Year ①

Small Steps Guidance and Examples

Block 2: Place Value to 50

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

Numbers to 50

Tens and ones

Represent numbers to 50

One more one less

Compare objects within 50

Compare numbers within 50

Order numbers within 50

Count in 2s

Count in 5s

NC Objectives

Count to **50** forwards and backwards, beginning with 0 or 1, or from any number.

Count, read and write numbers to **50** in numerals.

Given a number, identify one more or 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 (fewer), most, least.

Count in multiples of twos, fives and tens.

Numbers to 50

Notes and Guidance

Children build on previous learning of numbers to 20
They learn about grouping in 10s and the idea of 1 ten being equal to 10 ones is reinforced.

Children count forwards and backwards within 50 and use a number track to support their understanding of this.

Mathematical Talk

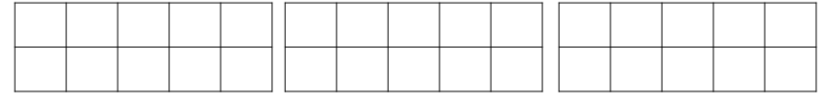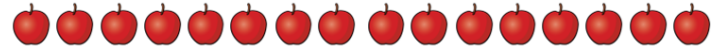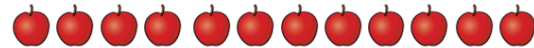What happens when we get to 10?

___ ones make ___ ten.

How many groups of 10 can we see in the number ___ ?

How does the ten frame show groups of 10?

Varied Fluency

1 Use ten frames and counters to show how many apples Joe has.

2 How many muffins are there?

40	41	42	43	44	45	46	47	48	49	50
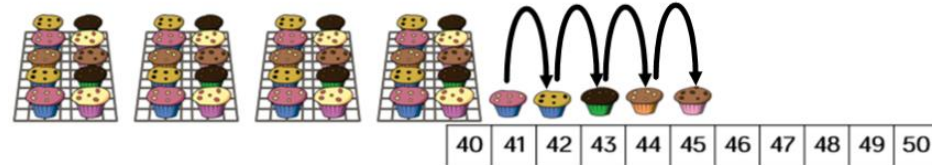
3 Use a number track to
(a) count back from 46 to 38
(b) count forwards from 35 to 49

35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
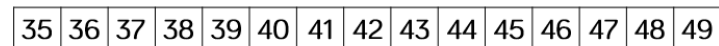
Numbers to 50

Reasoning and Problem Solving

Alex counts how many muffins she has.

30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40
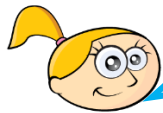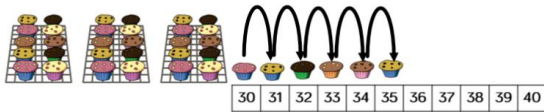
There are 35 muffins.

Do you agree with Alex?

Explain your answer.

Possible answer:
I do not agree with Alex because she has counted 30 twice. There should be 36 muffins.

Sasha is counting from 38 to 24

Will she say the number 19?

Explain how you know.

Possible answer:

Sasha will not say 19 because 19 is not between 38 and 24 Children could show this on a number track.

Tens and Ones

Notes and Guidance

Children use their knowledge from the previous step to look at how many groups of tens and ones there are in a number. They will use a range of concrete materials to do this.

It is important that children understand how a number is made up of tens and ones. For example, the number 34 is made up of 3 tens and 4 ones.
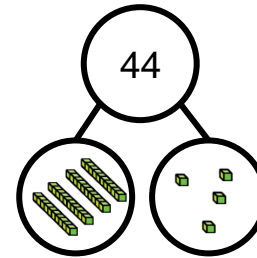
Mathematical Talk

How many tens are there?
How many ones are there?
What number does that make?

How can you exchange ten ones for one ten using different representations?

Varied Fluency

1. How many tens and ones are shown?

44

There are ___ tens and ___ ones.

___ tens + ___ ones = 44

2. What number is represented in the grid?

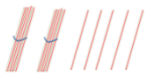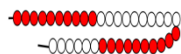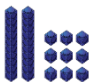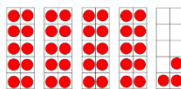| Tens	Ones

There are ___ tens and ___ ones.
___ tens + ___ ones = ___

3. Match the image to the correct number.

- Three tens and six ones

- Two tens and five ones

- Four tens and three ones

- Two tens and nine ones

Tens and Ones

Reasoning and Problem Solving

Mo says,

There are 25 counters.
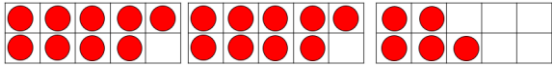
Do you agree with Mo?

Explain your answer.

