Mathletics

# Year 1 White Rose Maths (WRM) Spring Scheme of Learning, 2018 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 (WRM) scheme of learning available on the TES website. It contains the alignment information for the Spring Scheme of Learning.

# Year 1 White Rose Maths (WRM) Spring Scheme of Learning, 2018

## Content

### Examples of alignment to Mathletics



## Purpose:

The aim of this document is to support Mathletics teachers, who use the WRM schemes 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 corresponding WRM 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 is contained in this document.

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

**Course selection:**
A specific Mathletics course has been created in alignment with this WRM scheme of learning. You may wish to set this course for your class/groups.

**England Yr 01 WRM Autumn and Spring Aligned**

Data-Driven Teaching and Learning

Differentiation

Feedback and Reflection

Student Growth

Blended Learning

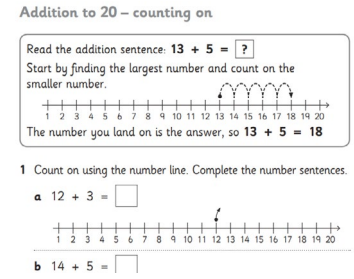
# Year 1 White Rose Maths (WRM) Spring Scheme of Learning, 2018

## Examples of alignment to Mathletics

## Block 1 (Weeks 1-4) Number: Addition and Subtraction

| National Curriculum Objectives | WRM Small Steps |
|---|---|
| ▸ Represent and use number bonds and related subtraction facts within 20.<br>▸ Read, write and interpret mathematical statements involving addition (+), subtraction (−) and equals (=) signs.<br>▸ Add and subtract one-digit and two-digit numbers to 20, including zero.<br>▸ Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = [ ] − 9. | ▸ Add by Counting On<br>▸ Find & Make Number Bonds<br>▸ Add by Making 10<br>▸ Subtraction — Not Crossing 10<br>▸ Subtraction — Crossing 10 (1)<br>▸ Subtraction — Crossing 10 (2)<br>▸ Related Facts<br>▸ Compare Number Sentences |

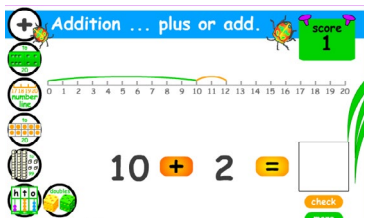
### Small step: Add by Counting On




**eBook, B series: Operations with Number, pages 28–30**

Pupils solve additions up to 20 by counting on using a number line.

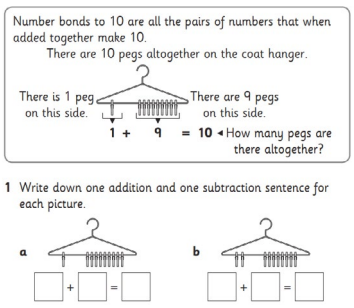
These pages also contain a game for pupils to play in pairs. Using counting on as a strategy for addition, they put together rockets.




**Rainforest Maths — Level C — Addition ... plus or add**

Pupils practise counting on using a number line to add 2 numbers with a total up to 20.

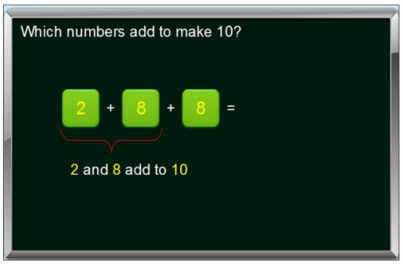
### Small step: Find & Make Number Bonds




**eBook, B series: Operations with Number, pages 1–13**

Pupils practise finding and making number bonds for numbers from 5–10. The exercises illustrate number bonds in a range of different ways.

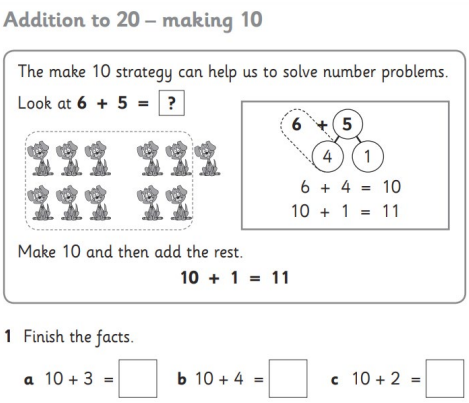
## Small step: Add by Making 10




Topic: Add Sub within 20

Activity: *Add 3 Numbers Using Bonds to 10*

Pupils swap the order of the 3 single-digit numbers to make bonds to 10 and then adds them together.

