



Autumn 1 Year 1

<p>Links to prior learning/ objectives: F2 objectives from ELG: Children count reliably with numbers from 1 to 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 two single-digit numbers and count on or back to find the answer. They solve problems, including doubling, halving and sharing.</p>	<p>Resources: Counters, numicon, number lines to 1, digit cards, sets of pairs of objects, base 10, dice, practical counting objects, scrabble tiles (for words) tens frames</p> <p>Mastery: (where to find some resources)</p> <ul style="list-style-type: none"> • Teaching for Mastery • White Rose New and old documents • Mastery maths stickers • Nrich (curriculum mapping) 	<p>Vocabulary: Number Zero, one, two, three to twenty, and beyond None Count (on/up/to/from/ down) Before, after More than, less than, many, few, fewer, most, least, fewest, smallest, greater, lesser Equal to, the same as Odd, even Pair Ones, tens Ten more/less Digit Numeral Figure(s) Compare (In) order/a different order Size Value Between, halfway between Above, below Near double Halve Equals, is the same as (including equals sign) Difference between How many more to make..? How many more is...than..? How much more is..? How many fewer is...than..? How much less is..? Number bonds Fact families One more, ten more</p>
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Objectives and Teaching

<p>Week 1 Barriers to ARE (misconceptions): Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding Number knowledge, counting forwards and backwards skills, recognising numbers and</p>	<p>Count to 10, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <ul style="list-style-type: none"> • To know how to sort objects • To know how to count objects • To know how to count forwards • To know how to count backwards • To know how to count from any given number
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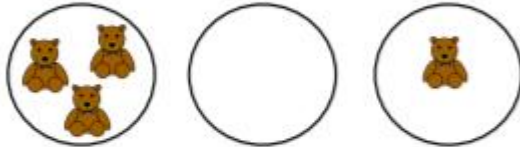
symbols, reading and understanding problems. Understanding of how to represent addition and subtraction using objects and pictorially.

Fluency

How many red cubes and how many green cubes are there?



Match the teddies to the correct number.



0

1

3

Use the picture to complete the sentences.



There are green cars.

There are yellow cars.

There are red cars.

Problem Solving

How have the sequences been sorted?

0, 1, 2, 3, 4	3, 2, 1, 0
	Seven, six, five, four

How many more sequences can you add to each column?

Reasoning

I am going to count on from 8. Will I say the number 6? Explain your answer.

- Spot the mistake: What is wrong with this sequence of numbers?

4, 5, 7, 8, 9

Close your eyes, can you count the number of pennies that I am dropping into the tin?

I am going to count backwards from 10. How many steps will it take until I reach 4?

Week 2

Barriers to ARE (misconceptions):

Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding
Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems. Understanding of how to represent addition and subtraction using objects and pictorially.

Count, read and write numbers to 10 in numerals and words

- To develop the skill of counting objects to 10
- To develop the skill of recognising numbers to 10
- To develop the skill of writing numbers to 10 in numerals
- To develop the skill of writing numbers to 10 in words

Fluency

How many red cubes and how many green cubes are there?



Match the teddies to the correct number.



0

1

3

Use the picture to complete the sentences.



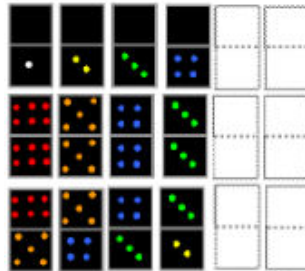
There are green cars.

There are yellow cars.

There are red cars.

Problem Solving

What comes next in each set of dominoes?



There are 4 children going to the beach.
Can every child have a bucket and spade?



If not, why not?

Play a game of snap- can the children match a number, to the number name, to a group of objects.

Eg

two

2

●●

Reasoning

Jo has counted the toy cars and said:



Explain the mistake she could have made.

Fill in the gaps. Can you draw a picture to prove your answer?

I have ___ fingers.

I have ___ nose.

I have ___ eyes.

Week 3

Barriers to ARE (misconceptions):

Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding

Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems.

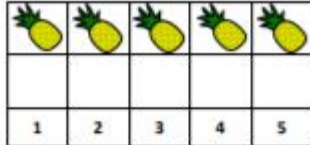
Identify and represent numbers using objects and pictorial representations including the number line, and use the language of equal to, more than, less than (fewer), most, least. (to 10)

- To know how to represent numbers using objects
- To know how to represent numbers using pictures
- To know how to find and show a number on the number line
- To develop the skill of comparing numbers.

Understanding of how to represent addition and subtraction using objects and pictorially.

Fluency

Using counters, show how many pineapples there are.



