



Year 1 White Rose Maths Hub (WRMH)

Autumn Scheme of Learning, 2017

Alignment with Mathletics

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

This alignment document has been based on the White Rose Maths Hub scheme of learning available on the TES website.

www.tes.com/teaching-resource/wrm-schemes-of-learning-years-1-to-6-block-1-place-value-11652624



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Mathletics

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Examples of alignment to Mathletics

Weeks 1-4 Number: Place Value	01
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Purpose:

The aim of this document is to support Mathletics teachers, who use the WRMH scheme of learning, to make full use of the resources available within Mathletics. Whenever possible, activities, pages from the eBooks or learning experiences on Rainforest Maths have been matched to each of the small steps on the WRMH scheme of learning.

In Mathletics, many eBooks are available in the student interface, however all eBooks are available to teachers through the teacher console. These topic-based eBooks contain practice and fluency exercises, along with application questions and games. Only a small selection of the relevant pages has been added to the document.

Links to Rainforest Maths, which can be found in the 'Play' area in the Mathletics student interface, have also been included as this resource has great visuals which work well on interactive whiteboards and give pupils further opportunities to practise their learning online.

Course selection:

A specific Mathletics course has been created in alignment with the WRMH scheme of learning. You may wish to set this course for your class/groups.

England Yr 01 WRMH Autumn Aligned



Data-Driven
Teaching and
Learning



Differentiation



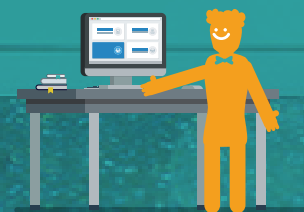
Feedback and
Reflection



Student Growth



Blended
Learning



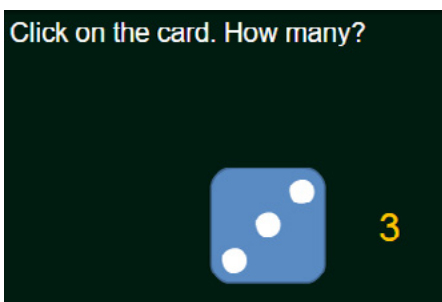
Examples of alignment to Mathletics

Weeks 1-4 Number: Place Value

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> ▶ Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. ▶ Count, read and write numbers to 10 in numerals and words. ▶ Given a number, identify one more or one less. ▶ Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. 	<ul style="list-style-type: none"> ▶ Sort objects ▶ Count objects ▶ Represent objects ▶ Count, read and write forwards from any number 0 to 10 ▶ Count, read and write backwards from any number 0 to 10 ▶ Count one more ▶ Count one less ▶ One to one correspondence to start to compare groups ▶ Compare groups using language such as equal, more/greater, less/fewer ▶ Introduce = , > and < symbols ▶ Compare numbers ▶ Order groups of objects ▶ Order numbers ▶ Ordinal numbers (1st, 2nd, 3rd ...) ▶ The number line

Small step: Count objects

Click on the card. How many?



Topic: **Number and Place Value within 10**

Activity: **Dot Display**

Pupils click on the card and see the dots briefly then record the number they saw. They can click on the card again and again to check.



Topic: **Number and Place Value within 10**

Activity: **How Many?**

Pupils count the objects (up to 10 objects).



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1 How many?

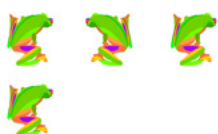


☐ elephants ☐ birds ☐ hippos
☐ monkeys ☐ giraffes ☐ mice

eBook, A series: Numbers and patterns, page 20

Count the various animals and record the number (up to 10).

How many frogs?

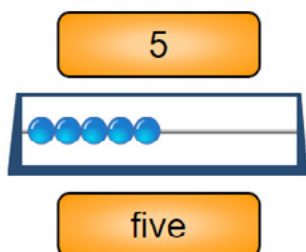


 Click a number card.

Rainforest Maths — Level A — How many frogs?

Pupils match the number of frogs to the number on a card (up to 10).

Small step: Represent objects



Topic: Number and Place Value within 10

Activity: *Matching Numbers to 10*

Pupils match the number of beads shown (between 1 and 10) with the matching numeral and word.