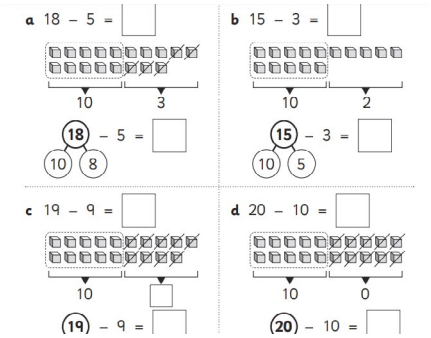



**eBook, B series: Operations with Number, pages 38–41**

Pupils use their knowledge of number bonds to 10 to help them solve addition problems.

The exercises on pages 40–41 also support the use of Numicon or base 10 equipment, with visuals that reflect these practical resources.

## Small step: Subtraction — Not Crossing 10

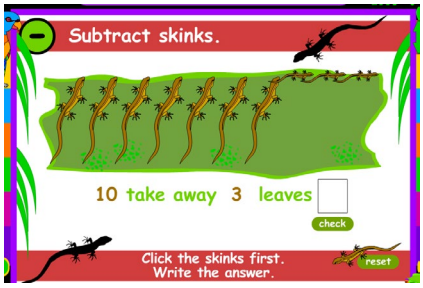



**eBook, B series: Operations with Number, pages 60–61**

Pupils practise subtracting by crossing out. The visual supports an understanding of partitioning of a number into tens and ones. In these examples, the ones can be subtracted without the need to subtract from the tens.

**eBook, B series: Operations with Number, page 47–60**

These exercises support pupils who need to practise subtracting ones from numbers within 10, before moving on to teen numbers.

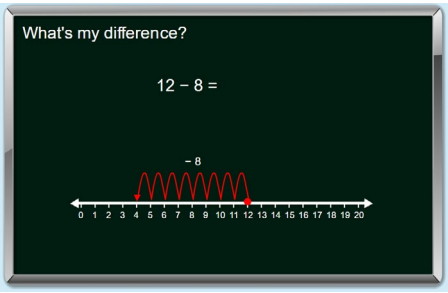



**Rainforest Maths — Level A — Subtract Skinks**

This interactive allows students to click to subtract skinks and then complete the subtraction number sentence. They can reset and play as many times as they like.

# Year 1 White Rose Maths (WRM) Spring Scheme of Learning, 2018

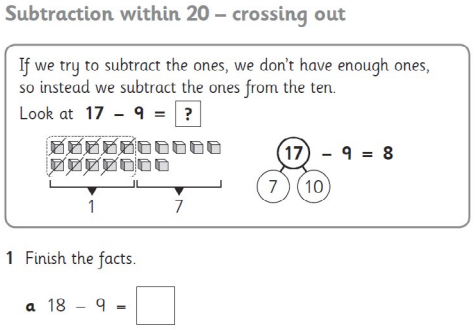
## Small step: Subtraction — Crossing 10 (1)(2)




Topic: Add Sub within 20

Activity: *Subtracting from 20*

Pupils complete number sentences involving subtraction within 20. The support represents the subtraction on a number line.


Subtraction within 20 – crossing out

If we try to subtract the ones, we don't have enough ones, so instead we subtract the ones from the ten.

Look at 17 – 9 = ?

