Summer Scheme of Learning

Year 1

#MathsEveryoneCan

2020-21

White Rose Maths

New for 2020/21

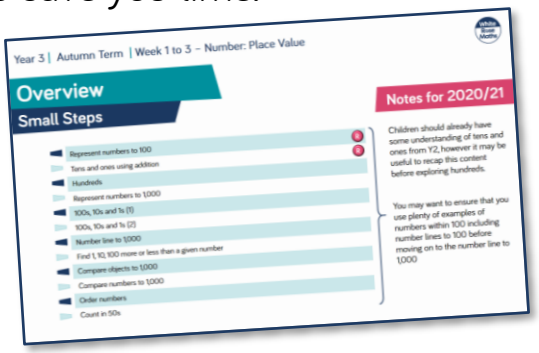
2020 will go down in history. The world has changed for all of us.

We want to do as much as we can to support children, teachers, parents and carers in these very uncertain times.

We have amended our schemes for 2020/21 to:

- ★ highlight key teaching points
- ★ recap essential content that children may have forgotten
- ★ flag any content that you might not have covered during the school closures period.

We hope these changes will add further value to the schemes and save you time.


Year 3 | Autumn Term | Week 1 to 3 – Number: Place Value

Overview

Small Steps

- Represent numbers to 100
- Tens and ones using addition
- Hundreds
- Represent numbers to 1,000
- 100s, 10s and 1s (1)
- 100s, 10s and 1s (2)
- Number line to 1,000
- Find 1, 10, 100 more or less than a given number
- Compare objects to 1,000
- Compare numbers to 1,000
- Order numbers
- Count in 50s

Notes for 2020/21

Children should already have some understanding of tens and ones from Y2, however it may be useful to recap this content before exploring hundreds.

You may want to ensure that you use plenty of examples of numbers within 100 including number lines to 100 before moving on to the number line to 1,000

Lesson-by-lesson overviews

We've always been reluctant to produce lesson-by-lesson overviews as every class is individual and has different needs. However, many of you have said that if blended learning becomes a key feature of school life next year, a weekly plan with linked content and videos could be really useful.

As always, we've listened! We've now produced a complete lesson-by-lesson overview for Y1 to Y9 that schools can use or adapt as they choose. Each lesson will be linked to a free-to-use home learning video, and for premium subscribers, a worksheet. This means that you can easily assign work to your class, whether they are working at home or in school.

Inevitably, this lesson-by-lesson structure won't suit everyone, but if it works for you, then please do make use of this resource as much as you wish.

Teaching for Mastery

These overviews are designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the new National Curriculum.

The overviews:

- have number at their heart. A large proportion of time is spent reinforcing number to build competency
- ensure teachers stay in the required key stage and support the ideal of depth before breadth.
- ensure students have the opportunity to stay together as they work through the schemes as a whole group
- provide plenty of opportunities to build reasoning and problem solving elements into the curriculum.

For more guidance on teaching for mastery, visit the NCETM website:

https://www.ncetm.org.uk/resources/47230

Concrete - Pictorial - Abstract

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking this approach.

Concrete – children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial – alongside this children should use pictorial representations. These representations can then be used to help reason and solve problems.

Abstract – both concrete and pictorial representations should support children's understanding of abstract methods.

Need some CPD to develop this approach? Visit www.whiterosemaths.com for find a course right for you.

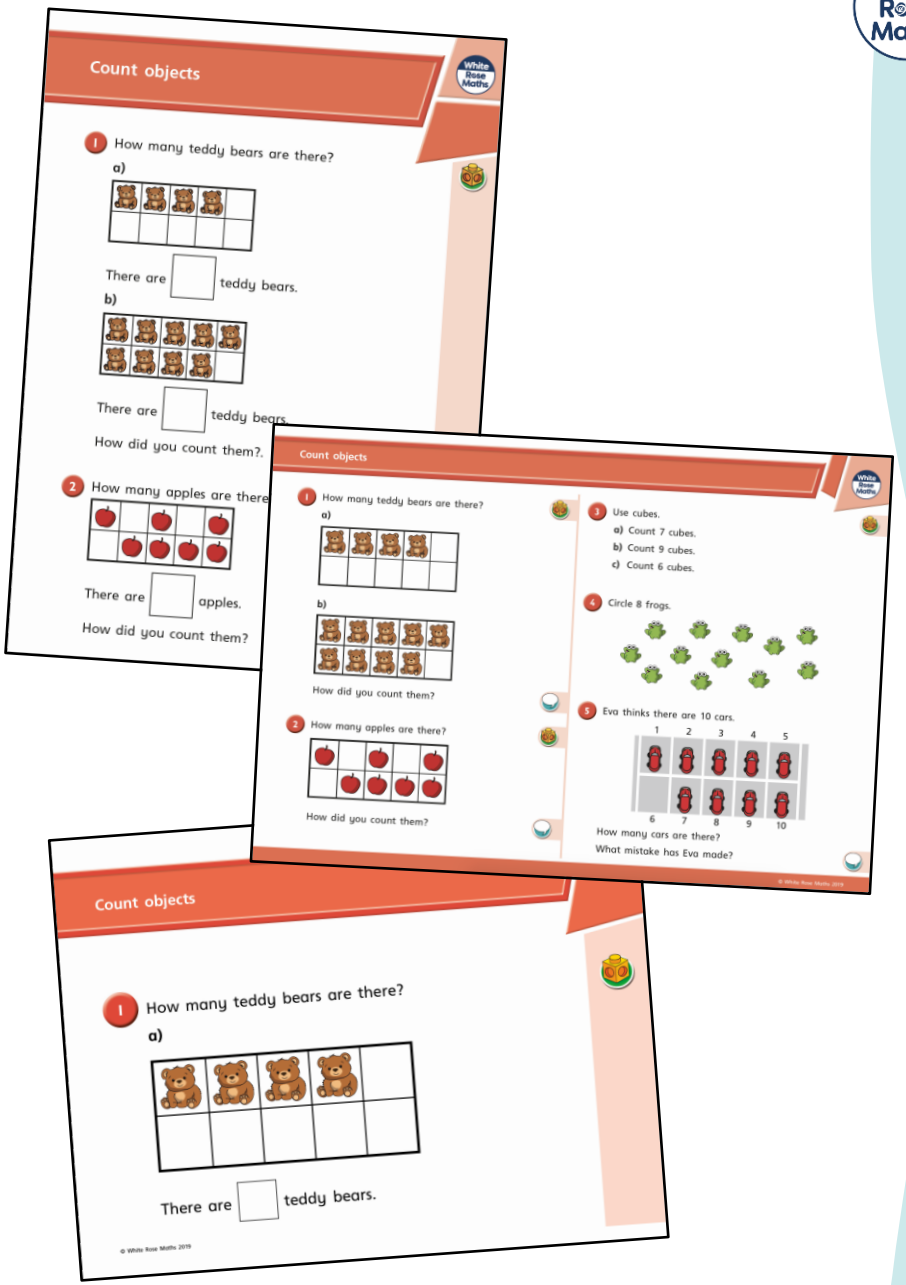
Supporting resources

We have produced supporting resources for every small step from Year 1 to Year 11.

The worksheets are provided in three different formats:

- Write on worksheet – ideal for children to use the ready made models, images and stem sentences.
- Display version – great for schools who want to cut down on photocopying.
- PowerPoint version – one question per slide. Perfect for whole class teaching or mixing questions to make your own bespoke lesson.

For more information visit our online training and resources centre resources.whiterosemaths.com or email us directly at resources@whiterosemaths.com



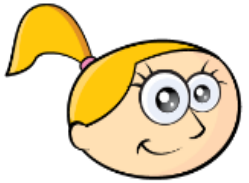
Meet the Characters

Children love to learn with characters and our team within the scheme will be sure to get them talking and reasoning about mathematical concepts and ideas. Who's your favourite?

Teddy

Rosie

Mo



Eva

Alex

Jack

Whitney

Amir

Dora

Tommy

Dexter

Ron

Annie

	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)	
Spring	Consolidation	Number: Addition and Subtraction (within 20)			Number: Place Value (within 50)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Consolidation	Number: Multiplication and Division			Number: Fractions		Geometry: Position and Direction	Number: Place Value (within 100)		Measurement: Money	Measurement: Time	

White Rose Maths

Summer - Block 1

Multiplication & Division

Overview

Small Steps

- Count in 2s (R)
- Count in 5s (R)
- Count in 10s
- Make equal groups
- Add equal groups
- Make arrays
- Make doubles
- Make equal groups – grouping
- Make equal groups - sharing

Notes for 2020/21

We have chosen to revisit counting in 2s and 5s from the spring term before children move on to look at counting in 10s. Practical equipment is encouraged throughout this block to help cement these essential mathematical concepts with children.

Count in 2s

Notes and Guidance

Children build on their previous knowledge of counting in multiples of 2 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 can be used to spot and discuss patterns that emerge when counting in 2s.

Mathematical Talk

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

Can we use tens frames to help us count in 2s?
Can you see any patterns when you count in 2s?

Varied Fluency

R

- How many socks are there?

There are ___ socks in total.

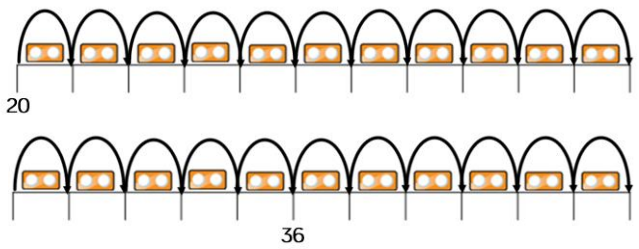
How many gloves are there?

There are ___ gloves in total.
Represent the gloves using ten frames.

- Continue colouring in 2s on the grid. What do you notice?

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

- Complete the number lines by counting in 2s.

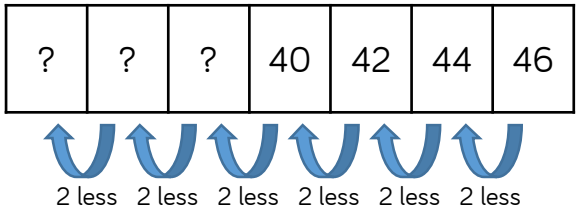


Count in 2s

Reasoning and Problem Solving

R

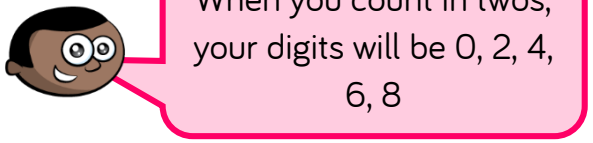
Count in 2s backwards to complete the number track.