How many whales can you see on the wrapping paper?



Place counters on the whales to help you.

What else can you count?

Complete the table

Picture 	Number
Draw it	Show it

Problem Solving

How many ways can you represent 6 glasses of apple juice?

How many ways can you show me less than 4 sweets?

How can you show me that there are more green cars than blue cars?

Miriam has this many cubes in one hand:



She has fewer cubes in the other hand.

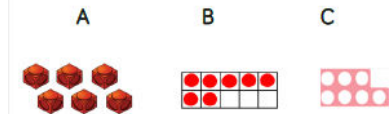
How many cubes could she have in her other hand?

Reasoning

Jules points to a number on the number line.



Which of the following **do not** represent this number?



Week 4

Barriers to ARE (misconceptions):

Counting forwards and backwards, language understanding (more/ less) Understanding of

Given a number, identify one more and one less (to 10)

- To know how to find one more and one less using objects
- To know how to find one more and one less pictorially

Count in multiples of 2

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visual representations of the number, number and letter formation, pattern finding
Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems. Understanding of how to represent addition and subtraction using objects and pictorially.

- To develop the skill of counting in 2s using objects for support
- To develop the skill of counting fluently in 2s.
- To understand what odd and even numbers are.

Fluency

Roll a dice, represent the number using counters on a track, and add 1 more.

Then, complete the sentences

1 more than ___ is ___
___ is one more than ___

Complete each box using a picture, a numeral and a word.

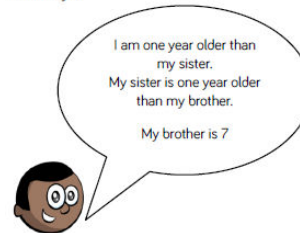
	→ one more →	<input type="text"/>
3	→ one more →	<input type="text"/>
SIX	→ one more →	<input type="text"/>

Choose a number card from 0 to 9 then complete the table.

Number in numerals	Number in words	Number track
		<input type="text"/>
Sentence		
One more than ___ is ___		

Problem Solving

Dan says:



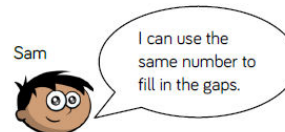
I am one year older than my sister.
My sister is one year older than my brother.
My brother is 7

How old is Dan?
Who is oldest?

Explain why.

One more than ___ is 1.
One less than ___ is 1.

Sam



I can use the same number to fill in the gaps.

Is he correct?

Explain how you know.

Reasoning

Using number cards 0 to 10.
How many different ways can you complete the boxes below?



Timmy rolls the number that is 1 more than the dice below.



He says that he rolls 2
Explain his mistake.

True or false?
One more than 7 is the same as 1 less than 9

Use a number track to help you.



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There are 2 flowers in each pot. How many flowers in 10 pots?



- In the story Noah's Ark, the animals went in 2 by 2. If there were 2 of every animal below, how many animals were there altogether?



- If there were 30 animals on the ark, how many pairs of animals were there?

I am going to count on in twos from 3. Will I say an even number? Prove it.

I am going to count back in twos from 20. How many steps will it take me to reach 0? Convince me.


Choose a number between 1 and 10

Then, complete the sentences

1 less than ____ is ____

____ is one less than ____

Complete each box using a picture, a numeral and a word.

	→ one less →	<input type="text"/>
1	→ one less →	<input type="text"/>
nine	→ one less →	<input type="text"/>

Choose a number card from 1 to 10 then complete the table.

Starting number	Number track
	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
More than sentence	Less than sentence

Week 5

Barriers to ARE (misconceptions):

Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding
 Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems.

Add and subtract one digit numbers (to 10), including zero.

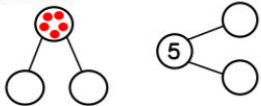
Read, write and interpret mathematical statements involving addition (+), subtractions (-) and equals (=) signs.

- To understand a part whole relationship.
- To understand the addition symbol.
- To know how to write addition fact families.
- To develop the skill of reading and understanding number sentences.
- To know how to write a number sentence.

Understanding of how to represent addition and subtraction using objects and pictorially.

Fluency

Complete the part whole models by drawing the counters then writing the numerals.



Here are seven pieces of fruit.



Put the fruit into a part whole model. Complete the sentences.

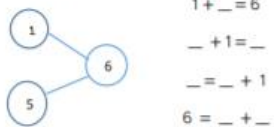


..... is the whole.
..... is a part, is a part and is a part.

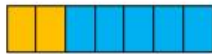
4 is the whole.
Complete all the part whole models using different numbers for the parts each time.



Fill in the missing numbers.



Complete the number sentences.