1 7

17 – 9 = 8

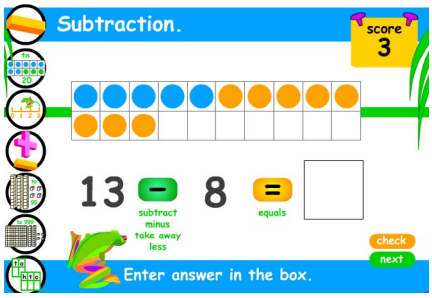
7 10

1 Finish the facts.

a 18 – 9 =

eBook, B series: Operations with Number, page 62

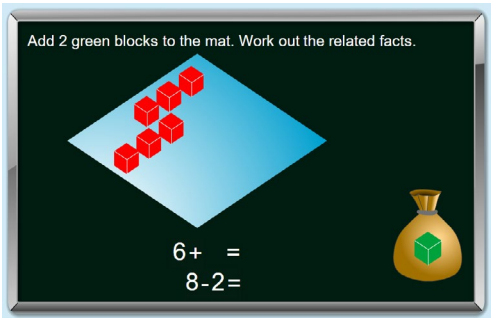
Pupils practise subtractions involving crossing 10. The visuals show them that when they do not have sufficient ones to complete the subtraction, they need to subtract from the tens.




Rainforest Maths — Level C— Subtraction to 20

This activity provides examples of subtractions that both do and do not cross the tens boundary.

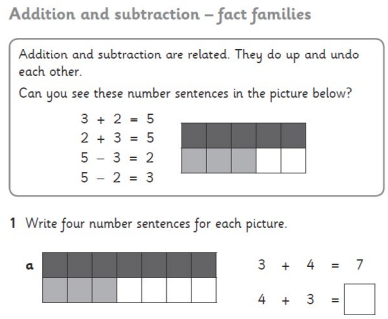
## Small step: Related Facts




Topic: Add Sub within 20

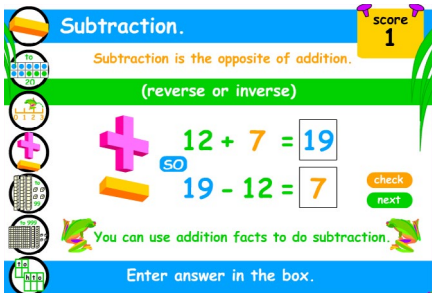
Activity: *Related Facts 1*

Pupils first solve an addition fact using blocks as support and then find the related subtraction fact.




### eBook, B series: Operations with Number, page 70

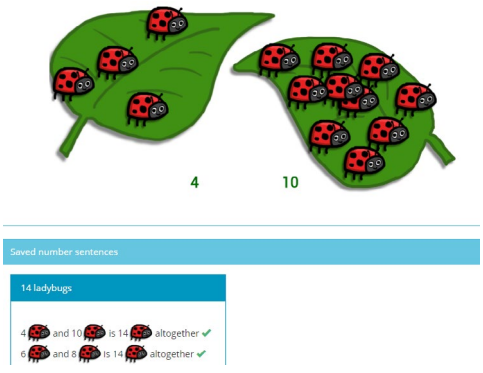
Pupils find related addition and subtraction number sentences. The visuals support an understanding of bar modelling, showing clearly the relationship between addition and subtraction.




### Rainforest Maths — Level C — Subtraction + -

Pupils use addition sentences to help them solve a related subtraction. If used on an interactive whiteboard, pupils can also be encouraged to show all the related number sentences.

## Small step: Compare Number Sentences




### eBook, B series: Lady Bird Crawl — Rich Learning Task

Teachers can use the interactive on an interactive whiteboard and encourage pupils to explore related number sentences. Pupils need to think about what is the same and different when looking at related number sentences.

The activity can be extended by asking pupils to think of the related subtraction sentences and recording them.

## Examples of alignment to Mathletics
## Block 2 (Weeks 5-7) Number: Place Value

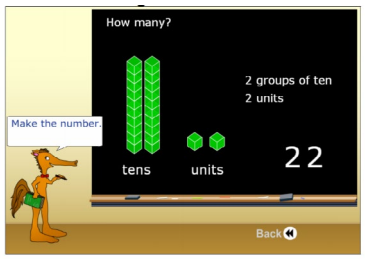
| National Curriculum Objectives | WRM Small Steps |
|---|---|
| ▸ Count to **50** forwards and backwards, beginning with 0 or 1, or from any number.<br>▸ Count, read and write numbers to **50** in numerals.<br>▸ Given a number, identify one more or one less.<br>▸ Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.<br>▸ **Count in multiples of twos, fives** and tens. | ▸ Numbers to 50<br>▸ Tens and Ones<br>▸ Represent Numbers to 50<br>▸ One More One Less<br>▸ Compare Objects within 50<br>▸ Compare Numbers within 50<br>▸ Order Numbers within 50<br>▸ Count in 2s<br>▸ Count in 5s |

### Small step: Numbers to 50


**eBook, B series: Numbers, pages 29–31**
Pupils count as they join the numbers from 1–50 to create the picture. Further exercises encourage pupils to practise counting forwards and backwards from 0–50, with written and oral activities.