If you continue counting, will you say the number 25?

38, 36, 34
Possible answer: Children will not say 25 because it is not a multiple of 2, they will say 28, 26, 24 and 22

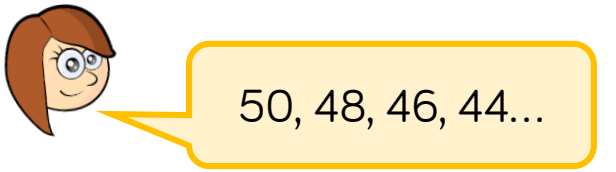
Always, sometimes, never...

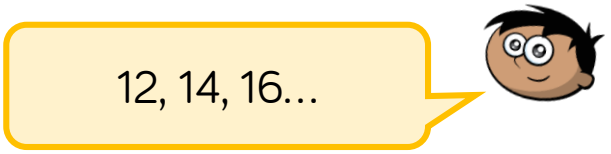


Prove it!

Sometimes. It depends on your starting number. For example 1, 3, 5...
Also for 12, 14, 16, the tens digit is 1

Rosie counts back from 50 in 2s.
Amir counts up from 12 in 2s.





They say their numbers together.
Who will say 30 first.

Rosie says 11 numbers to reach 30
Amir says 10 numbers to reach 30
So Amir will get there first.

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 can be used to spot and discuss patterns that emerge when counting in 5s.

Mathematical Talk

How can we count the groups of 5?

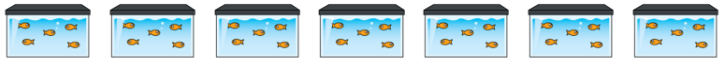
Can you describe the pattern when you count in 5s?

Will _____ appear on our number line? Why/why not?

Varied Fluency

R

How many fish are there?



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

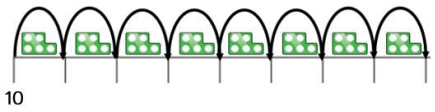
How many grapes are there?

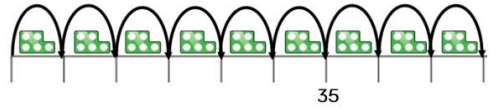
There are ___ grapes in each bunch.
There are ___ bunches.
There are ___ grapes altogether.

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

Complete the number lines by counting in 5s.



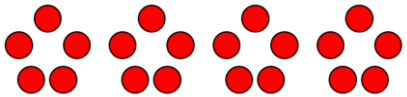


Count in 5s

Reasoning and Problem Solving

R

Amir is making this flower pattern with counters.



Annie says,

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

Do you agree with Annie?
Explain your answer.

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

If she makes 9 flowers she will use 45 counters.

Odd One Out

25

27

30

45

Which is the odd one out? Explain your answer.

27 because you would not count it if you were counting in 5s. Children also may give other responses.

Work in groups.
Create a circle with your hands. You can choose to put in one hand or both hands.

Count how many fingers and thumbs you can see altogether.

Can you predict how many? Count to check.

Children can practise counting in 5s and recognise one hand is worth 5 They may start to spot patterns and reason about how many there will be.

Count in 10s

Notes and Guidance

Children count in groups of tens for the first time. Previously they have counted in 2s and 5s.
They use pictures, bead strings and number lines to support their counting.

Counting in 10s on a hundred square will also support children to see the similarities between the numbers when we count in tens.

Mathematical Talk

How many birds/flowers are there in total?

How can we use our number lines to help us count them?

Will _____ appear on our number line? Why?

What is the same about all the numbers we say when we are counting in tens?

Varied Fluency

How many birds are there altogether?

There are _____ birds in each tree.
There are _____ trees.
There are _____ birds altogether.

How many flowers are there altogether?

There are _____ flowers in each bunch.
There are _____ bunches.
There are _____ flowers altogether.

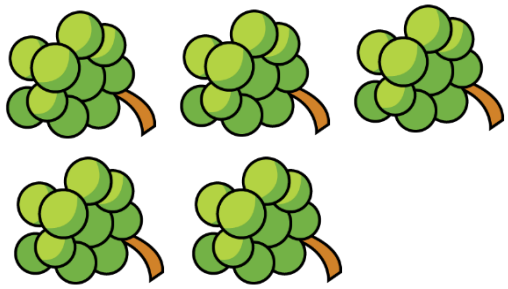
Use a 0-100 bead string to count in tens.
Can we count forwards and backwards in tens?

Can we count in tens on a number track as well?
How does this match counting on a bead string?

Count in 10s

Reasoning and Problem Solving

In a shop, grapes come in bunches of 10



Max wants to buy forty grapes.

Are there enough grapes?

Yes there are enough grapes. There are fifty grapes and Max only needs forty.

Jemima is counting in 10s on part of a hundred square.

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

She starts at 10

Shade in all the numbers Jemima will say.

What is the same about the numbers she says?

What is different about the numbers?

Jemima will say 10, 20, 30, 40 and 50
All the numbers have the same ones digit (0)
They all have different tens digit.
The tens digit goes up by 1 for each new number she says.

Making Equal Groups

Notes and Guidance

Children begin by using stories which link to pictures and concrete manipulatives to explore making equal groups and write statements such as 'there are ___ groups of ___.' They will recognise and explain how they know when they are equal or not. Children see equal groups that are arranged differently so they understand that the groups look different but can still be equal in number.
At this stage children do not explore multiplication formally.

Mathematical Talk

How do I know that the groups are equal? What does equal mean?

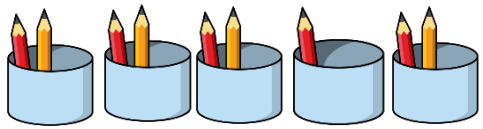
How many pencils are there in each pot? How can I complete the sentence to describe the groups?

What's the same and what's different?

Are Josh's groups equal or unequal? How can we make them equal?

Varied Fluency

Are the groups equal or unequal? Write a label for each.



Complete the sentences

There are ___ groups of ___ pencils.

There are ___ groups of ___ flowers.

Josh is drawing equal groups of 3

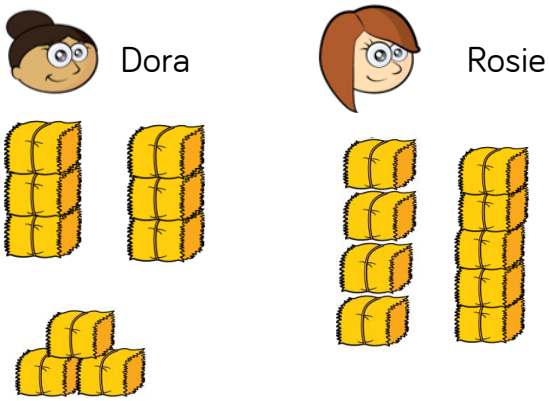
Complete his drawing.

Making Equal Groups

Reasoning and Problem Solving

Dora and Rosie are making hay bundles.

Who has made equal groups?



Explain how you know.

Possible answer:
Dora has made equal groups because she has 3 groups of 3 hay bundles.

Rosie has two unequal groups.

Use concrete materials or pictures to complete the questions.

Alex has 4 equal groups.
Show me what Alex's groups could look like.

Whitney has 3 unequal groups.
Show me what Whitney's groups could look like.

Children will show 4 groups where there are the same amount in each group for Alex and 3 groups that are unequal for Whitney.

Encourage children to do this in more than one way.

Add Equal Groups

Notes and Guidance

Children use equal groups to find a total. They focus on counting equal groups of 2, 5 and 10 and explore this within 50.

Children could begin by linking this to real life, for example animal legs, wheels, flowers in vases etc.

Stem sentences alongside number sentences can help children link the calculation with the situation. Ensure children have the opportunity to say their sentences aloud.

Mathematical Talk

How many apples are there in each bag?
Do all of the bags have an equal number of apples?
How many equal groups can you see?

How can we represent this with counters/cubes/on a number line/in a number sentence etc?

What other equipment could you use to represent your pattern? What's the same? What's different?

Which is more, 3 groups of 10 or 4 groups of 5? Prove why.

Varied Fluency

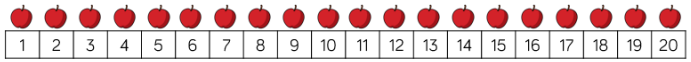
- How many wheels altogether?

2 + 2 + 2 + 2 + 2 =

How many fingers altogether?

5 + 5 + 5 =

- How many apples are there? Complete the sentences.

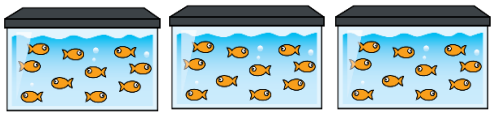


5 + 5 + 5 + 5 = ____

There are ____ apples.

There are ____ groups of ____ apples which is equal to ___

- How many fish are there?
Complete the sentences.



___ + ___ + ___ = ___

There are ____ fish.

Can you show this using ten frames?

Add Equal Groups

Reasoning and Problem Solving

Eva and Whitney are making equal groups of bread rolls.

Eva

We need one more group to make 40

We need 10 more rolls to make 40

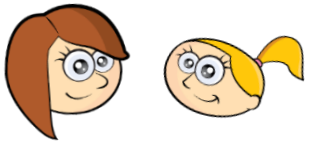
Whitney

Who do you agree with? Explain why.

Possible answer:
I agree with both.

They are counting in groups of 10 so they need one more group of 10

Rosie and Eva have equal groups of either 2, 5 or 10



Each of their totals is less than 40

Rosie has 5 equal groups.
Eva has 3 equal groups.

Eva's total is more than Rosie's total.

What could they be counting in?

Use equipment to help you.

Possible answers:

Rosie: 2 + 2 + 2 + 2 + 2 = 10
Eva: 5 + 5 + 5 = 15

Rosie: 5 + 5 + 5 + 5 + 5 = 25
Eva: 10 + 10 + 10 = 30

Rosie: 2 + 2 + 2 + 2 + 2= 10
Eva: 10 + 10 + 10 = 30

Make Arrays

Notes and Guidance

Children begin to make arrays by making equal groups and building them up in columns or rows.

They use a range of concrete and pictorial representations alongside sentence stems to support their understanding.

Children also explore arrays built incorrectly and recognise the importance of columns and rows.

Mathematical Talk

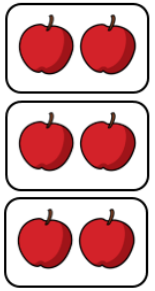
How many equal groups do I have? How many in each group?
Can I represent my apples with counters?

