L.E.A.D. Academy Trus

Links to prior learning/ objectives

Children will have learned to read and recognise numbers to 10 and 20.
Counting with accuracy, forwards and backwards, using a range of strategies: one to one correspondence; counting out and counting all, counting on and building through ten.

Number bonds to 10 and 20.

Finding one more, one less.

Addition and subtraction with numbers up to 10 and 20.

Representing amounts up to 10 /20 and problems with concrete objects and pictorially. Used language equal to, more than, less than (fewer), most, least.

Resources

Base10, numicon, number lines, number tiles, counting objects, bead strings, balance scales (for number bonds to 10), tens frames, two-sided counters,

Mastery:

(where to find some resources)

- Teaching for Mastery
- White Rose New and old documents
- Mastery maths stickers
- Nrich (curriculum mapping)

Vocabulary:

Forwards, backwards, ascending, descending, count, read, write, numerals, words, digits, interpret, represent, statements, number sentence, calculation, place value, two-digit, more, less, equal to, more than, less than (fewer), most, least, pictorial, Number bonds, zero, add, subtract, addition, subtraction, read, write, interpret, number sentence, calculation, digit, numeral, number, pictorial representation, missing number.

Objectives and Teaching

Barriers to ARE (misconceptions) Week 1

Children may not have a secure understanding of what a number is.

Understanding of teens numbers/ counting past ten.

Accuracy with counting with larger numerals. Phonic knowledge- hearing and saying each numeral correctly.

Accuracy when counting backwards.

Count, read and write numbers to at least 100 in numerals.

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

- To know how to read and write numbers up to 100.
- To understand how to read and write numbers up to 100.
- To know how to count forwards and backwards up to 100.
- To know how order numbers up to 100.
- To develop the skill of ordering numbers up to 100.

Fluency	Reasoning	Problem Solving	l
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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
ì	31	35	33	34	35	36	37	38	39	40
	41	42	41	44	45	46.	47.	48	49	50
	51	52	53	54	55	56	57	58	59	50
	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	103	90
	91	92	93	94	95	96	97	98	99	100

Put these objects in the correct place in the table.

Most			Least	
888	•	000		

Put the children in the correct order.







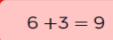


Ben is first in the line. Zoe is fourth. Faye is second. Matthew is third place in the line.

Order the numbers from smallest to largest.

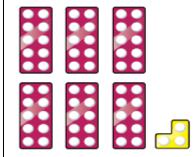
57 8 21

100 93 72





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

How have these numbers been ordered?

18, 39, 52, 64, 65, 80

Explain how you know.

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?

Week 2

Count, read and write numbers 1 to 20 in numerals and words. Recognise the place value of each digit in a two-digit number.

L.E.A.D. Academy Trust

Children may not have a secure understanding of what a number is.

Accuracy with counting with larger numerals. Phonic knowledge- hearing and saying each numeral correctly.

Accuracy when counting backwards.

Children may not be able to apply their knowledge of counting to support them with finding one more and one less.

Children may make mistakes with the place value.

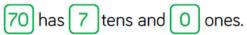
Given a number, identify one more and one less

- To know how to write numbers up to 20 in numerals.
- To know the place value of a two-digit number.
- To develop the skill of recognizing the place value of a two-digit number.
- To know how to identify one more and one less.
- To understand how to identify one more and one less

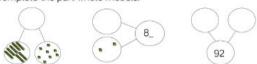
Fluency

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

70 96 64 81 92 66 99



Complete the part whole models.



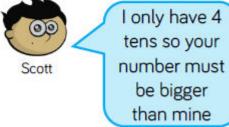
Show these numbers using a place value chart and Base 10 or straws.

Tens	Ones



Reasoning





Is Scott correct? Prove it.

Problem Solving

Use Base 10 to make a number:

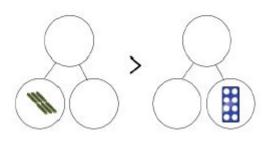
- Greater than 84
- Less than 70
- Greater than 75 but less than 87

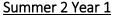
Use Base 10 to make a number.

With 5 tens and less than 8 ones

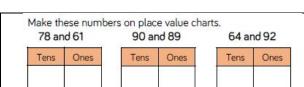
How many possible numbers are there?

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









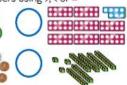
Which number from each pair is the largest?

On the number line, label a number:

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



Compare the numbers using >, < or =



Poppy and Freya have some coins.







Freya

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?

Week 3

Children may not have a secure understanding of what a number is.

Understanding of teens numbers/ counting past ten.

Accuracy with counting with larger numerals. Phonic knowledge- hearing and saying each numeral correctly.

Accuracy when counting backwards.

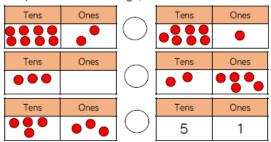
Children may struggle to represent a number with physical objects, pictorially or as numbers. Children may struggle to use what they know to support them with reasoning about number-placing a number along a partially numbered number line.

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.

- To understand how to represent a number pictorially.
- To know how to represent a number along a number line.
- To understand how to represent a number along a number line.
- To know how to compare numbers.
- To understand how to compare numbers.

Fluency

Compare the numbers using <, > or =



Complete the statements.

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

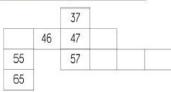
Complete the stem sentences.