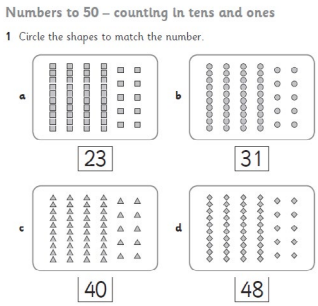

**Rainforest Maths — Level B — Count to 50**
Frogs are shown in rows of tens and ones and pupils select the number card to match the number of frogs.

### Small step: Tens and Ones




Topic: Number within 50
Activity: *Making Numbers Count*
Pupils count the tens and ones blocks shown and record the 2-digit number.

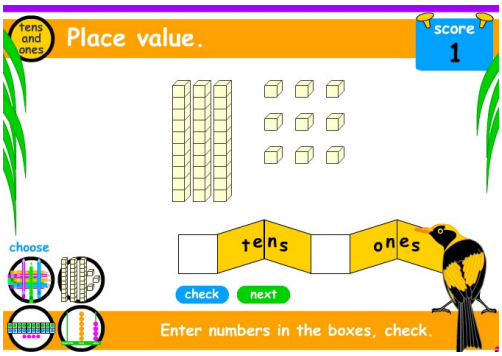
 | 




### eBook, B series: Number, pages 37–45

Pupils can practise showing and identifying numbers up to 50 by using visuals to represent tens and ones.

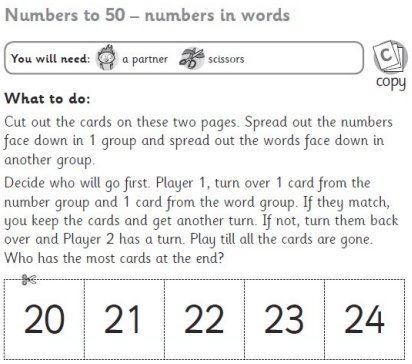
The activities on page 43 support pupils using Numicon to practically represent numbers.




### Rainforest Maths — Level B — Place value

Using a variety of visuals, pupils see a representation of numbers as tens and ones (up to 100). When the numbers are entered, the strip folds together so pupils see the number created from the tens and ones. The activity also works well on an interactive whiteboard.

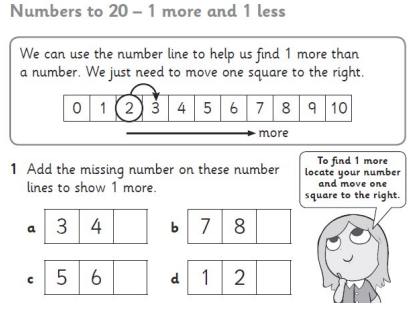
## Small step: Represent Numbers to 50




### eBook, B series: Number, pages 35–36

In this 2-player game, pupils match up numerical representations for numbers from 20–50 and match them with the number words. The activity can be extended by asking pupils to also show the numbers using a visual representation or practical equipment.

## Small step: One More One Less

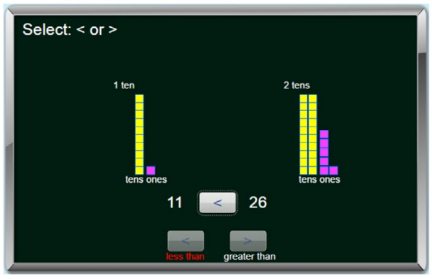



### eBook, B series: Number, page 28

Pupils practise finding one more and one less with numbers up to 20 by moving one step forward or one step back on the number line.