What is the difference between columns and rows?
How many counters in each row? How many counters in each column?

How can I record my array with a number sentence?

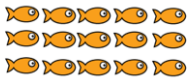
Varied Fluency

- Build an array with counters to represent the apples.
Complete the sentences.



There are ____ apples in each row.
There are ____ rows.
____ + ____ + ____ = ____
There are ____ apples altogether.

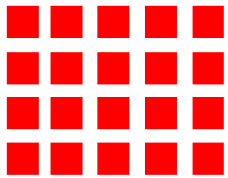
- Complete the table.

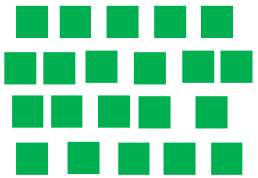
Array	Description - columns	Description - rows	Totals
	5 columns 2 cookies in each column	2 rows 5 cookies in each row	2 + 2 + 2 + 2 + 2 = 10 5 + 5 = 10
	___ columns ___ donuts in each column	___ rows ___ donuts in each row	
	___ columns ___ fish in each column	___ rows ___ fish in each row	
	3 columns 5 cupcakes in each column	5 rows 3 cupcakes in each row	

Make Arrays

Reasoning and Problem Solving

Amir and Whitney are making arrays.

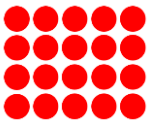




Who has made a mistake? Explain why.

Possible answer: Whitney has made a mistake because her array is not in columns. There are an unequal amount of squares in each row.

Teddy and Alex are writing number sentences to describe the array.



Who do you agree with? Explain why.

Possible answer: They are both right. Teddy has counted the columns. Alex has counted the rows.

Eva begins to make an array with 40 counters.
She has finished her first row and her first column.
Complete her array.

Write two different number sentences to describe the finished array.

Possible answer:
Array showing 10 + 10 + 10 + 10 = 40

Or

4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 + 4 = 40

Making Doubles

Notes and Guidance

Children explore doubling with numbers up to 20
Reinforce understanding that 'double' is two groups of a number or an amount. Children show and explain what doubling means using concrete and pictorial representations.

They record doubling using the sentence, 'Double ___ is ____' and use repeated addition to represent doubles in the abstract. They look at representations to decide whether that shows doubling or not.

Mathematical Talk

Can you sort these representations in to doubles and not doubles? How do you know they've been doubled?

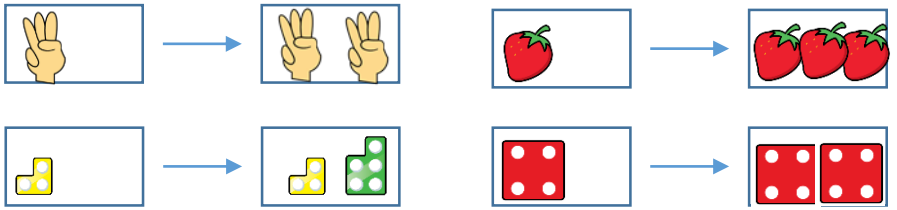
What comes next in my table, why?

How can we show the double differently?

If double 2 is 4, what is double 20?
What is the largest double we can roll on a normal dice?

Varied Fluency

Circle the representations which have been doubled:

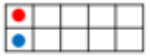
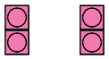


Take a number piece and double it. Complete the sentence.

Double ____ is ____

Double ____ is ____

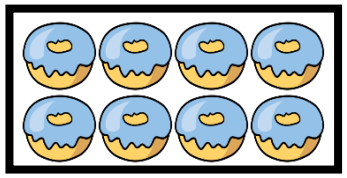
Complete and continue the table.

Build	Represent	Add	Double
		1 + 1 = 2	Double 1 is 2
		2 + 2 = __	Double 2 is __
		3 + 3 = __	Double 3 is __
		__ + __ = __	Double 4 is __

Making Doubles

Reasoning and Problem Solving

Louise doubles her donuts. The picture shows what she had after she doubled her donuts.

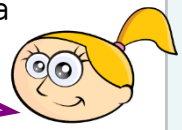


Whitney

Louise started with 4 and ended with 8 donuts.

Eva

Louise started with 8 and ended with 16 donuts.



Mo

Louise started with 2 and ended with 4 donuts.

Who do you agree with? Explain why.

Possible answer:

Whitney is correct because the image shows what she was left with. She had 8 after she doubled and double 4 is 8

Complete the table by doubling each number.

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

What patterns do you notice?

Possible answer:

1	2
2	4
3	6
4	8
5	10
6	12
7	14
8	16
9	18
10	20

The doubles increase by 2 each time.

The doubles are all even.

The doubles end in 2,4,6,8 or 0

Make Equal Groups - Grouping

Notes and Guidance

Children start with a given total and make groups of an equal amount. They record their understanding in sentences, not through formal division at this stage.

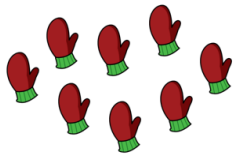
Children can develop their understanding of equal groups by also being exposed to numbers which do not group equally.

Mathematical Talk

How can you tell if the groups are equal? How can you represent the equal groups? Do all numbers divide into equal groups of 2?
How do you sort the cubes into equal groups?
What would happen if there were 21 cubes?
Have I got equal groups?
How do you know?
Does each group need to be arranged in the same way for it to be equal?

Varied Fluency

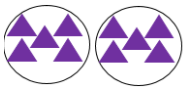
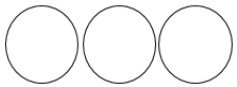
- How many equal groups of 2 can you make with the mittens?



There are ____ groups of 2 mittens.
If you had 10 mittens, how many equal groups of 2 mittens could you make?

- Take 20 cubes. Complete the sentences.
I can make ____ equal groups of 2
I can make ____ equal groups of 5
I can make ____ equal groups of 10

- Complete the table. Use equipment to help you.

Representation	Description
	There are ____ altogether. There are ____ equal groups of ____
	There are ____ altogether. There are ____ equal groups of ____
	15 has been sorted into 3 equal groups of 5
	____ has been sorted into ____ equal groups of ____

Make Equal Groups - Grouping

Reasoning and Problem Solving

Tommy and Jack each have the same number of sweets.

Tommy has 5 equal groups of 2
Jack has 1 equal group.
How many sweets are in Jack's group?

Jack has 10 sweets in his group.

I am thinking of a number between 20 and 30

I can only make equal groups of 5

What must my number be?

What happens when I try to make groups of 2 with it?

What happens when I try to make groups of 10 with it?

Answer: 25
Children can use practical equipment to solve this and discover what happens.
If you make equal groups of 2 with it there will be 1 left over.
If you make equal groups of 10 with it there will be 5 left over.

Sharing Equally

Notes and Guidance

Children explore sharing as a model of division.
They use 1 : 1 correspondence to share concrete objects into equal groups.

Children also need to be given the opportunity to see when a number of objects cannot be shared equally into equal groups.

Mathematical Talk

How can I share the muffins equally?

How many muffins on this plate? How many on this plate? Are they equal? If I had 9 muffins what would happen?

How can I share the objects equally? How many equal groups am I sharing the objects into? Are the groups equal? Are there any left over?

Varied Fluency

- Share the muffins equally between the two plates.
  Complete the sentence.
  ___ cakes shared equally between 2 is ___

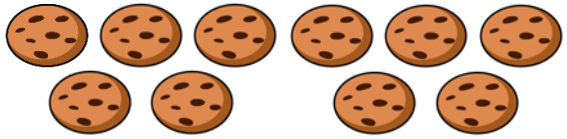
- Collect 20 cubes. Use hoops to represent your friends.
  Can you share the cubes between 5 friends?
  20 shared between 5 equals ____
  Can you share the cubes between 2 friends?
  20 shared between 2 equals ____
  Can you share the cubes between 10 friends?
  20 shared between 10 equals ____

- Tim has 16 bananas.
  He shares them equally between two boxes.
  How many bananas are in each box?
  Represent and solve the problem.

Sharing Equally

Reasoning and Problem Solving

Dora has 10 biscuits.



She wants to share them equally at her party.

How many people could be at the party?

Possible answers:

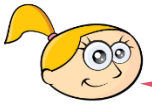
There could be:
10 people
5 people
2 people
1 person (Dora)

There are 10 cakes and 2 boxes.

An equal amount needs to be put into each box.

Jack

Put them into groups of 2



Eva

Share them into 2 groups.

Who is correct?
Explain your answer.

Possible answer:

Eva is correct. She has shared the cakes equally and put 5 into each box.

White Rose Maths

Summer - Block 2

Fractions

Overview

Small Steps

- Find a half (1)
- Find a half (2)
- Find a quarter (1)
- Find a quarter (2)

Notes for 2020/21

You may choose to omit this block of learning in favour of spending more time on basic number. Children will be introduced to the ideas of halves and quarters again in year 2.

Find a Half (1)

Notes and Guidance

Children explore finding a half for the first time using shapes and sets of objects. They will use the vocabulary 'half' and 'whole'. Children will not at this stage use the fractional notation of $\frac{1}{2}$

It is important that they know that a half means 'one of two equal parts' and are able to count them.

Mathematical Talk

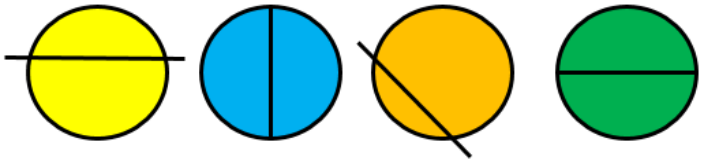
How many parts have I split my object into?
How can you show a half of something?
How do you know if a shape is split into halves?
How many halves make a whole?
Can we count them?
How do you know if an object or shape has not been split in half?
Is there more than one way to show half of a shape or object?
Is this the same for all shapes?

Varied Fluency

- Show the children real life objects and how they can be cut in half.
  How can we cut these objects in half?

  Can any of the objects be cut in half in more than one way?

- Which circles have been split into equal halves?



- Match the halves to make 5 complete shapes.

Find a Half (1)

Reasoning and Problem Solving

Eva and Jack are both attempting to split a rectangle in half.

Eva

Jack thinks he can find three more ways.

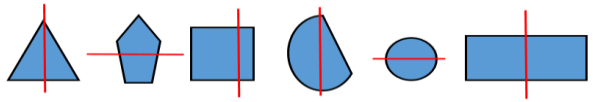
Jack

Find Jack's three examples.

