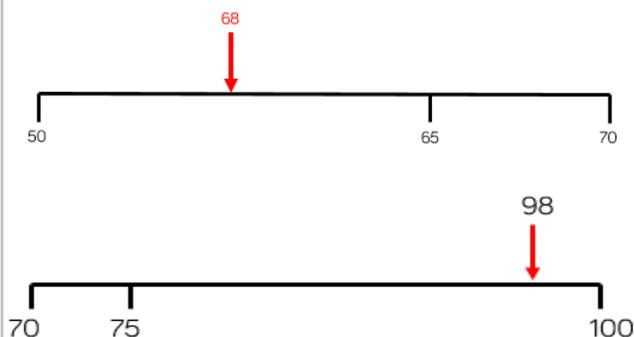
3 Complete the stem sentences.

62 is _____ than 55 but less than _____.
 90 is less than _____ but _____ than 88.
 _____ is greater than _____ but less than _____.

Comparing Numbers (2)

Reasoning and Problem Solving

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



Can you show the following numbers on your own number line?

- 75
- 34
- 91
- 87

68 is greater than 65 and therefore should come after it on the number line.

The number is marked correctly – there is no mistake.

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

Tens	Ones	<	Tens	Ones
5				3

$50 < 53$

$51 < 53$

$52 < 53$

Placing a 6, 7, 8 or 9 in the Tens column means that children can then place any number in the Ones.

Ordering Numbers

Notes and Guidance

Children order sets of objects and numbers from smallest to largest and largest to smallest.

Children use the language ‘most’, ‘bigger’, ‘biggest’, ‘larger’, ‘largest’, ‘smaller’, ‘smallest’ and ‘least’.

Children revisit and practise position and ordinal numbers (first, second, third etc.).

Mathematical Talk

How are we ordering these objects/numbers? Which should be start with?

Which is the biggest/has the most?

Which is the smallest/has the least?

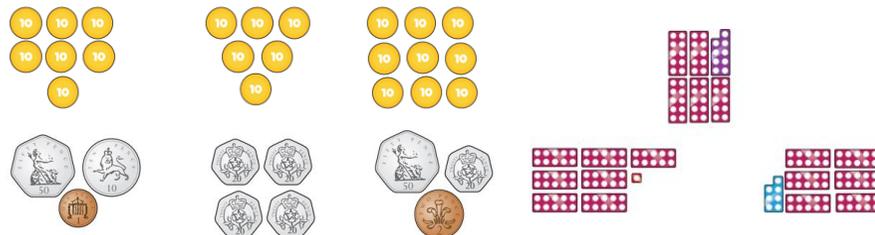
Which number/group comes next? How do you know?

How many more/less objects are in group A than group B?

Varied Fluency

1 Put these objects in the correct place in the table.

Most		Least



2 Put the children in the correct order.



Ben is first in the line. Zoe is fourth. Faye is second. Matthew is third place in the line.

3 Order the numbers from smallest to largest.

57 8 21

100 93 72

Ordering Numbers

Reasoning and Problem Solving

How have these numbers been ordered?

18, 39, 52, 64, 65, 80

Explain how you know.

Numbers have been ordered from smallest to largest. Children should explain that the numbers are getting larger each time.

Complete the number tracks.

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?

1. Children could choose any number >78 but <91 .
2. Children could choose any numbers <72 .
3. Children can choose any numbers to make the track go from largest to smallest or smallest to largest.

One More, One Less

Notes and Guidance

Children find one more and one less than given numbers to 100

Children begin using concrete materials and physically add 1 more or take 1 away before moving to more abstract methods such as number tracks or hundred squares.

Mathematical Talk

- Do we need to add more or take some away?
- How can we represent this?
- How many tens were there? How many tens are there now?
- How many ones were there? How many ones are there now?
- Which place value column changes when finding 1 more and 1 less?
- What happens when I find 1 more than a number with 9 ones?
- What happens when I find 1 less than a number with 1 one?

Varied Fluency

- 1 Show one more and one less than the numbers given.

One less		One more

- 2 Find the missing numbers.

		37			
	46	47			
55		57			
65					

- 3 Use the number cards to make 2 digit numbers. Now write down one more and one less than the numbers you have made.

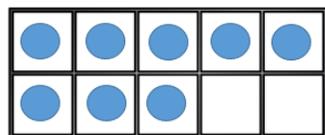
Use equipment if needed.



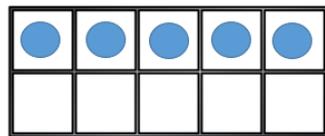
One More, One Less

Reasoning and Problem Solving

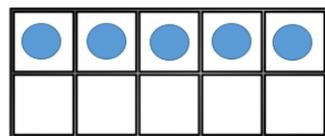
Can you move two of the counters so Jacob has 1 more than Emma and Toni has 1 less than Emma?



Emma



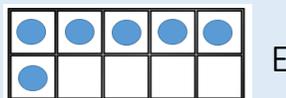
Jacob



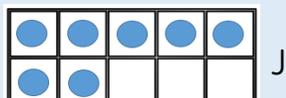
Toni

Always, Sometimes, Never

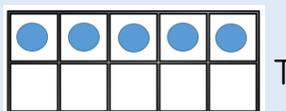
When finding 1 less the tens digit stays the same.



E



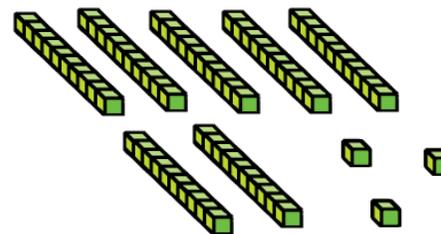
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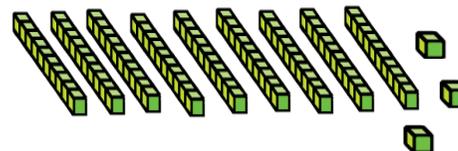
T

Sometimes. If the number has 0 ones, the tens number will change.

Iqra started with this number.



I am going to find one more



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

Iqra is not correct. Iqra has shown 10 more by adding another rod instead of 1 more and adding another cube.