# Year 1 White Rose Maths (WRM) Spring Scheme of Learning, 2018

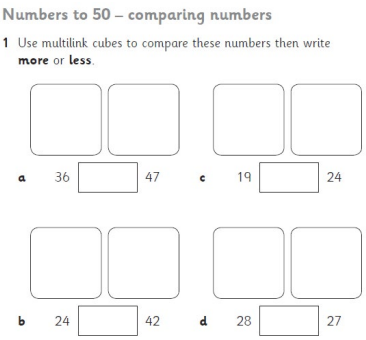
## Small step: Compare Objects within 50




Topic: Number within 50

Activity: *Compare Numbers to 50*

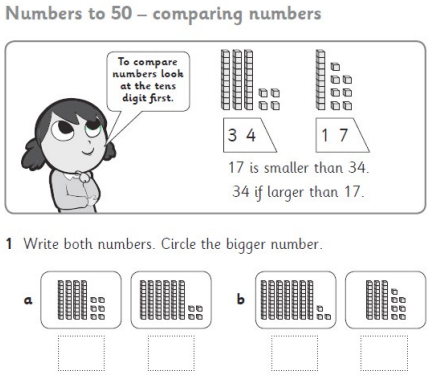
Pupils compare two 2-digit numbers represented with place value blocks (up to 50), using inequality symbols.




**eBook, B series: Number, pages 47–49**

Pupils use various representations of numbers to 50 to make comparisons using the language of 'more' or 'less'.

## Small step: Compare Numbers within 50

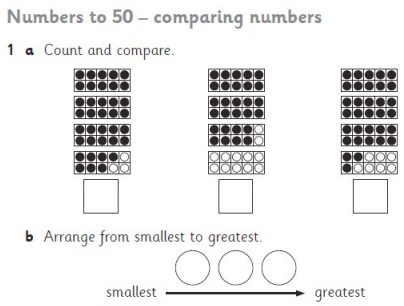



**eBook, B series: Number, pages 46–48**

Pupils identify the number represented by visuals of tens and ones and then circle the bigger or smaller number.

Additional exercises on these pages also represent numbers to 50 with visuals that support the use if Numicon and the introduction of place value cards.

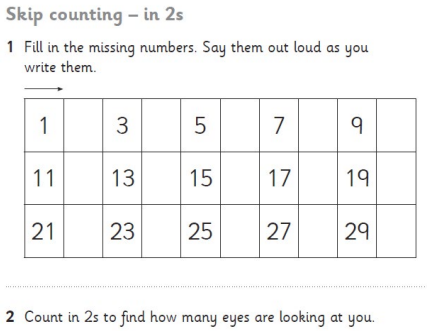
## Small step: Order Numbers within 50




**eBook, B series: Number, page 49**

Using visuals that support the use of Numicon and base 10 equipment, pupils identify numbers to 50 and then order them from smallest to largest.

## Small step: Count in 2s


Skip counting – in 2s

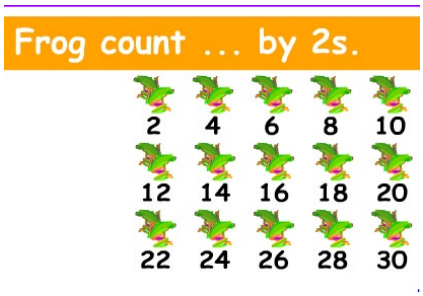
1 Fill in the missing numbers. Say them out loud as you write them.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 1 | | 3 | | 5 | | 7 | | 9 |
| 11 | | 13 | | 15 | | 17 | | 19 |
| 21 | | 23 | | 25 | | 27 | | 29 |

2 Count in 2s to find how many eyes are looking at you.

### eBook, B series: Number, pages 63–65

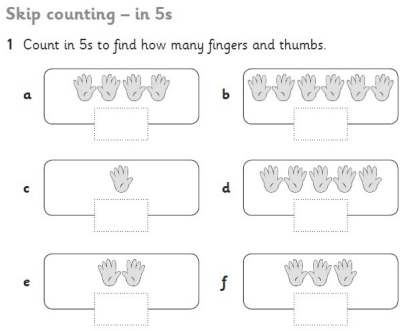
These pages include activities where pupils practise counting in 2s out loud, by recording the numbers and by drawing groups of 2 objects. There are activities to be completed by individuals and for collaborative work.