Possible answers:

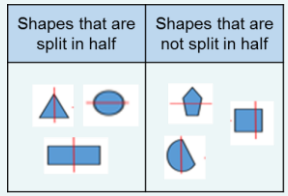
Sort the shapes into the table.

Shapes that are split in half	Shapes that are not split in half



Can you add any more shapes to the table?

Possible answer:



There are a number of different answers for other shapes children could add to the table.

Find a Half (2)

Notes and Guidance

Children use their understanding of finding half of an object or shape and apply this to finding half of a small quantity.
It is important that children find the total amount and can then show how this number can be shared equally into two. The use of concrete manipulatives such as counters can help children to find a half.

Mathematical Talk

How can we find half of an amount?

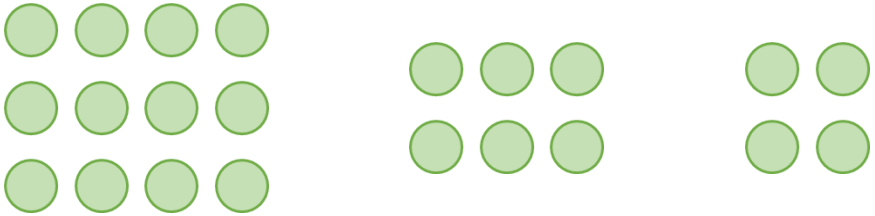
How many groups do we need to share our beads between?

How can you check that you have found half?

How many equal parts should you have when you have split the objects in half?

Varied Fluency

Find half of each amount.



Find half of the amounts and complete the stem sentences.

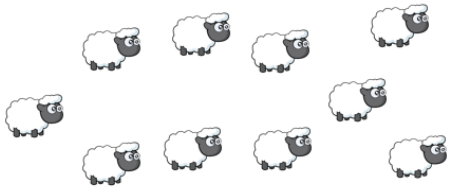
There are ____ beads.

Half of ____ is ____

There are ____ marbles.

Half of ____ is ____

Find half of the sheep.



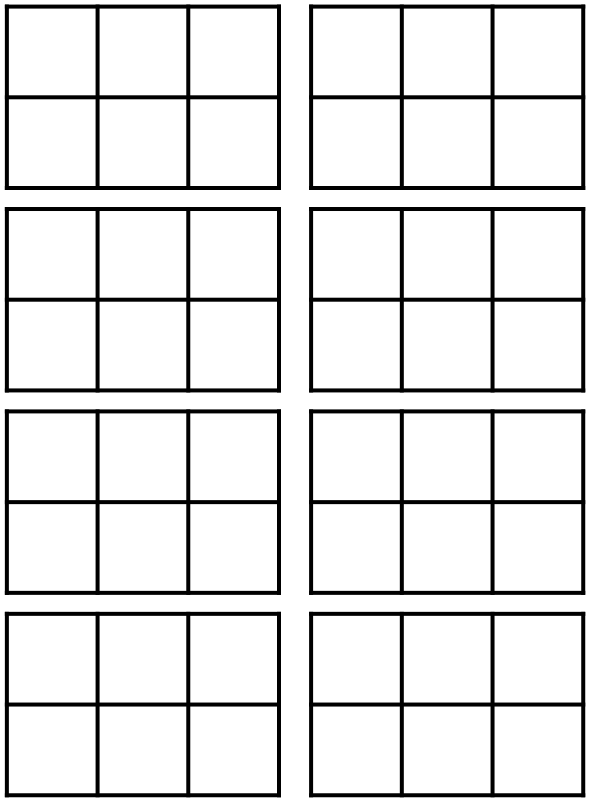
There are ____ sheep.

Half of ____ is ____

Find a Half (2)

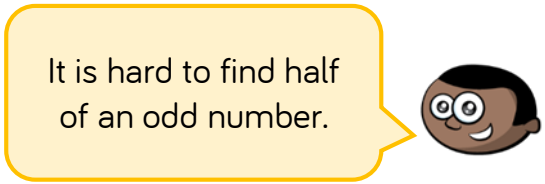
Reasoning and Problem Solving

How many different ways can you shade one half of the shapes?



Any combination that has three whole squares shaded out of the 6

Mo is finding halves.



Do you agree with Mo?
Explain your answer.

Possible answer:
I agree with Mo because an odd number cannot be shared equally between 2
It would not give a whole number answer.

Find a Quarter (1)

Notes and Guidance

Children explore quarters for the first time. They will develop their understanding of equal parts and non-equal parts and relate this to a shape or object being split up into four equal parts.

Children will use the words quarters and parts at this stage but will not use the fractional notation of $\frac{1}{4}$

Mathematical Talk

How many parts does my whole have?
Are my parts equal or not equal?
How many equal parts can we see/count?

Can we make a quarter in a different way?

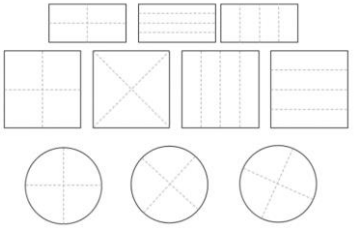
Which shapes show equal parts?
Which shapes show four equal parts?
Which shapes show quarters?

Varied Fluency

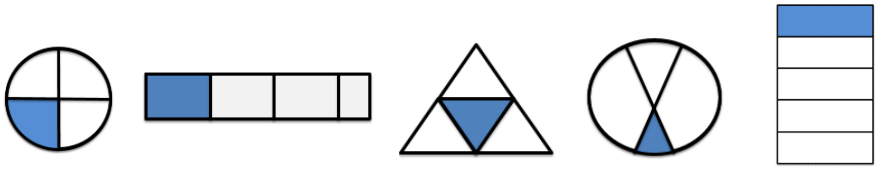
- Take two square pieces of paper, two circular pieces of paper and two rectangular pieces of paper.
  Model folding one of each into four equal parts and the other into four non-equal parts.
  - Which shapes show equal parts? Which do not?
  - How many equal parts can we see?
    Can we fold any of the shapes in a different way and still get equal parts?

  Count the equal parts and then model counting them in quarters.

- Colour a quarter of each shape. Can you colour it in different ways?



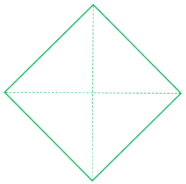
- Tick the shapes that show quarters.



Find a Quarter (1)

Reasoning and Problem Solving

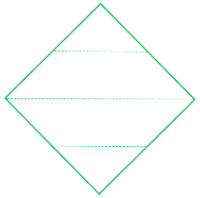
Alex and Jack are talking about quarters.



My shape shows quarters because it has four equal parts.

Alex

My shape shows quarters because it has four parts.



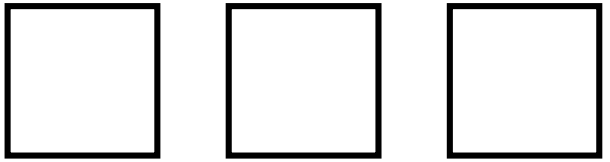
Jack

Are they correct?
Explain your answer.

Alex is correct because quarters must be four equal parts.
Jack has split his square into four unequal parts so they are not quarters.

Use the squares to show:

- Less than a quarter shaded.
- Exactly a quarter shaded.
- More than a quarter shaded.



There are multiple solutions for each one.

Find a Quarter (2)

Notes and Guidance

Children find a quarter of a small quantity through equal sharing. It is important they can show the groups clearly by drawing around quantities or by physically sharing into something. Children will use the word quarters and parts at this stage but will not use the fractional notation of $\frac{1}{4}$

They also begin to describe capacity using the terminology 'a quarter full'.

Mathematical Talk

How many sweets do I have? How can I share them equally into four groups? What is one quarter worth?

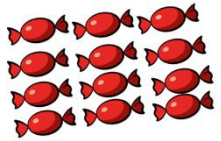
Are my containers the same or different?
Can you should me a quarter full in each container.

How can I quarter this amount?
If I have 2, and it is a quarter, what will the whole look like?
What will the whole be worth?

Varied Fluency

- Share each quantity into four equal groups.

There are ___ cakes.
There is ___ cake in each quarter.
A quarter of ___ is ___



There are ___ sweets.
There are ___ sweets in each quarter.
A quarter of ___ is ___

There are ___ peaches.
There are ___ peaches in each quarter.
A quarter of ___ is ___

- Use a range of containers and rice/water.
Can you show me a quarter full in each container?
Do they look the same or different?

- Use counters to complete the sentences.

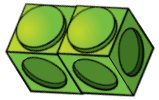
A quarter of 4 is ___ A quarter of 8 is ___

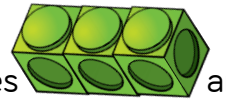
1 is one quarter of ___ 3 is one quarter of ___

Find a Quarter (2)

Reasoning and Problem Solving

One cube  is a quarter, what could the whole look like?

Two cubes  are a quarter, what could the whole look like?

Three cubes  are a quarter, what could the whole look like?

How many different possibilities can you make?

Possible answers:

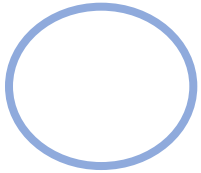
Any arrangement of 4 cubes.

Any arrangement of 8 cubes.

Any arrangement of 12 cubes.

There are many different possibilities which the children will find through their exploration with the multilink.

Mr. White has asked his class to put one quarter of the balls into the hoop.



Teddy: I'm going to put one ball in the hoop.

Whitney: I'm going to put three balls in the hoop.

Tommy: I'm going to put four balls into the hoop.

Who is correct? Can you explain any mistakes made?

Whitney is correct because one quarter of 12 is 3

Teddy has misinterpreted **one** quarter to just mean one.

Tommy knows that quarters are linked to fours but hasn't split the balls into four equal groups.

White Rose Maths

Summer - Block 3

Position & Direction

Overview

Small Steps

- Describe turns
- Describe position (1)
- Describe position (2)

Notes for 2020/21

Practical activities are encouraged to help children understand how to describe position, direction and movement, including whole, half, quarter and three quarter turns.

Consider omitting the language of half and quarter turns if fractions was not covered.

Describe Turns

Notes and Guidance

Children use the language 'full', 'half', 'quarter' and 'three-quarter' to describe turns made by shapes/objects.

Children should practically turn objects, shapes and themselves in different directions but do not need to describe the direction of the turns. Children should investigate whether they can finish facing the same direction if they complete different turns.

Mathematical Talk

What is each turn called?
Is there only one direction shapes/objects can move in?