Possible answer:

I do not agree with Mo because the ten frames are not all full so he doesn't have 2 tens and 5 ones. He has 23 counters.

Alice and Billy both attempt to build the same number.

Alice   Billy

42   42

Who is correct?

Can you explain the mistake that has been made?

Billy is correct.

Alice has got mixed up with tens and ones and shown 4 ones and 2 tens (24)

Represent Numbers to 50

Notes and Guidance

Children represent numbers to 50 using a variety of concrete materials.

Children should be able to state how a number is made up. For example, 29 is made up of 2 tens and 9 ones.

Mathematical Talk

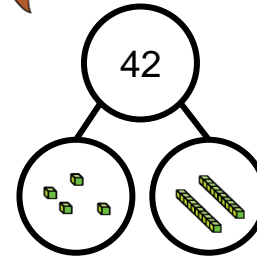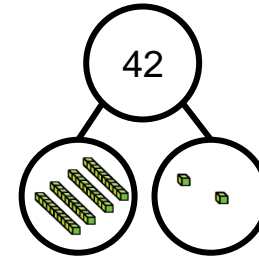Which part represents the tens?
Which part represents the ones?

What do you notice about the numbers 30?
How many tens are there?
How many ones?

Varied Fluency

1 Using base 10, make the following numbers on the place value chart.
- 29
- 30
- 48

Tens	Ones
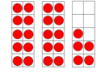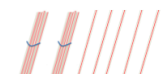
There are ___ tens and ___ ones in ___.

2 Using ten frames and counters, show:
- 19
- 32
- 40

There are ___ tens and ___ ones in ___.

3 How many different ways can you represent the following numbers? Here is an example for 25

- 34
- 28
- 49

Represent Numbers to 50

Reasoning and Problem Solving

Alan, Daisy and Oliver have all tried to make 23

Alan
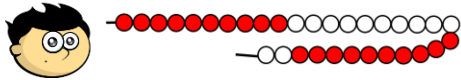
Daisy
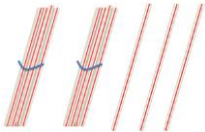
Oliver

Can you explain any mistakes made?

Alan is incorrect as he has mixed up his tens and ones and made 32 rather than 23

Kate says,

I have 3 tens and 8 ones. My number must be 308

Explain the mistake Kate has made.

Kate has written 3 tens as 30 instead of just using the digit 3 in the tens column. It should be 38

One More One Less

Notes and Guidance

Building on previous learning of tens and ones, children will start to compare numbers finding one more and one less than given numbers up to 50

Children build numbers concretely before using number tracks and 1–50 grids.

Mathematical Talk

What number is shown? How do you know?

How many tens are there in ___?
How many ones?

When finding one more and one less than, which column changes? Why?

Varied Fluency

1 Fill in the blanks:

There are ___ donuts.
One more than ___ is ___.

There are ___ donuts.
One less than ___ is ___.

2 Build and find one more and one less.

One more than ___ is ___.
One less than ___ is ___.
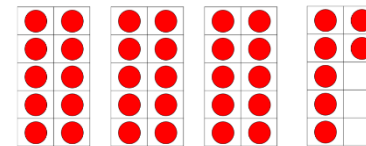
One more than ___ is ___.
One less than ___ is ___.

3 Find one more and one less:

One less than ____ is ____.

| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |

One more than ____ is ____.

| 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 |

| 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |

| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

40 41 42 43 44 45 46 47 48 49 50
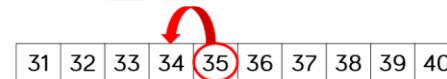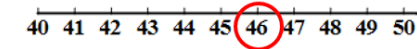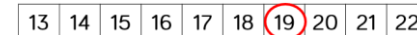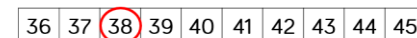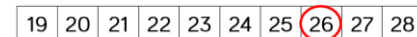
One More One Less

Reasoning and Problem Solving

| 19 | 20 | (21) | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

One more than 21 is 23

Do you agree?

Explain your answer.

No, the number track is wrong. The answer should be 22

How many different ways can you represent one more than and one less than this number?

Children could use a number line, number pieces, base ten, place value table etc to represent the numbers 45 and 47

Choose the correct numbers to make the sentences correct.

28   26   33   45

36   43   35   49

□ is one less than 27

34 is one less than □

□ is one more than 44

50 is one more than □

26
35
45
49

Compare Objects within 50

Notes and Guidance

Children compare two sets of objects using the inequality symbols. Children use the language 'more than', 'less than' and 'equal to' alongside the correct symbols.

The way numbers can be built and represented should be explored to find the simplest and easiest way to visualise the numbers when comparing.

Mathematical Talk

What could we use to represent the muffins?

How could we layout the muffins to help us compare?

What do <, > and = mean?