Small step: Count, read and write forwards from any number 0 to 10

Numbers to 10 – count on

1 Count on to 10.

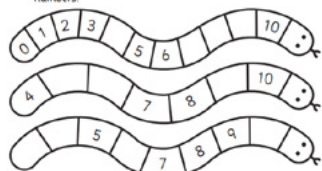
5 6 10
 3 4 7 10
 7 10

eBook, A series: Numbers and patterns, page 17

Count forwards to 10 from any number.

Numbers to 10 – counting

1 Count forwards along the snakes. Fill in the missing numbers.



eBook, B series: Numbers, page 4

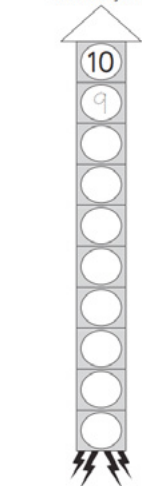
Count forwards to 10 from any number.



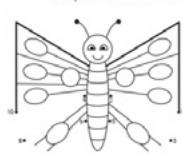
Small step: Count, read and write backwards from any number 0 to 10

Numbers to 10 – counting backwards

- 1 Help the rocket blast-off. Count back from 10.



- 2 Count back from 10 to complete this dot to dot.



- 3 When you are counting backwards, what number do you say after:

10	9
5	4
7	
3	
6	

eBook, A series: Numbers and patterns, page 18

Count backwards from 10 and find the number before a given number.

Small step: Count one more

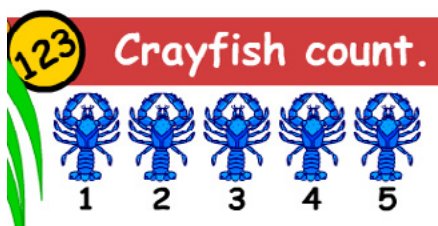
- What numeral is missing?

3	4	5	6	7
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Topic: Number and Place Value within 10

Activity: *Order Numbers to 10*

Pupils practise counting one more by entering the missing number. Counting back one (or finding one less) can also be highlighted as a strategy to check the answer.



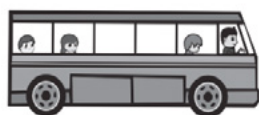
Rainforest Maths – Level A – Count crayfish

Click to add or subtract one – counting one more or one less. Also models 1:1 correspondence.

Small step: Count one less

Numbers to 10 – one more and one less

- 1 Three people are in a bus. One more person gets in. How many people are in the bus now?



eBook, A series: Number and patterns, page 16

Questions use visual support to help pupils find one more or one less.



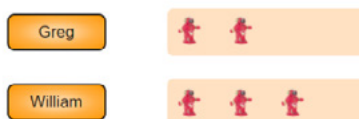
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Small steps:

- One to one correspondence to start to compare groups
- Compare groups using language such as equal, more/greater, less/fewer

Who has more robots?



Topic: **Number and Place Value within 10**

Activity: *Picture Graphs: More or Less*

Pupils compare two groups using one-to-one counting. They decide who has more or less.

Who has the fewest apples?

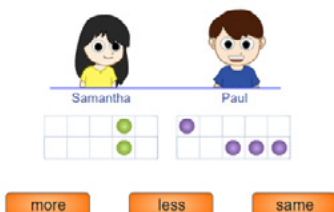


Topic: **Number and Place Value within 10**

Activity: *Pictograms: Who has the Goods?*

Pupils compare three groups of objects. They decide who has the most, the fewest or a particular number of objects.

Does Samantha have more than, less than or the same as Paul?



Topic: **Number and Place Value within 10**

Activity: *More, Less or the Same to 10*

In this activity, pupils can move the counters to help them compare the amounts. When they submit the answer, the counters are lined up to show the comparison more easily if needed.

Small step: Ordinal numbers (1st, 2nd, 3rd)

Which is the fourth object?



Topic: **Number and Place Value within 10**

Activity: *Ordinal Numbers*

Pupils count the objects and select the object in the correct position.



Small step: The number line

Walking back and forth

Start at Go forward stepsGo back stepsGo forward stepsGo back steps

1 2 3 4 5 6 7 8 9 10

[eBook, A series: Walking Back and Forth \(rich task\)](#)

This rich task provides pupils with an opportunity to practise the counting sequence on a number line. Included is an interactive, as well as printable sheets.