$_ + _ = 7$
 $_ + _ = 7$
 $7 = _ + _$
 $7 = _ + _$

Use the number cards to make 4 addition sentences.

Problem Solving

Pick a pair of numbers.



Add them together.
How many different totals can you make?

Sid has two bean bags. He is throwing them into the buckets.



More than one bean bag can go in each bucket. What is the highest/lowest score?

Reasoning

Here are 8 cubes.



How many ways can you use the cubes to complete this number sentence?

$$\square + \square =$$

Week 6

Barriers to ARE (misconceptions):

Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding
 Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems. Understanding of how to represent addition and subtraction using objects and pictorially.

Represent and use number bonds and related subtraction facts (within 10).

- To know how to find numbers that add together to make 10.
- To know how to represent number bonds to 10.
- To know how to find subtraction facts for number bonds to 10.
- To understand the relationship between addition and subtraction within number bonds.

Add and subtract one digit numbers (to 10), including zero.

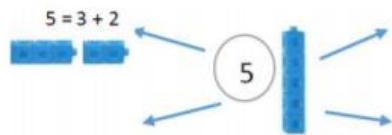
- To develop the skill of adding/ subtracting to 10 using objects/ pictures/ number line.

Fluency

Here are 5 cubes.



Break them apart in different ways to find all the number bonds to 5.
 One is done for you.



Use seven double sided counters.

How many different ways to make 7 can you find?
 Record your findings in number sentences.

If 9 is the whole, what could the parts be?

Show your findings in part whole models.
 Can you write an addition sentence for each part whole model?

Problem Solving

What number goes in the missing boxes?

$$9 + \square = 10$$

$$10 - \square = 9$$

This stick of cubes shows $8 + 1 = 9$



This stick of cubes shows $1 + 8 = 9$



Use cube to find if...

$$7 + 3 = 3 + 7$$

Reasoning

I have 10p to spend.
 Which two items could I buy?
 How many different ways can you do it?



All the dots have fallen off two toad stools.

How many different ways can you put them back on?



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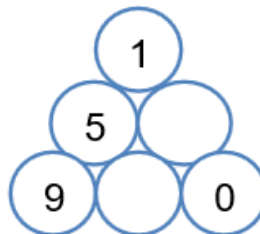
<p>Week 7 Barriers to ARE (misconceptions): Counting forwards and backwards, language understanding (more/ less) Understanding of visual representations of the number, number and letter formation, pattern finding Number knowledge, counting forwards and backwards skills, recognising numbers and symbols, reading and understanding problems. Understanding of how to represent addition and subtraction using objects and pictorially.</p>	<p>Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems.</p> <ul style="list-style-type: none"> To understand how to understand a number problem To know how to use concrete objects to solve problems To know how to use pictures to solve problems To know how to find missing numbers in calculations
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Fluency	Problem Solving	Reasoning
<p>Complete the part whole model.</p> <p style="margin-left: 100px;"> $\square + \square = \square$ $\square = \square + \square$ 5 is a part, ___ is a part. The whole is 9. </p> <p>There are seven cars in total. Seven of them are green. How many of them are yellow?</p> <p style="margin-left: 100px;"> $\square + \square = \square$ $\square = \square + \square$ 7 is a part, ___ is a part. The whole is 7. </p>	<p>Tom is bowling. Which pins must he knock down to score 7? How many ways can you do it?</p> <div style="text-align: center; border: 1px solid black; padding: 5px; margin: 10px 0;"> 1 2 4 5 </div> <p>Choose from these number cards to make the following numbers.</p> <p style="text-align: center; font-size: 1.2em;">5, 6, 7, 8, 9, 10</p> <p>You can use 2 or 3 number cards. Write your answers in full number sentences.</p>	<p>Which four number sentences link these 3 numbers?</p> <div style="text-align: center; margin: 10px 0;"> 3 4 7 </div> <p>Write the missing symbols in these number sentences. +, - and =</p> <p style="text-align: center; font-size: 1.2em;">7 ■ 2 ■ 9</p> <p style="text-align: center; font-size: 1.2em;">8 ■ 4 ■ 4</p>

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In the triangle, the number above two numbers is the difference between the numbers.
Eg 3 above 7 and 4
Find the missing numbers. Can you do it in more than one way?



James has two dice.
He rolls them and scores 5 altogether.
Which two numbers could he have rolled?

Complete the number sentence.
Use cubes to help you solve the problem.

$$\boxed{5} + \boxed{2} = \boxed{3} + \boxed{}$$

How many different ways can you complete the empty boxes?

$$\boxed{2} + \boxed{} = \boxed{9} - \boxed{}$$