What is the smallest number you could have in the last box on the table.

Varied Fluency

1   Craig and Emma each have some muffins.

☐ has the most muffins.

☐ is more than ☐   ☐ > ☐

2   Fill in the blanks:

☐ < ☐   ☐ > ☐
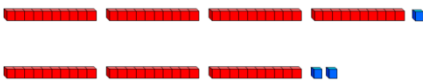
3   Complete the table:

Compare Objects within 50

Reasoning and Problem Solving

Zoe is thinking of a number that could go in the empty box.
Her number is more than 19

23 >
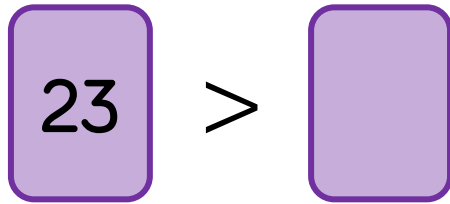
What could Zoe's number be?

20, 21 or 22

Ben compares two numbers.

Tens	Ones

>

Tens	Ones
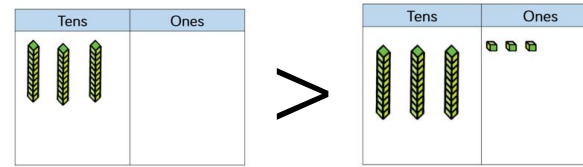
Do you agree with Ben?

Explain your answer.

Possible answer:
Children may choose to prove Ben wrong by building and representing the numbers shown.

Compare Numbers within 50

Notes and Guidance

Building on previous learning of comparing objects within 50, children compare two numbers using the inequality symbols.

Children use the language 'more than', 'less than' and 'equal to' alongside the correct symbols to compare numbers.

Mathematical Talk

What does $<$, $>$ and $=$ mean?

How many tens are there in _____? How many ones?

What is one more than _____? What would one less be?

How many more/less is _____ than _____ ?

Varied Fluency

1 Use the number track to compare the two numbers using words and inequality symbols.

| 19 | 20 | 21 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

21 is _____ than 26.   21 ◯ 26

26 is _____ than 21.   26 ◯ 21

| 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 |

30 is _____ than 35.   30 ◯ 35

35 is _____ than 30.   35 ◯ 30

2 Use the 1-50 grid to compare using $<$, $>$ or $=$

12 ◯ 23

38 ◯ 19

40 ◯ 39 + 1

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

3 Use a number track or 1-50 grid to complete:

15 ◯ 50   38 ◯ 49

28 ◯ 9   2 tens $<$ ▢

33 ◯ 33   ▢ $>$ 46

Compare Numbers within 50

Reasoning and Problem Solving

Beth makes a 1-50 grid to help her compare 18 and 13

1	2	3	4	5	6	7	8	9	10
20	19	(18)	17	16	15	14	(13)	12	11
21	22	23	24	25	26	27	28	29	30
40	39	38	37	36	35	34	33	32	31
41	42	43	44	45	46	47	48	49	50

Beth thinks that 18 is less than 13

Do you agree?

Can you spot her mistake?

Possible answer:
Beth has incorrectly filled in her 1-50 grid. 18 is greater than 13

Use the 1-50 grid to complete the statements.

12 ◯ 21   21 is _____ than 12

21 ◯ 12   12 is _____ than 21

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

Prove it.

12 < 21
21 is more than 12
21 > 12
12 is less than 21

Children can prove it using concrete resources e.g. ten frames or place value charts.

Order Numbers within 50

Notes and Guidance

Children order numbers using the language, 'largest', 'smallest', 'biggest', 'greatest', 'least', 'most' and 'equal to'.

They continue to use inequality symbols to order numbers in ascending and descending order.

Mathematical Talk

Which group is the largest? Which group is the smallest?

How many are in group _____?
How many more/less does group ___ have than group ___?

Can you build the groups using cubes and compare? Explain what you notice.

What is the smallest/largest number that could complete the empty box?

Varied Fluency

1 Order the groups of cubes starting with the largest group.

Group 1
Group 2
Group 3
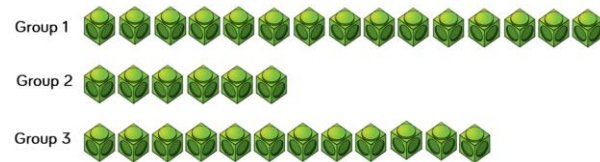
2 Order the three numbers from smallest to biggest:

☐ < ☐ < ☐

Using base 10, build and order from biggest to smallest:
- 23, 49, 19
- 11, 33, 22
- 41, 14, 42, 24

3 Use the four numbers to complete the statement.

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

☐ > ☐ > ☐ > ☐

Order Numbers within 50

Reasoning and Problem Solving

Spot the Mistake

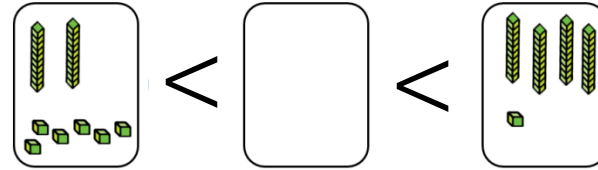12 > 21 > 33 > 35

Can you correct it?