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Examples of alignment to Mathletics

Weeks 5–8 Number: Addition and Subtraction

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> Represent and use number bonds and related subtraction facts <u>within 10</u> Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs. Add and subtract one digit numbers <u>to 10</u>, including zero. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems. 	<ul style="list-style-type: none"> Part whole model Addition symbol Fact families – Addition facts Find number bonds for numbers within 10 Systematic methods for number bonds within 10 Number bonds to 10 Compare number bonds Addition: Adding together Addition: Adding more Finding a part Subtraction: Taking away, how many left? Crossing out Subtraction: Taking away, how many left? Introducing the subtraction symbol Subtraction: Finding a part, breaking apart Fact families – The 8 facts Subtraction: Counting back Subtraction: Finding the difference Comparing addition and subtraction statements $a + b > c$ Comparing addition and subtraction statements $a + b > c + d$

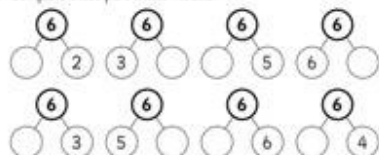
Small step:

- Part whole model
- Systematic methods for number bonds within 10

1 Use the pattern to complete the addition and subtraction number sentences.

	$0 + 6 = 6$ $1 + \square = 6$ $2 + 4 = 6$ $3 + \square = 6$ $4 + 2 = 6$ $5 + \square = 6$ $6 + \square = 6$	$6 - 6 = 0$ $6 - 5 = 1$ $6 - 4 = \square$ $6 - 3 = 3$ $6 - 2 = \square$ $6 - 1 = 5$ $6 - 0 = \square$
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2 Complete these part-whole models.



eBook, B series: Operations with Number, page 4

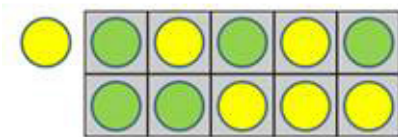
Find bonds for numbers within 10 using patterns. Complete number bonds within 10 using a part-whole model.



Small steps:

- Number bonds to 10
- Addition symbol

How many more counters to make 10?

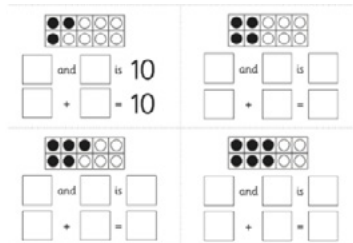


5 and 5 makes 10

Topic: [Addition and Subtraction within 10](#)

Activity: [Adding to make 5 and 10](#)

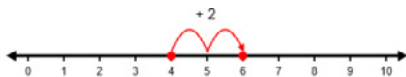
Pupils use a tens frame and move counters to find out how many more counters are needed to make 5 or 10.



eBook, A series: [Operations with numbers, page 7](#)

Pupils practise counting two groups that add to ten using counters on a tens frame. Introduction to the addition symbol.

Small step: Addition: Adding together



$$4 + 2 = 6 \quad \checkmark$$

Topic: [Addition and Subtraction within 10](#)

Activity: [Model Addition](#)

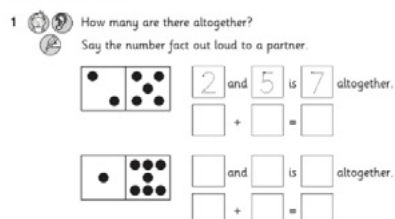
The support shows pupils how adding two groups together relates to moving along a number line.



Rainforest Maths — Level A — Add bugs

Add two groups of objects together and select the correct answer card.

Addition – to 10



eBook, A series: [Operations with numbers, page 14](#)

Add two groups of objects together and record the number sentence with and without the addition symbol.



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Small step: Addition: Adding more

3 of 10 Addition to 10 – Adding to Make 5 and 10

How many more counters to make 10?

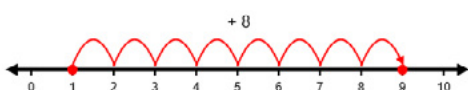


8 and makes 10

Topic: **Addition and Subtraction within 10**

Activity: **Adding to make 5 and 10**

Pupils can move the counters to add more.



$$1 + 8 = 9$$



Topic: **Addition and Subtraction within 10**

Activity: **Adding to Ten**

This activity shows the addition as jumps on a number line.