62 is	than	55 but le	ss than
90 is les	s than	but	than 88.
is gre	ater than .	but	less than

Show one more and one less than the numbers given

One less		One more
	CHARLES CHARLES	
	60	
	田田田田	
	田田田田	
	00 0	
	0000	

Find the missing numbers.



Use the number cards to make 2 digit numbers.

Now write down one more and one less than the numbers you have made.

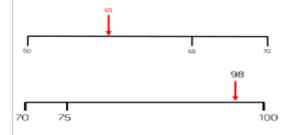
Use equipment if needed.



Reasoning

Leo has marked numbers on his number lines.

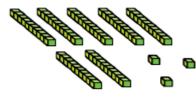
Has he made any mistakes?



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

- 75
- 34
- 91
- 87

Igra started with this number.

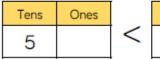




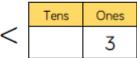


Has Iqra shown the correct amount? Explain how you know.

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



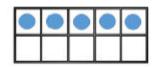
the statement correct?



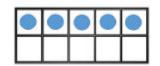
Can you move two of the counters so Jacob has 1 more than Emma and Toni has 1 less than Emma?



Emma



Jacob



Toni

Always, Sometimes, Never

When finding 1 less the tens digit stays the same.



Week 4

Children may not have a clear understanding of combining numbers to make a larger number. Children may not have a strong understanding of number bonds to 10/20.

Children may mistake the symbols and use them inaccurately when writing mathematical statements.

Children may make inaccuracies when counting each part or the whole.

Know the meaning of add or subtract.
Understanding of the relationship between addition and subtraction.

Represent and use number bonds and related subtraction facts within 20. Lead • Empower Add and subtract one digit and two digit numbers to 20, including zero.

- To know number bonds to up to 20.
- To understand the number bonds up to 20.
- To know how to add one digit and two digit numbers to 20.
- To know how to subtract one digit and two digit numbers to 20.
- To develop the skill of adding and subtracting within 20.

Fluency	Reasoning	Problem Solving	

Week 5

Children may struggle to see the relationship between the two.

Children may mistake the symbols and use them inaccurately when writing mathematical statements.

Children may make inaccuracies when counting each part or the whole.

Know the meaning of add or subtract.
Understanding of the relationship between
addition and subtraction. Children may
presume that = refers to an answer as opposed
to an equal amount on both sides.

Read, write and interpret mathematical statements involving addition (+), subtractions (-) and equals (=) signs.

- To know how to add two numbers.
- To understand how to add two numbers.
- To know how to subtract two numbers.
- To understand how to subtract two numbers.
- To develop the skill of adding and subtracting two numbers.

Fluency

Use Base 10 to complete the number sentences.

5 + 12 =

12 - 5 =

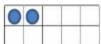
7+__=19

13 - = 8

Use the ten frames to complete the number sentences.

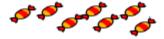
$$12 - 6 =$$





Sita and Kim have 15 sweets between them.

Here are Kim's sweets.



How many sweets does Sita have?

Reasoning

Fill in the missing numbers.

Explain how you worked it out.

Always, sometimes, never.

Two one digit odd numbers add up to make an even number.

Example: 3+5=8

Sam says

When you add 0 to a number, the number doesn't change.

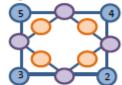
Do you agree?

Use Base 10, a ten frame or a number line to help you explain.

Problem Solving

The numbers in the blue circles add together to make the number in the purple circle between them.

The numbers in the purple circles add together to make the number in the orange circle between them.



Can you fill in the purple and orange circles?

Choose two ten frames and add them together.

What is the smallest answer you can make?

What is the greatest answer you can make?



Week 6

Children may mistake the symbols and use them inaccurately when writing mathematical statements.

Children may make inaccuracies when counting each part or the whole.

Know the meaning of add or subtract.

Understanding of the relationship between addition and subtraction.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? - 9.

- To know how to solve one step problems (addition).
- To know how to solve one step problems (subtraction).
- To develop the skill of solving one step problems.
- To know how to solve missing number problems.
- To understand how to solve missing number problems.



Children may presume that = refers to an answer as opposed to an equal amount on both sides. Children may make calculation errors.

May struggle to interpret the word problems. May struggle to represent the problem with concrete objects or their own pictorial representations.

Understanding of the parts and whole in relation to an addition and subtraction number sentence.

Fluency

Look at the diagram and write a

number sentence to describe it.

Fill the boxes using +, - or =

Reasoning

Use < , > or = to fill the boxes.
 Explain your choices.

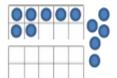
 How many number sentences could you write to describe the number line below?



What's the same? What's different?

Jasmine is using a ten frame to find the answer to a question.

What could the question be?



Problem Solving

Here are some number cards.



Use six of the number cards to fill the boxes below.

You can only use each card once.



How many different ways can you complete the boxes?

Turn number cards 0-10 over.
 Children pick two.
 Turn + and – signs over.
 Children pick one.

How many different calculations can you make?

Example cards turned over:





5+2=7 2+5=7 7=5+2 7=2+5

Write a number sentence to describe

Write a word story for the balloons

below.

your story.

Week 7

Consolidation

Fluency Reasoning Problem Solving

Fluency	Reasoning	Problem Solving
Week 8	Consolidation	
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