Does it make a difference which way the shape / object / person is turned?

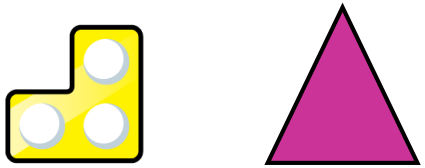
What part of a whole has the shape/object turned?
What will the shape/object look like before or after the turn?

Varied Fluency

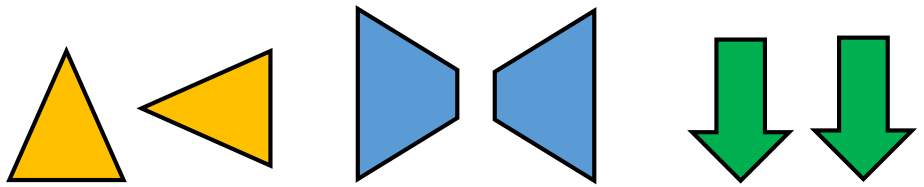
- Give the children instructions using the language 'quarter turn', 'half turn', 'three quarters turn' and 'full turn'. Children could then work in pairs to give and follow directions. This could be developed into a routine with music or as the children line up.

- Draw what each shape will look like once it has turned a:

  - quarter turn
  - half turn
  - three-quarter turn
  - full turn



- Complete the sentence to describe the turns these shapes have made.



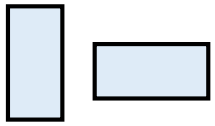
The shape has turned a _____ turn.

Describe Turns

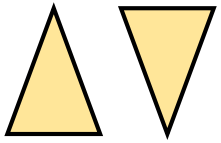
Reasoning and Problem Solving

Are these statements correct?
Is there more than one answer?
Explain how you know.

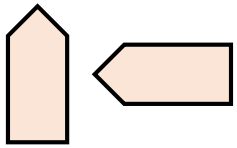
The shape has made a quarter turn.



The shape has made a half turn.



The shape has made a three-quarter turn.

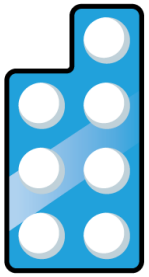


Correct in either direction. It could also be a three-quarter turn in either direction.

Correct in either direction.

The shape could have made a three-quarter turn clockwise or a quarter turn anti-clockwise.

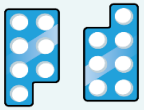
Alex turns her number shape and it finishes facing this direction.



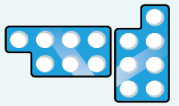
What direction could it have started facing?

What turn could it have made?

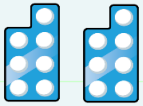
A half turn.



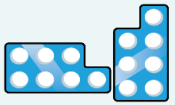
A quarter turn



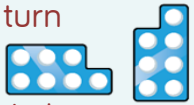
A whole turn



A quarter turn



A three-quarter turn



A three-quarter turn

Describe Position (1)

Notes and Guidance

Children use 'left', 'right', 'forwards' and 'backwards' to describe position and direction. They will describe the position of objects and shapes from different starting positions.

You could use board games such as Snakes and Ladders and Twister to explore positional language.

Where possible, this concept should be explored practically.

Mathematical Talk

What are the different directions we can move in?

How would I get to the ……..?

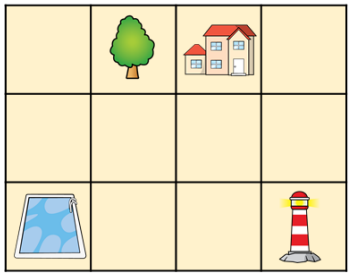
How could you describe the movement?
How could we record the movement?

How would I get from the …… to the ……..?

Varied Fluency

- Use cones to mark out a route for a partner.
Describe the route your partner needs to take using the words 'left', 'right', 'forwards' and 'backwards'.

- Use a grid to move a bot to different places. Use the words 'left', 'right', 'forwards' and 'backwards' to describe the movements.



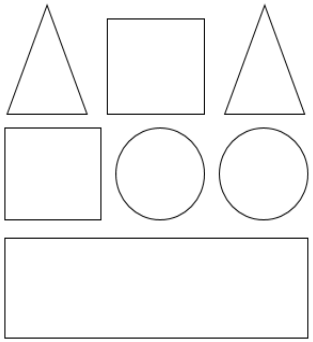
- Complete the sentences using 'left' and 'right' to describe the position of the coins.

The £1 coin is to the _____ of the 1p coin.
The 50p coin is to the _____ of the 1p coin.
The 2p coin is to the _____ of the 50p coin.

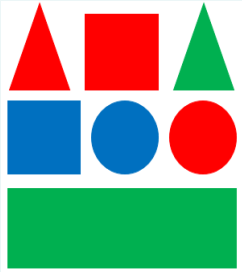
Describe Position (1)

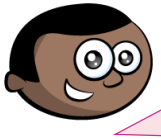
Reasoning and Problem Solving

Use the clues to colour the shapes.



- The circle in the middle is blue.
- The circle on the right is red.
- The shape up from the right circle is green.
- The shape down from the circles is green.
- The square to the left of the green triangle is red.
- The four-sided shape up from the rectangle is blue.
- The triangle on the left is red.

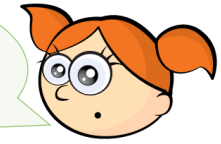




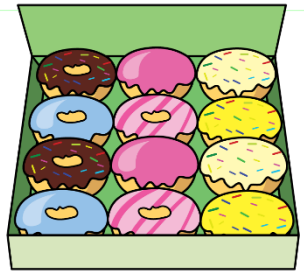
Mo

The pink doughnuts are on the left.

The pink doughnuts are on the right.



Alex



Who is correct?
Explain how you know.

Both children could be correct because they have not stated what the pink doughnuts are left or right in relation to.

The pink doughnuts are on the left of the yellow doughnuts and the pink doughnut are on the right of the blue and brown doughnuts.

Describe Position (2)

Notes and Guidance

Children will build upon directional language 'left' and 'right' to assist with describing position. They will describe position using: 'top', 'in between', 'bottom', 'above' and 'below'. Children explore the position of objects and shapes from different starting points.

Where possible, this concept should be explored practically both in and out of the classroom.

Mathematical Talk

Where is the _____ in relation to you?

What is _____ of you?

What is _____ of this object?

How can we describe the position of _____?

Can you create your own instructions to build a tower?

Varied Fluency

Think about where you are sitting in the classroom.
What can you see around you? Complete the table.

In front of me	Behind me	To the left of me	To the right of me

Use objects in your classroom or outside area to complete the sentences. Use the words: 'top', 'middle', 'bottom', 'above' and 'below' to describe the position.

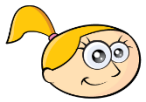
The _____ is above _____.
The _____ is below _____.
In between _____ and _____ is _____.
Above _____ is _____ and _____.
There is nothing between _____ and _____.

Use 5 cubes to build a tower.

- Start with a yellow cube.
- Place a blue cube on top of the yellow cube.
- Place a white cube below the yellow cube.
- Place a red cube on the top of the tower.
- Place the green cube in between the yellow and white cube.

Describe Position (2)

Reasoning and Problem Solving

Whitney	 Jack	
		
		 Dora

Jack is directly above Alex.
Eva is directly below Alex.
_____ is to the right of Eva.
There is no-one above Amir.
What are the missing names?
Add people to complete the grid and describe where they are.

 Whitney	 Jack	
	 Alex	 Amir
	 Eva	 Dora

How many different ways can you describe the position of the 2p coin?

Possible answers may include:

The 2p coin is:

Below the 50p

Above the 10p

In between the £1 and 5p

To the **left** of the 5p

To the **right** of the £1

White Rose Maths

Summer - Block 4

Place Value (within 100)

Overview

Small Steps

- Counting forwards and backwards within 100
- Partitioning numbers
- Comparing numbers (1)
- Comparing numbers (2)
- Ordering numbers
- One more, one less

Notes for 2020/21

Children continue their learning on place value. Start with numbers within 10, 20 and 50 to ensure understanding of this before moving on to look at numbers within 100.

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

Using dot-to-dot activities, both forwards and backwards, with a range of numbers is a fun way to explore counting to 100

Mathematical Talk

What is the most efficient way to count the objects?

How many are in each group?

How many more groups would you need to make 100?

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

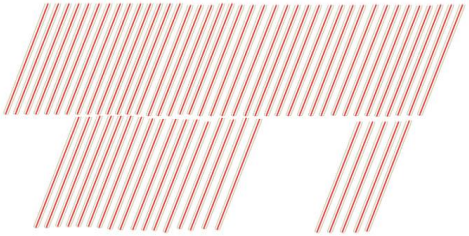
Can you tell you friend an efficient way to find the number 57?

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 into tens to make them easier to count.



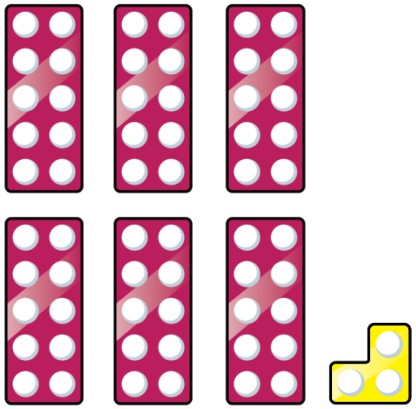
- Use the hundred square to:
  - Count forwards from 80 to 92
  - Count backwards from 73 to 65
  - Write down the numbers between 75 and 81
  - Find what number comes between 46 and 48

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

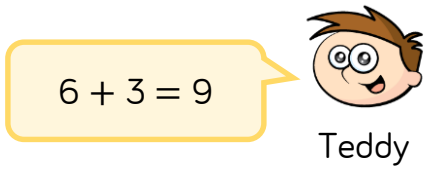
Counting to 100

Reasoning and Problem Solving

Teddy has made a number using the number shapes.



He says



What mistake has Teddy made?

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

Correct the mistake in each sequence.

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

- 34, 35, 36, 37, 38, 39
- 98, 97, 96, 95, 94, 93
- 78, 79, 80, 81, 82

Partitioning Numbers

Notes and Guidance

Children continue grouping in 10s to identify how many tens and ones are within a number. Flexible partitioning is not expected at this stage, however children may notice other ways of partitioning numbers by themselves. Children will use concrete resources to group objects into tens and ones. Place value charts can be introduced to read and record 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?