Addition to 10 – counting on

We can solve missing number problems by counting on. Look at this problem.

$$3 + \square = 7$$

We know that we have 3. We know that we need to get to 7. So, we start at 3 and count on until we get to 7.

We added 4 more to get to 7.



So, $3 + 4 = 7$

1 Count on and finish the number facts.

a $6 + \square = 10$

b $4 + \square = 8$

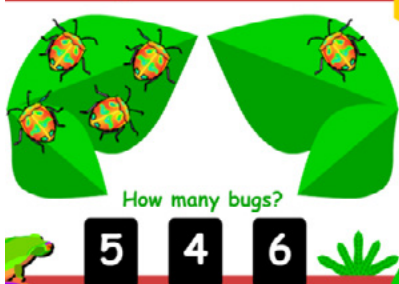
c $8 + \square = 9$

d $\square + 3 = 9$

eBook, B series: **Operations with Number, page 15**

Count on to add more to a given group of objects.

Add bugs.



How many bugs?



5

4

6



Rainforest Maths – Level A – Add bugs

Models addition as adding groups together. Pupils count the bugs on 2 leaves and click the card with the correct answer.



Small step: Finding a part

Sienna has 6 puppies. 2 are and the rest are .

How many are ?

Show your thinking.



$$2 + 4 = 6$$

Topic: **Addition and Subtraction within 10**

Activity: **Adding to 10 Word Problems**

This activity includes questions that require pupils to find the total or find the part (change or start unknown). Objects are able to be dragged to help with counting/ addition.



$$2 + 3 = 5 \quad \checkmark$$

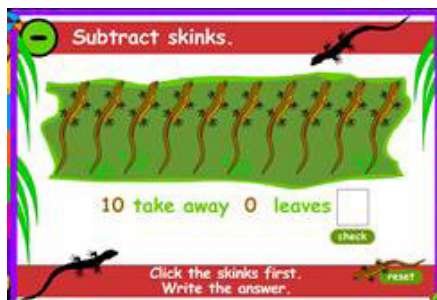
Topic: **Addition and Subtraction within 10**

Activity: **All about Ten**

This activity includes questions that require pupils to find the missing part in a number sentence.

Small steps:

- Subtraction: Taking away, how many left? Crossing out
- Subtraction: Taking away, how many left? Introducing the subtraction symbol



Rainforest Maths — Level A — Subtract Skinks

Pupils click to subtract the skinks and count how many are left.

Subtracting within 10 – crossing out

One way to subtract is to take things away or cross them out and count how many are left.



$$6 - 2 = 4$$

1 Cross out the pictures to match these number facts.



$$6 - 2 = 4$$



$$7 - 6 = 1$$



$$4 - 2 = 2$$



$$9 - 3 = 6$$

eBook, B series: **Operations with Number, page 47**

Subtraction within 10 by crossing out objects and counting how many are left. Subtraction symbol used.



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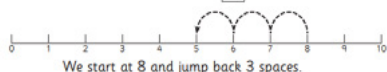
Mathletics

Small step: Subtraction: Counting back

Subtraction within 10 – counting back

Another way to subtract is to count back. Number lines can help us do this as counting backwards can be tricky!

$$8 - 3 = \square$$



We start at 8 and jump back 3 spaces.

$$8 - 3 = 5$$

1 Count back using the number line. Finish the number facts.

a $5 - 3 = \square$

b $9 - 2 = \square$

c $4 - 2 = \square$

d $10 - 5 = \square$

e $7 - 6 = \square$

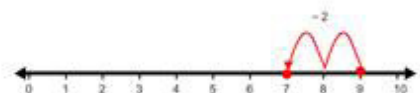
f $10 - 2 = \square$



Remember we count the **jumps or spaces**, not the numbers!

eBook, B series: Operations with Number, page 48

Subtraction within 10 by counting back using a number line.



$$9 - 2 =$$

7



Topic: Addition and Subtraction within 10

Activity: *Subtracting from Ten*

Count back along a number line to subtract within 10.