### Rainforest Maths — Level B — Count by 2s

Pupils count in 2s as they add groups of 2 frogs. They can also subtract groups of 2 frogs and count in 2s backwards.

## Small step: Count in 5s

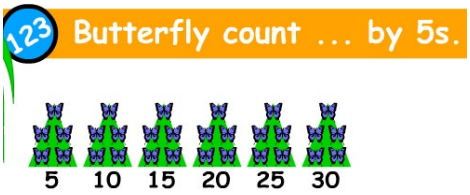

Skip counting – in 5s

1 Count in 5s to find how many fingers and thumbs.

a b c d e f

### eBook, B series: Number, pages 66–67

Pupils practise counting in 5s, recording the numbers and drawing groups of 5 objects.




### Rainforest Maths — Level B — Butterfly count ... by 5s

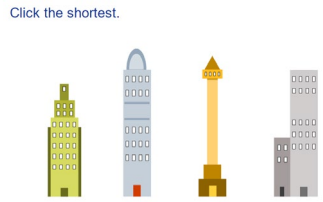
Pupils add groups of 5 butterflies and count on in 5s. They can then subtract groups of butterflies and count back in 5s.

## Examples of alignment to Mathletics

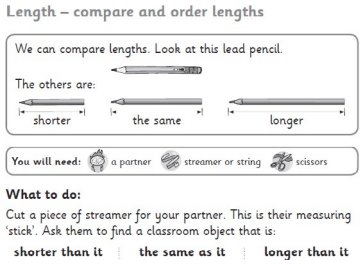
## Block 3 (Weeks 8–9) Measurement: Length and Height

| National Curriculum Objectives | WRM Small Steps |
|---|---|
| ▸ Measure and begin to record lengths and heights.<br>▸ **Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short,** double/half). | ▸ Compare Lengths & Heights<br>▸ Measure Length (1)<br>▸ Measure Length (2) |

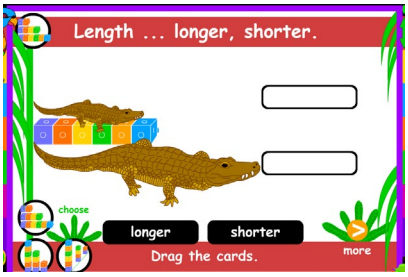
### Small step: Compare Lengths & Heights



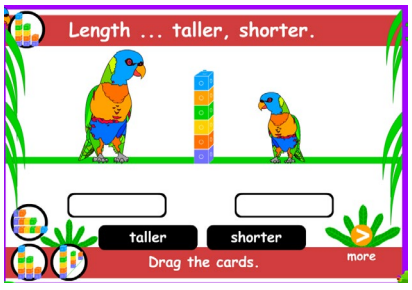

Topic: Measurement (Length & Height)
Activity: *Everyday Length*
Pupils choose the shortest/tallest, shortest/longest or thinnest/widest of 4 objects.




eBook, B series: Measurement, page 2
Pupils work with a partner. Using a non-standard measuring stick (eg a streamer or string), they compare the length of objects, sorting them into 'longer than', 'shorter than' and 'the same as' the length of their measuring stick.



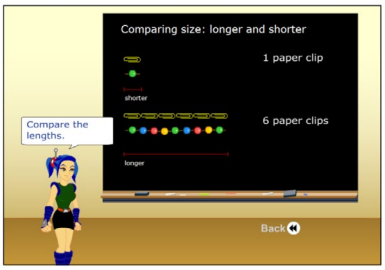

Rainforest Maths — Level A— Length
Pupils compare the lengths of 2 creatures and choose the correct labels to describe which is longer and which is shorter.



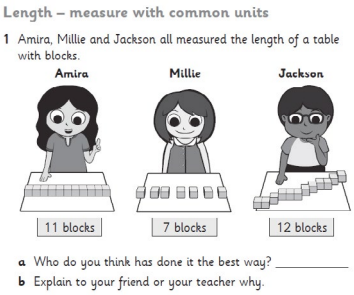

Rainforest Maths — Level A— Length
Pupils compare the heights of 2 creatures and choose the correct labels to describe which is taller and which is shorter.