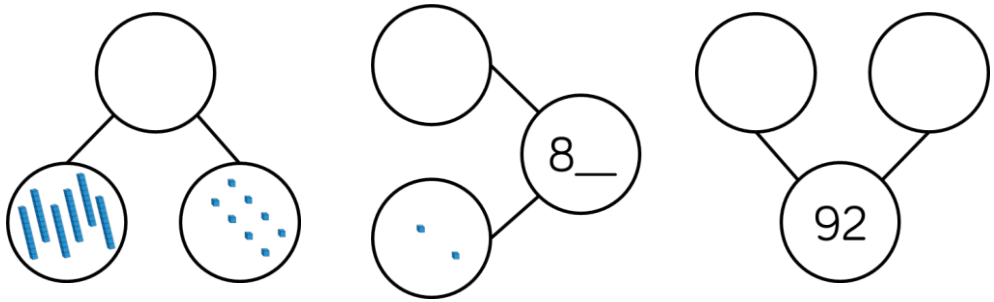
Varied Fluency

- Use Base 10 to make these numbers. Complete the stem sentences.

70 36 64 81 22 66 49

70 has 7 tens and 0 ones.

- Complete the part-whole models.



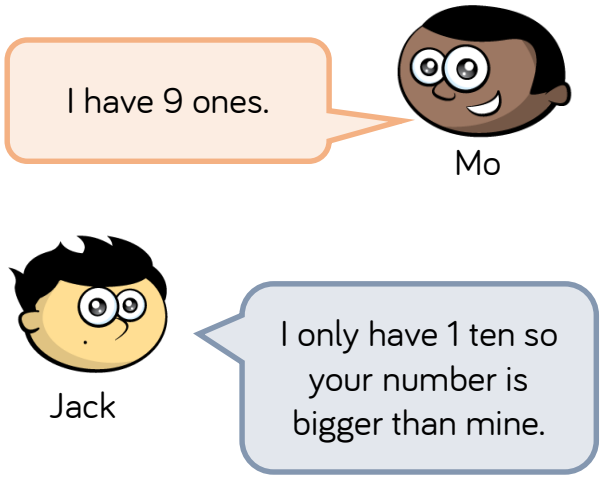
- Show these numbers using a place value chart, Base 10 or straws.

Tens	Ones

73 50 88 79
91 85 62 93

Partitioning Numbers

Reasoning and Problem Solving



Is Jack correct?
Prove it.

Jack is incorrect.

Jack's ten is equal to ten ones.

Mo only has 9 ones.

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.

The number has 5 tens and fewer than 8 ones

How many possible numbers are there?

They could make 50, 51, 52, 53, 54, 55, 56 or 57
So there are eight 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, both natural and man-made 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/fewest tens? Which number has the most/fewest ones?

Why is it important to look at the tens before the ones?

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

How can we count efficiently?

Varied Fluency

- Use Base 10 to make these numbers on place value charts. Write how many tens and ones are in each number.

78 and 61

Tens	Ones

90 and 89

Tens	Ones

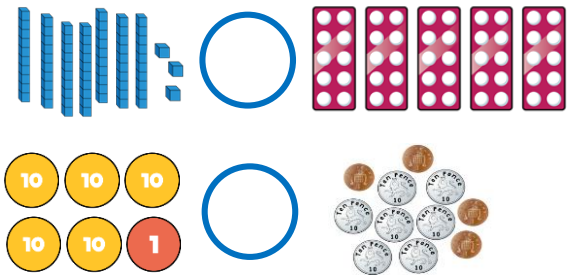
64 and 92

Tens	Ones

Which number from each pair is the largest? Discuss how you know.

- On the hundred square, find a number:
  - Less than 69
  - Greater than 79
  - Greater than 69 but less than 79

- Use equipment from your classroom to compare the amounts using >, < or =

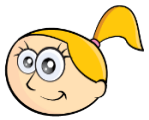


Comparing Numbers (1)

Reasoning and Problem Solving

Eva and Alex have some number cards.

1 2 4



Eva

Alex

3 5 6

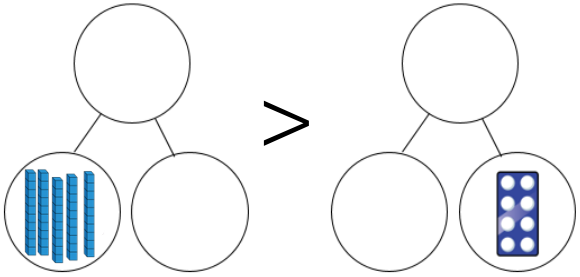
They both use two of their cards to make two-digit numbers.

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

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

Eva could have 41, or 42 and Alex could have 35 or 36.

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..
Possible answers include:
50 > 8
51 > 48 etc.

Comparing Numbers (2)

Notes and Guidance

Children compare numbers and amounts using comparison language, more than, less than, equal to as well as the symbols $<$, $>$ and $=$

Children demonstrate their understanding of the value of the digits in a 2-digit number. They represent this using concrete manipulatives before ordering numbers. Children should be aware when comparing three or more numbers opposite inequality symbols should not be used. (e.g. $\square < \square > \square$)

Mathematical Talk

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

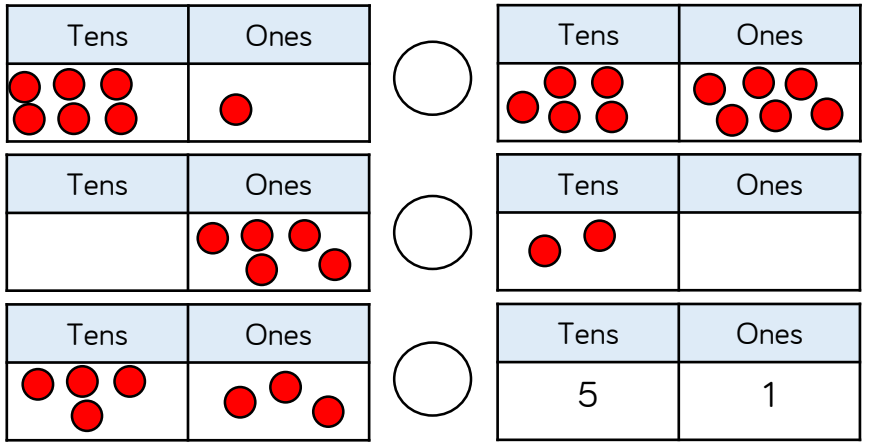
When ordering, which digit should you consider first?

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

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

Varied Fluency

Compare the amounts using $<$, $>$ or $=$



Complete the statements:

$70 < \square$ $\quad \square > 70$ $\quad \square < 70$

$\square < 1$ $\quad 0 < \square$ $\quad \square < 100$

Complete the stem sentences and statements.

62 is _____ than 55 but _____ than 70

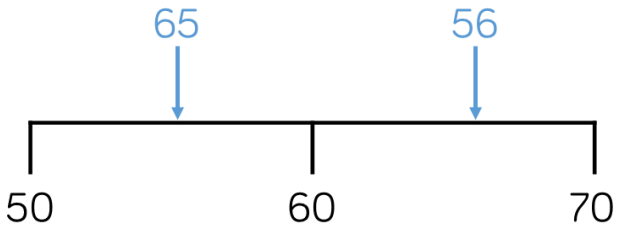
$\square < \square < \square$ $\quad \square > \square > \square$

___ is greater than ____ but less than ____

Comparing Numbers (2)

Reasoning and Problem Solving

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

65 is greater than 60 and therefore should come after 60 on the number line.

56 is less than 60 so should come before it on the number line.

Tommy could have read the tens and ones digit the wrong way around or mixed up the 2 numbers.

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

Tens	Ones
5	

<

Tens	Ones
	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 column.

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 we start with?

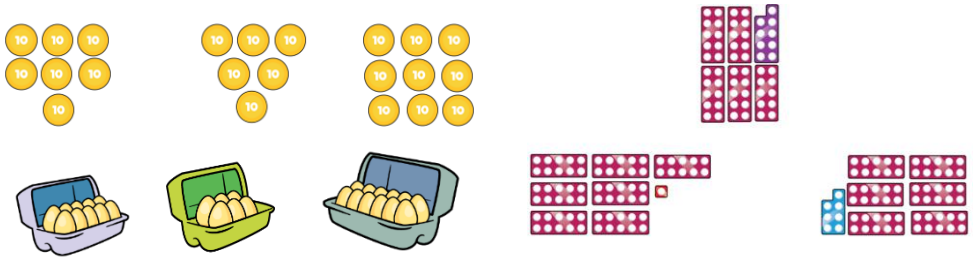
Which is the biggest/has the most?
Which is the smallest/has the least?
Which number/group comes next? How do you know?

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

Varied Fluency

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

	Most		Least
Counters			
Number Pieces			
Eggs			



- In groups of 4 roll some PE equipment. The furthest roll wins. Give a sticker and a high-five to the person who came first, second, third and fourth.

- Order the numbers from smallest to largest.

57 8 21

100 93 72

Ordering Numbers

Reasoning and Problem Solving

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.

There are four cars 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?

Children could choose any number > 78 but < 91

Children could choose any numbers < 72

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 or amounts to 100

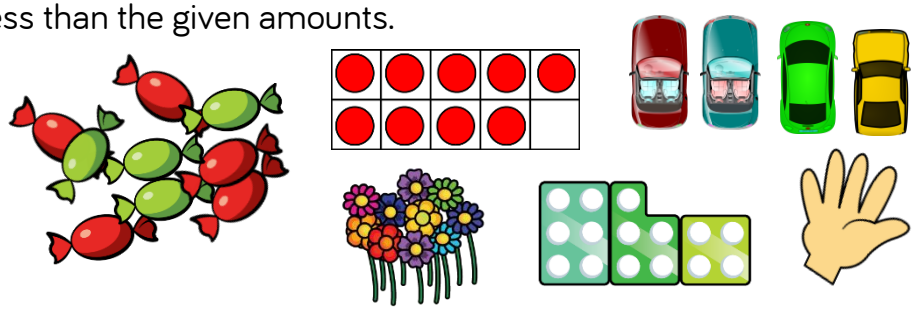
Children use concrete materials and physically add 1 more or take 1 away before moving to more abstract methods such as number tracks or hundred squares.

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

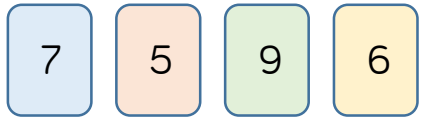
- Use manipulatives and ask children to show one more and one less than the given amounts.



- Complete the missing numbers.