Small step: Subtraction: Finding a part, breaking apart

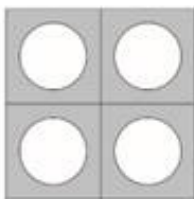
Number bonds – to 10

You will need: a partner 10 counters

What to do:

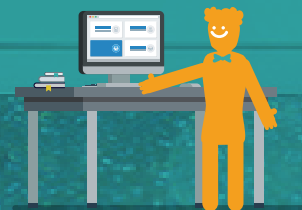
Put 10 counters on the frame.
Take turns taking some counters away. Don't let your partner see you do it!
Can they work out how many counters you took away?
Say or record the number fact together like this:

10 take away ... is ...



eBook, A series: Operations with numbers, page 8

This game requires pupils to find the amount that was taken away from 10 using counters and a tens frame.



Small step: Subtraction: Finding the difference

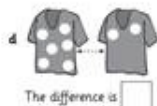
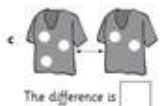
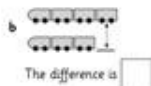
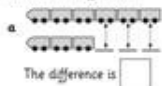
Subtraction within 10 – find the difference

When we subtract, we can compare 2 groups or numbers and ask ourselves, 'What is the difference? Does one group have more than the other? Does one group have less than the other? Look at these 2 trains. What is the difference?

5 This train has 5 carriages.
3 This train has only 3 carriages.

If they both had 3 carriages, they would be the same.
If they both had 5 carriages, they would be the same.
What is the difference?
The difference is 2 carriages.

1 What is the difference?

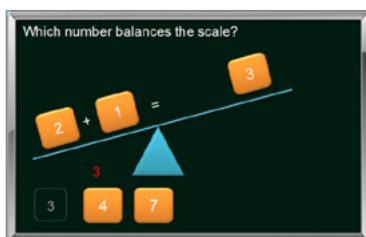


eBook, B series: Operations with numbers, page 49

Find the difference between two amounts using visual supports.

Small step: Comparing addition and subtraction statements $a + b > c + d$

Balance Numbers to 10



Topic: Addition and Subtraction within 10

Activity: *Balance Numbers to 10*

Add the missing numbers to create two equal (balanced) number sentences.

Possible extension activities



Live Mathletics – Level 1

Timed activities for students who are ready to develop fluency in addition and subtraction up to 10. Teachers can access Live Mathletics, through the student view and the play area. Many teachers use this resource with the whole class or small groups, and have pupils either calling out answers or recording on whiteboards. If they do access the game independently, pupils can select to play against their peers, the computer, or with other pupils from around the world.



eBook, B series: Lady Bug Crawl (rich task)

The interactive uses 14 lady bugs, but shows pupils how these lady bugs can be moved across the 2 leaves to create different addition and subtraction number sentences. The printable problem for pupils could be adapted to give pupils 10 ladybirds, supporting the learning of numbers to 10.



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Mathletics

Examples of alignment to Mathletics Week 9 Geometry: Shape

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> ▶ Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles). ▶ Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres). 	<ul style="list-style-type: none"> ▶ Recognise and name 3D shapes ▶ Sort 3D shapes ▶ Recognise and name 2D shapes ▶ Sort 2D shapes ▶ Patterns with 3D and 2D shapes

Small step: Recognise and name 3D shapes

3D shape – recognising shapes



You will need: a partner, scissors, copy

What to do:

Cut out the tiles below and place each one in the correct box on the following page.
When you have finished, share your work with a partner. Do you agree about which shapes belong where?



eBook, B series: *Geometry*, pages 17–20
Recognising and sorting 3D shapes.

Which object am I like?



Select an object:



Topic: **Shape**

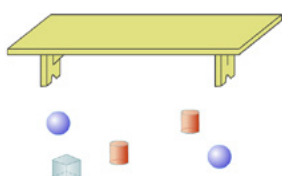
Activity: *Match the Solid 1*

Match a 3D object to a 3D shape. The support area provides names for the 3D shapes and looks at attributes such as rolling and stacking.

Small step: Sort 3D shapes

Space & Shape – Collect the Objects 1

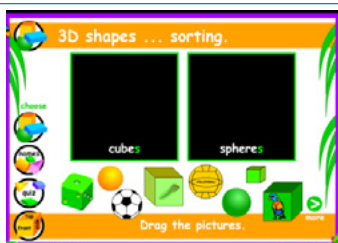
Place the cylinders on the table.



Topic: **Shape**

Activity: *Collect the Objects 1*

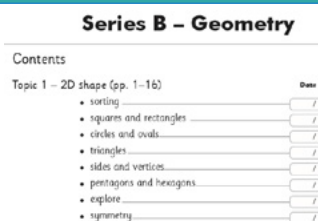
Pupils identify and place the named 3D shapes on a table.