The wrong inequality symbol has been used.

It should be
12 < 21 < 33 < 35
or
35 > 33 > 21 > 12

Find at least 5 different numbers that could complete the statement.

 < [ ] <

Possible answers:
27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40

Count in 2s

Notes and Guidance

Children build on previous learning of counting in twos and go beyond 20 up to 50

They will apply previous learning of one more and one less to counting forwards and backwards in twos. For example, two more than and two less than. The 1-50 grid will be used to spot and discuss patterns that emerge when counting in 2s.

Mathematical Talk

How can we count the socks and gloves?
What does it mean to count in pairs?

Can you describe the pattern on the grid? Why do you think this happens?

What do you notice about the digits in the ones column for each of the numbers shaded in your grid?

Will 25 appear on our number line? Why?

Varied Fluency

1   How many socks are there?

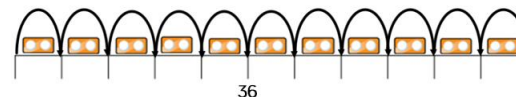There are ___ socks in total.

How many gloves are there?

There are ___ gloves in total.

2   Continue counting in 2s on the grid.

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

3   Complete the number lines by counting in 2s.

20

36
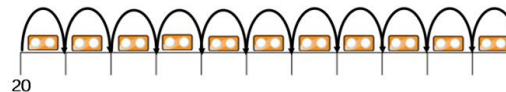
Count in 2s

Reasoning and Problem Solving

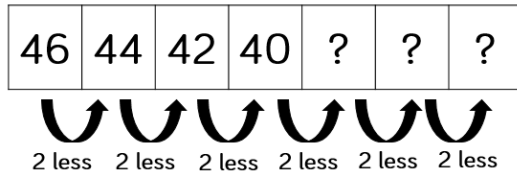Count in 2s backwards to complete the number track.

46	44	42	40	?	?	?

2 less   2 less   2 less   2 less   2 less   2 less

Explain how you got your answer.

38, 36, 34

Children should explain how they count backwards in 2s

Jess thinks that if she continues counting in 2s, she will say the number 49

32, 34, 36, 38, 40, 42…

Do you agree?

Explain why.

Jess is wrong. She will say 44, 46, 48, 50 and miss out 49

Count in 5s

Notes and Guidance

Children build on previous learning of counting in fives to go beyond 20 and up to 50

The 1-50 grid will be used to spot and discuss patterns that emerge when counting in 5s.

Mathematical Talk
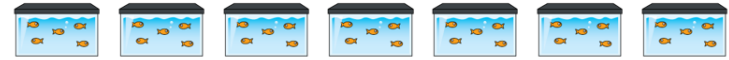
How can we count the fish and grapes?

Can you describe the pattern on the grid? Why do you think this happens?

What do you notice about the digits in the ones column for each of the numbers shaded in the grid?

Will _____ appear on our number line? Why?

Varied Fluency

1 How many fish are there?

There are ___ fish in each tank.
There are ___ tanks.
There are ___ fish altogether.

How many grapes are there?
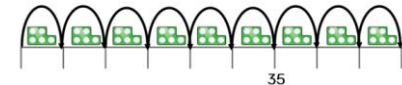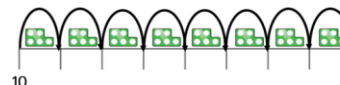

There are ___ grapes in each bunch.
There are ___ bunches.
There are ___ grapes altogether.

2 Continue counting in 5s on the grid.

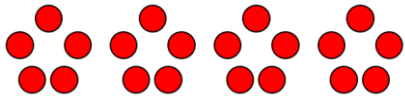| 1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50

3 Complete the number lines by counting in 5s.

10   35

Count in 5s

Reasoning and Problem Solving

Amy is making this flower pattern with counters.

Rachel says,

If you make 9 flowers, you will use 43 counters.

Do you agree with Rachel?

Explain your answer.

Rachel is wrong because 43 does not end in a 5 or a 0

If she makes 9 flowers she will use 45 counters

Jenson counts the pencils in 5s.
He says he has 25 pencils.

0   5   10

15   20   25

Do you agree with Jenson?

Explain your answer.

There are 30 pencils.

Jenson said 0 when there were 5 at the start.

Jenson started counting at 0 when he should have started counting at 5