		37			
	46	47			
55		57			
65					

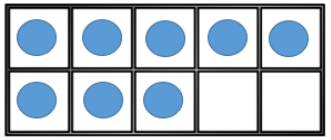
- Use the number cards to make 2 digit numbers.
Now write down one more and one less than the numbers you have made.
Use equipment if needed.



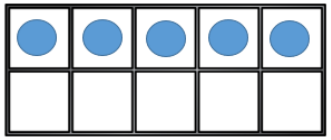
One More, One Less

Reasoning and Problem Solving

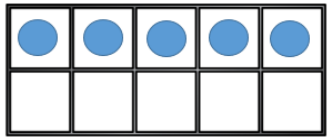
Can you move two of the counters so Rosie has 1 more than Alex and Whitney has 1 less than Alex?



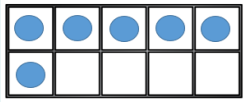
Alex



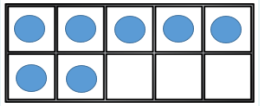
Rosie



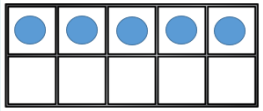
Whitney



A



R



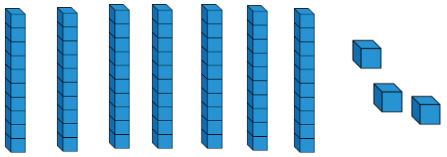
W

Always, Sometimes or Never True?

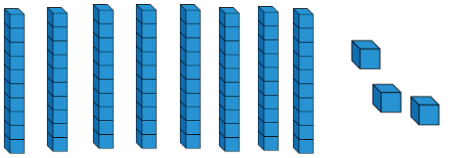
When finding 1 less than a number, the tens digit of the number stays the same.

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

Dora started with this number.



I am going to find one more.



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

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

White Rose Maths

Summer - Block 5

Money

Overview

Small Steps

- Recognising coins
- Recognising notes
- Counting in coins

Notes for 2020/21

When counting in coins, focus on 1p, 2p, 5p and 10p coins to build on understanding of counting in 1s, 2s, 5s and 10s from earlier in the year.

Recognising Coins

Notes and Guidance

Children will recognise and know the value of different denominations of coins.
Children will use their knowledge of place value to match coins with equivalent values. For example, ten 1 pence coins is equivalent to one 10 pence coin. This could be linked with the concept of exchanging.
Teachers could use coins to support this activity (or pictures where appropriate).

Mathematical Talk

How have you organised the coins?

What is the value of each coin? How do you know?

How many 1 pence coins will you need to make 2 p? 5 p? 10 p? 20 p? 50 p? 1 pound?

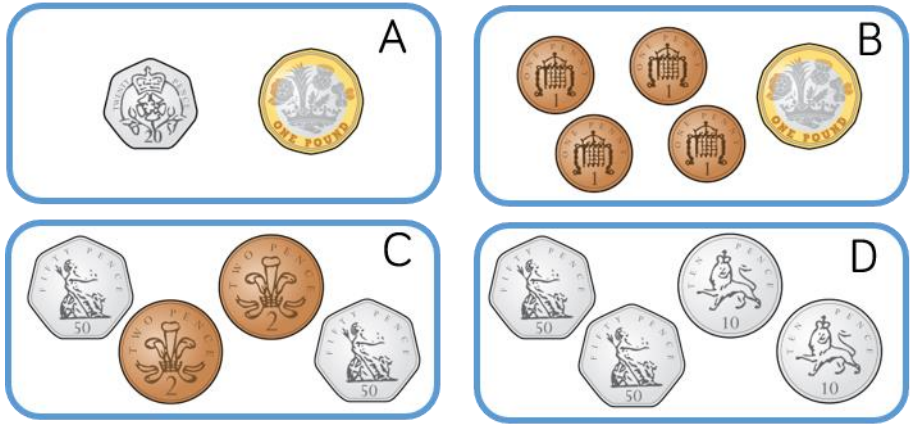
How many 1 pound coins will you need to make 2 pounds?

Varied Fluency

- Organise the coins on your table into pence and pounds.
Can you name each coin?

- Write down the value of each coin.

- What coins are in each box?



Recognising Coins

Reasoning and Problem Solving

Dora says:

Do you agree with Dora?

Justify your answer.

Dora is incorrect.

A 50 p coin isn't round.
A 20 p coin isn't round.
A £1 coin isn't round.

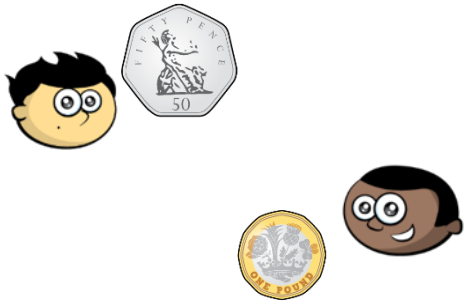
Which is the odd one out?

20 p | 8 p | 2 p | 10 p

Why?

8 p is the odd one out because we do not have an 8 p coin.

The tooth fairy left some money for two children.



Jack has 50 pence. Mo has one pound.

Jack thinks he has more money because his coin is physically bigger.

Explain why Jack is wrong.

Jack is wrong because although the 50 pence coin is physically bigger it only has a value of 50 pence, but the pound coin has a value of 100 pence.

Recognising Notes

Notes and Guidance

Once children are able to identify and recognise coins they need to be able to recognise notes.

Children use their understanding of place value to see that one note can represent many pounds, for example, a ten pound note could be 10 pound coins or 3 two pound coins and 4 one pound coins. Children also need to be aware that one note may be worth many times the value of another note.

Mathematical Talk

Can you name each note?

What is the same about each note?

What is different about each note?

How many ___ pound notes are equivalent to a ___ pound note?

Varied Fluency

How many of each note can you see?

There are _____ 5 pound notes.
There are _____ 10 pound notes.
There are _____ 20 pound notes.

What is the value of each note?

 = ☐ pounds

 = ☐ pounds

 = ☐ pounds

Fill in the blanks.

One  = ☐ 

One  = ☐ 

Recognising Notes

Reasoning and Problem Solving

Teddy is given one  for Christmas.

Eva is given two  

I got more than you did because my number is bigger.

Teddy

I got more than you did because I got two notes.

Eva

Who is correct?

Explain your reasoning.

Both Teddy and Eva are wrong because they both have £10.

Eva has two £5 notes, which makes £10, and Teddy has a £10 note.

Jack, Rosie and Amir each have some money in their pockets.
Jack and Amir both have coins and Rosie has a note.

I have more money than Rosie.

Amir 

I have less money than Rosie.

Jack

What note could Rosie have?

Rosie could have a £5 note.
She could not have a £10 or a £20 note because they are larger than Amir's amount.

Always, sometimes, never

Money in notes is worth more than money in coins.

Sometimes - if you have £6 in coins it is worth more than a £5 note.
However you could also have less than £5 in coins.

Counting in Coins

Notes and Guidance

Children combine their knowledge of money with counting in 2s, 5s and 10s to count money efficiently.

They may draw coins or representations to match a given amount and use previous understanding to compare amounts of money.

Mathematical Talk

Can two people have the same amount of money, with a different number of coins?

Is the largest amount of coins always the largest amount of money? Can you prove it?

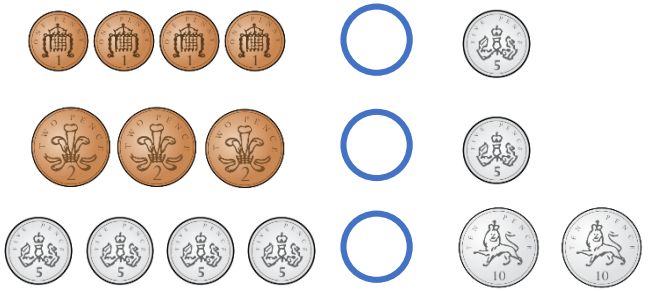
Is there one way, or more than one way?

Varied Fluency

- Using coins children make links to times tables. What do they notice?

- Use or draw coins to show the given amounts.
  - 10p in 5p coins.
  - 50p in 5p coins.
  - 50p in 10p coins.
  - 40p in 5p coins.

- Use <, > or = to compare the amounts.



Counting in Coins

Reasoning and Problem Solving

Tommy's piggy bank is full of 2 pence pieces, 5 pence pieces and 10 pence pieces.

Using one type of coin at a time, how can he make 30 p?

Fifteen 2 pence pieces equal 30 p.

Six 5 pence pieces equal 30 p.

Three 10 pence pieces equals 30 p.

Alex has 2 silver coins.

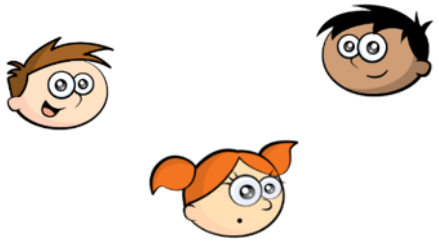
Teddy has 5 bronze coins.

Amir has 1 silver coin.

They all have the same amount of money.

Which coins do they each have?

Collect or draw the coins to prove it.



Are there any other amounts that this works for?

Alex has two 5 pence coins.

Teddy has five 2 pence coins.

Amir has one 10 pence coin.

They all have 10 p.

You could have two 10 pence coins making 20 pence and one 20 pence coin but there are not 5 bronze coins which make 20 pence.

White Rose Maths

Summer - Block 6

Time

Overview

Small Steps

- Before and after
- Dates
- Time to the hour
- Time to the half hour
- Writing time
- Comparing time

Notes for 2020/21

You may choose to omit these steps to focus on some of the earlier learning on place value and addition and subtraction. Time will be revisited in Year 2 or could be taught through short daily inputs throughout the year.

Before and After

Notes and Guidance

Children are introduced to key vocabulary related to time.

They use before and after to describe, sort and order events.

Building on this, they use first and next to describe an order of events. When talking about the day, children use the language: morning, afternoon and evening.

Mathematical Talk

Explain why you have placed the pictures before or after each other?

Could any of the pictures have gone in both?

Which activities do you do before school?

Which activities do you do after school?

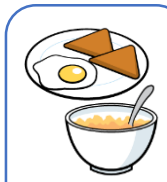
What do you do in the morning?

What do you do in the afternoon?

What do you do in the evening?

Varied Fluency

Sort the activities into **before** and **after** school.


Breakfast


Bedtime story


Get dressed


Go to a party

Can you think of one more activity for each group?
Can you sort the activities into three groups labelled **morning**, **afternoon** and **evening**?