Rainforest Maths — Level B — 3D shapes: sorting

Drag the correct 3D shapes into the boxes eg, cubes or spheres, cones or cylinders.

Small step: Recognise and name 2D shapes



eBook, B series: Geometry, page 1-16

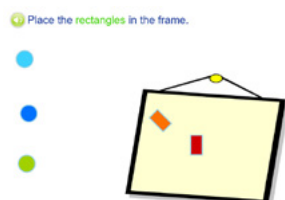
Recognise, draw, trace, compare and sort common 2D shapes.



Rainforest Maths — Level B — 2D shapes: names

Name the 2D shape shown.

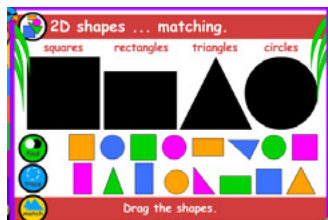
Small step: Sort 2D shapes



Topic: Shape

Activity: *Collect Simple Shapes*

Drag the named 2D shape into the frame. The support compares the 2D shape with a real-life example.



Rainforest Maths — Level A — 2D shapes: matching

Sort different colours and orientations of 2D shapes into their correct categories.

Small step: Patterns with 3D and 2D shapes

Patterns and Problem Solving - Complete the Pattern

What comes next?



Topic: Shape

Activity: *Complete the Pattern*

This activity supports conversations about what shapes are in the pattern, and also how pupils know which shape to select next.



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Mathletics

Examples of alignment to Mathletics Weeks 10 and 11 Number: Place Value

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> ▶ Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. ▶ Count, read and write numbers to 20 in numerals and words. ▶ Given a number, identify one more or one less. ▶ Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. 	<ul style="list-style-type: none"> ▶ Count forwards and backwards and write numbers to 20 in numerals and words ▶ Numbers from 11 to 20 ▶ Tens and ones ▶ Count one more and one less ▶ Compare groups of objects ▶ Compare numbers ▶ Order groups of objects ▶ Order numbers

Small steps:

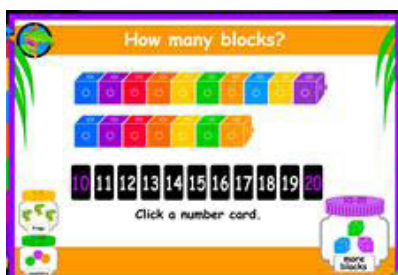
- Count forwards and backwards and write numbers to 20 in numerals and words
- Numbers from 11 to 20



Topic: **Number and Place Value within 20**

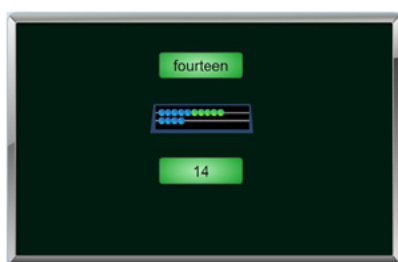
Activity: *Counting Up to 20*

Identify (count) the three numbers that come after a given number up to 20.



Topic: **Rainforest Maths — Level B — Count to 20, 50, 100: blocks**

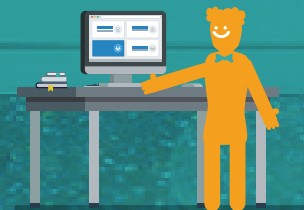
Count the blocks and identify the correct number up to 20.



Topic: **Number and Place Value within 20**

Activity: *Matching Numbers to 20*

Identify the matching numeral and word for a given number of beads up to 20.



Numbers to 20 – counting from different starting points

1 Count forwards along these paths. Fill in the gaps.

a 11 12

b 7 8

c 5 6

Watch out!
The paths start at different numbers.

2 Count backwards along these paths. Fill in the gaps.

a 10 9 0

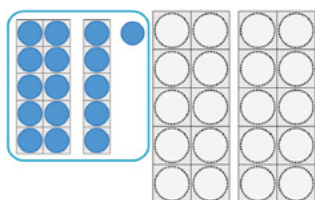
b 19 16

3 Work with a friend. Choose a number that is 20 or less. Close your eyes and together, count back from that number to zero. Every time you do it right, give yourselves a backwards tick!

eBook, B series: Numbers, pages 8–20

Various exercises for counting forwards and backwards to 20.

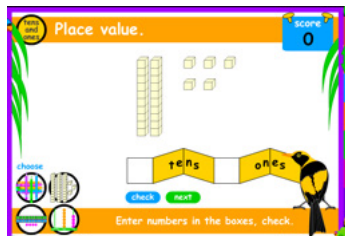
Small step: Tens and ones



Topic: Number and Place Value within 20

Activity: *Making Teen Numbers*

Make teen numbers by selecting a whole group of ten and then the extra ones needed.



Rainforest Maths — Level B — Place value

Identify the number of tens and ones modelled using sticks, place value blocks, cubes or on an abacus.

Small step: Count one more and one less

Numbers to 20 – 1 more and 1 less

We can use the number line to help us find 1 more than a number. We just need to move one square to the right.

0 1 2 3 4 5 6 7 8 9 10

more →

1 Add the missing number on these number lines to show 1 more.

a 3 4 b 7 8

c 5 6 d 1 2

To find 1 more
locate your number
and move one
square to the right.

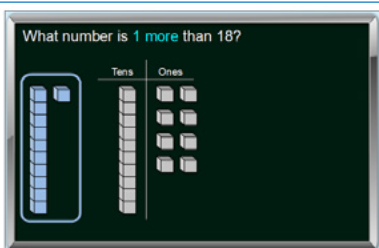
We can also use the number line to count 1 less. This time we need to move one square to the left.

0 1 2 3 4 5 6 7 8 9 10

less ←

eBook, B series: Numbers, page 28

Identify the number 1 more or 1 less using a number line for support.



Topic: Number and Place Value within 20

Activity: *1 More, 2 Less*

Identify the number 1 more or 2 less than a number modelled using place value blocks. Pupils can drag the blocks to make the new number.



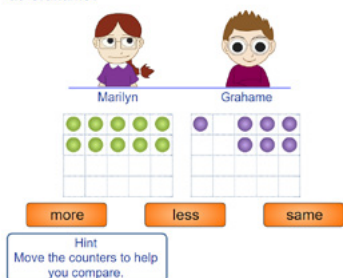
Year 1 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Small steps:

- Compare groups of objects
- Compare numbers

Does Marilyn have more than, less than or the same as Grahame?



Topic: **Number and Place Value within 20**

Activity: ***More, Less or the Same to 20***

Use the visual representations to compare two numbers. Counters can be moved to make the comparison easier. Decide if one person has more, less or the same as the other person.

Select: < or >



Topic: **Number and Place Value within 20**

Activity: ***Compare Numbers to 20***

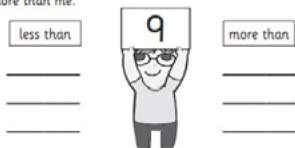
Compare two numbers and two groups of objects. A great activity for moving pupils from comparing groups of objects to comparing numbers. Greater than and less than symbols are used.

Numbers to 20 — comparing numbers

1 Circle the numbers

- a that are more than 13. 11 16 17
- b that are less than 17. 13 20 15
- c that are more than 14. 11 15 17

2 Write 3 numbers that are less than me. Write 3 numbers that are more than me.



3 Write 3 numbers that are less than me. Write 3 numbers that are more than me.



eBook, B series: Numbers, page 25

Find the numbers that are more than or less than a given number.






Small steps:

- Order groups of objects
- Order numbers

Numbers to 20 — ordering numbers

Now let's compare three numbers.

11  15  9 

11 is **less** than 15. 15 is **more** than 11. 9 is **less** than 11.
11 is **more** than 9. 15 is **more** than 9. 9 is **less** than 15.
15 is the **greatest**. 9 is the **smallest**.

Let's put them in order.

From **smallest** to **greatest** we start with the smallest number.

smallest → 9 11 15 → greatest

From **greatest** to **smallest** we start with the biggest number.

greatest → 15 11 9 → smallest

eBook, B series: Numbers, page 26

Order numbers up to 20. The exercise helps to develop the transitivity concept.

What numeral is missing?



Topic: Number and Place Value within 20

Activity: *Order Numbers to 20*

In this activity, pupils use the order of numbers up to 20 to find a missing number.



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For more information about Mathletics,
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