Tommy is drinking a bottle of orange juice.
Match the words to the bottles to order them.

finally | first | next

Describe a special day to a friend. Use the words: before, after, first, next, morning, afternoon, evening.

Before and After

Reasoning and Problem Solving

Dora is describing her day.

Dora

First, I went to the park. After lunch, I went to the cinema. Before the cinema, I went to a café for lunch.

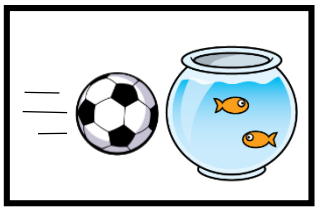
Can you draw and label pictures to order Dora's day?

First | Next | Then

Children draw a picture so the 'First' box shows the park, the 'Next' box shows lunch and the 'Then' box shows cinema.

Draw pictures to show what could have happened before and after.

Before



After

Children draw pictures to show what could have happened.
They might show someone kicking the ball in the 'Before' box and the goldfish bowl smashing in the 'After' box.

Dates

Notes and Guidance

Children learn about the days of the week and know there are 7 days in a week. They talk about events using today, yesterday and tomorrow.

Children learn about the months of the year and can pick out special dates within the year, for example, their birthday.

Children could explore and use a calendar displaying days and months within the classroom environment.

Mathematical Talk

What day is it today?

What day was it yesterday?

What day will it be tomorrow?

Which month is your birthday in?

Which month do we start school in?

Which months are the summer holidays in?

If today is _____ , what will tomorrow be?

Varied Fluency

Fill in the missing days of the week and complete the sentences.

Sunday
Tuesday
Wednesday
Saturday

- Today is Wednesday, yesterday was _____.
- Yesterday was Monday, today is _____.
- Today is Saturday, tomorrow is _____.
- Tomorrow is _____, today is Wednesday.

Use a calendar to look at the names of the months.
Discuss special dates in different children's lives e.g. birthdays, celebrations, holidays.
Complete the sentences.

My birthday is in _____.

In _____, I went to _____.

Dates

Reasoning and Problem Solving

Eva is practising chanting the months of the year.

She says,

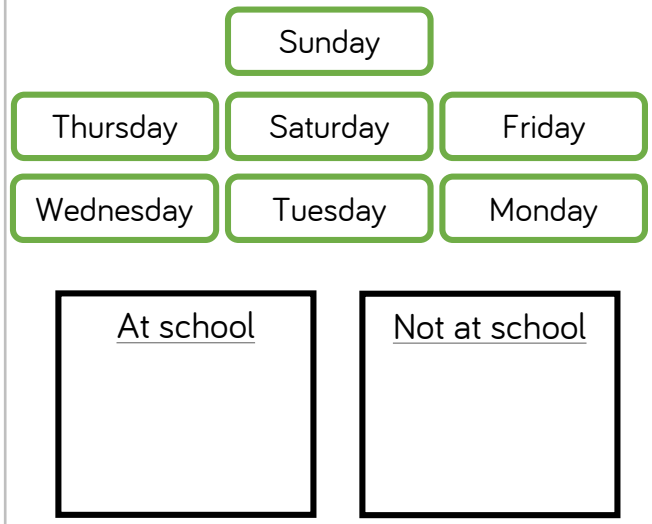
Eva is incorrect. Correct her mistakes.

January
February
March
April
May
June
July
August
September
October
November
December

The 5h June is a Wednesday.
What day is the 10th June?

The 10th June is a Monday.

Sort the days of the week into school days or non-school days.



School days – Monday, Tuesday, Wednesday, Thursday, Friday

Non-school days – Saturday, Sunday

Time to the Hour

Notes and Guidance

Children are introduced to telling the time to the hour using an analogue clock. They learn the language of o'clock and understand the hour hand is the shorter hand and the minute hand is the longer hand.
Children read the time to the hour and know when the minute hand is pointing upwards to the number 12 it is an o'clock time, and understand that they need to look at the hour hand to see which hour it is.

Mathematical Talk

There are two hands on the clock.
What is the same about each hand? What is different about each hand compared to the other?

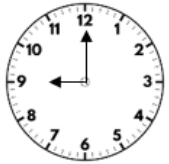
Looking at all three clock faces, what is the same about the hands? What is different about them?

Where will the hour hand be at ____?
Where will the minute hand be at ____?
Can you show me _____?

Varied Fluency

- Match the times to the clocks.

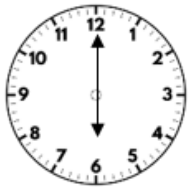
9 o'clock



Two o'clock

5 o'clock

- Complete the times.



The time is ___ o'clock

The time is ___ o'clock

- Draw the hour hand and minute hand on clock faces to show the times:

Eight o'clock 1 o'clock Twelve o'clock

Time to the Hour

Reasoning and Problem Solving

Amir

The time is 3 o'clock.

Can you spot Amir's mistake?

Amir has read the hour hand and the minute hand the wrong way round. At three o'clock the longer minute hand should be pointing at 12 and the shorter hour hand should be pointing at 3

Alex

When it is 11 o'clock both hands point at 11

Is Alex correct?
Explain your reasoning.

Alex is incorrect. If the time is eleven o'clock, the hour hand should be pointing at 11 and the minute hand should be pointing at 12

Time to the Half Hour

Notes and Guidance

Children are introduced to telling the time to the half hour. They learn the language half past.

They understand that, at half past the hour, the minute hand has travelled half way around the clock from the twelve and is pointing at the six and the hour hand is half way between the hours e.g. half way between one and two or half way between nine and ten.

Mathematical Talk

Which is the hour hand? Which is the minute hand? How do you know?

Where does the minute hand point to at half past? Can you see that the minute hand has travelled halfway around the clock? Could you show this to your partner?

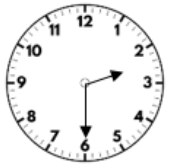
Can you show me _____?

Varied Fluency

- Match the times to the clocks.

Half past twelve

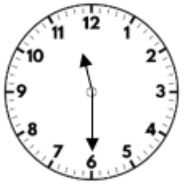
Half past 2



Half past nine

- Complete the times.

The time is half past ___



The time is half past ___

- Draw the hour hand and the minute hand on clock faces to show these times:

Half past 1 Half past four Half past 8

Time to the Half Hour

Reasoning and Problem Solving

Tommy

Can you spot Tommy's mistake?

Tommy has read the minute hand as showing the number of minutes past the hour, rather than understanding that the minute hand pointing to 6 means half past. The time is half past one.

Read the instructions and draw the hands on the clock.

- The minute hand is pointing at the six.
- The hour hand is half way between 10 and 11

What time is it?

The time is half past 10

Writing Time

Notes and Guidance

Children explore the difference between seconds, minutes and hours. They decide which activities would be measured in each unit of time.
Children explore suitable equipment e.g. stopwatches or sand timers to measure durations of time. They carry out activities and use suitable equipment to measure how long each activity takes e.g. timing how long it takes to run around the playground using a stopwatch.

Mathematical Talk

Would you measure the activity in hours, minutes or seconds?

How many star jumps do you think you can do in 10 seconds?

Let's count to 20 seconds in our heads, stand up when you think we reach 20 seconds. How close were you?

Varied Fluency

Using a stopwatch, record how many times you can do these activities in 20 seconds.

- Star jumps
- Write your name
- Hops on the spot

Can you think of any activity which takes 20 seconds?

Would you measure the duration of the activities in seconds, minutes or hours? Sort the activities into three groups: seconds, minutes and hours.

Brushing teeth	Reading a book	Saying the alphabet
Holiday flight	Playing outside	Sleeping at night

Complete the sentences using seconds, minutes or hours.

- Playtime is about 20 _____ long.
- The school day is about 6 _____ long.

Writing Time

Reasoning and Problem Solving

Are the units of time chosen sensible for these activities?

- A football match measured in seconds.
- A lap around the school playground measured in minutes.
- A birthday party measured in hours.

Explain your answers.

Not sensible- a football match is measured in minutes because to use seconds would involve very large numbers.

Dependent on the school playground, could be sensible, or it could be more sensible to measure in seconds.

Sensible - parties can last at least 2 hours.

Dora has a clock without an hour hand.

She says,

Do you agree with Dora?
Explain your answer.

I agree, Dora can still measure time in minutes using her clock.
The minute hand moving the distance from one increment to another shows one minute has passed.
The minute hand moving one complete turn shows that one hour has passed.

Comparing Time

Notes and Guidance

Children compare amounts of time using the language faster, slower, earlier and later.
They build on writing and measuring time by comparing different amounts of times using time language.
Children understand that when someone wins a race the length of time will be shorter and if someone takes longer the length of time will be larger.

Mathematical Talk

Which is longer: one hour, one minute or one second?

If I finish a race first, am I faster or slower than everyone else?

Can you think of a comparison where you use faster and slower in the same sentence?
e.g. A rabbit is faster than a tortoise but slower than a cheetah.

Varied Fluency

Teddy, Mo and Whitney are running a race. Here are their times.

 Teddy - 52 seconds

 Mo - 58 seconds

 Whitney - 48 seconds

Use **faster** or **slower** to complete each sentence.

Teddy is _____ than Mo.

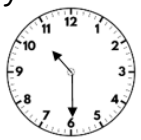
Teddy is _____ than Whitney.

Whitney is _____ than Mo.

Can you write any more sentences to describe the race using the words slower and faster?

Three planes are flying to Paris in the morning.
Here are the times they arrive.

A 

B 

C 

Use **earlier** and **later** to complete the sentences.

Plane A is _____ than Plane B.

Plane B is _____ than Plane C.

Plane C is _____ than Plane A.

Complete the sentences using <, > or =

1 minute ◯ 1 hour 30 seconds ◯ 3 hours

2 seconds ◯ 1 minute

Comparing Time

Reasoning and Problem Solving

Work in small groups.
Complete the following activities and record how long it takes each person.

- Build a tower of ten bricks.
- Run a lap of the playground.
- Write your name five times.

Write three sentences about each activity using the words **slower** and **faster.**

Children will complete three sentences about each activity. They can then share the sentences with their groups and see how many different sentences they have created with altogether.

Five friends are going to a party.
Use the clues to work out when each friend arrived.

Amir arrived later than Jack and Eva.
Rosie arrived later than Amir but earlier than Ron.
Eva arrived the earliest.

1st
2nd
3rd
4th
5th

1st - Eva
2nd- Jack
3rd- Amir
4th- Rosie
5th- Ron