## Small step: Measure Length (1)




Topic: Measurement (Length & Height)
Activity: *Compare Length*
Pupils use paper clips as a uniform informal unit to compare 2 lengths and decide which is longer or shorter.



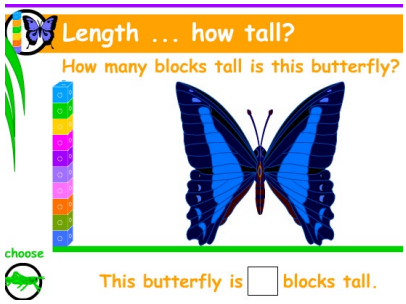
Length – measure with common units

1 Amira, Millie and Jackson all measured the length of a table with blocks.

Amira: 11 blocks
Millie: 7 blocks
Jackson: 12 blocks

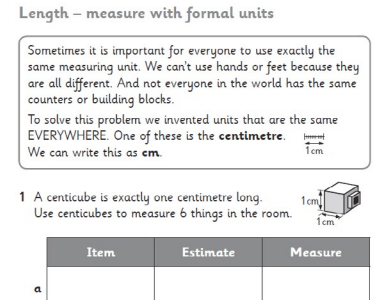
a Who do you think has done it the best way? _____
b Explain to your friend or your teacher why.

**eBook, B series: Measurement, pages 8–12**
Pupils explore measuring using a common unit of measurement. These pages give practical exercises for pupils to complete collaboratively or individually, using units of measurement such a counting blocks.




**Rainforest Maths — Level B— Length**
Pupils can measure the length of a variety of bugs using a paper clip as an informal unit of measurement. They also measure the height of butterflies using blocks.

## Small step: Measure Length (2)



Length – measure with formal units

Sometimes it is important for everyone to use exactly the same measuring unit. We can't use hands or feet because they are all different. And not everyone in the world has the same counters or building blocks.

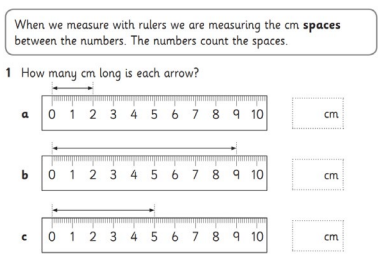
To solve this problem we invented units that are the same EVERYWHERE. One of these is the **centimetre**. We can write this as **cm**.

1 cm

1 A centicube is exactly one centimetre long. Use centicubes to measure 6 things in the room.

| | Item | Estimate | Measure |
|---|---|---|---|
| a | | | |

**eBook, B series: Measurement, pages 13–15**
Pupils are introduced to centimetres as units of measurement. They use centimetre cubes or rulers to estimate and measure items in the classroom.



When we measure with rulers we are measuring the cm **spaces** between the numbers. The numbers count the spaces.

1 How many cm long is each arrow?

a 0 1 2 3 4 5 6 7 8 9 10 cm
b 0 1 2 3 4 5 6 7 8 9 10 cm
c 0 1 2 3 4 5 6 7 8 9 10 cm

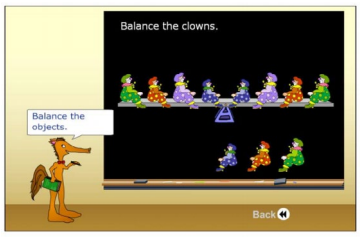
**eBook, C series: Measurement, page 4**
Pupils are introduced to using rulers to measure in centimetres. On this page the misconception of starting to measure from the edge of the ruler is addressed.

## Examples of alignment to Mathletics

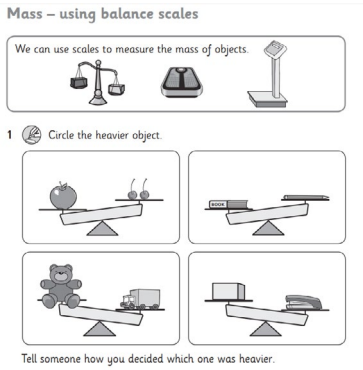
## Block 4 (Weeks 10–11) Measurement: Weight and Volume

| National Curriculum Objectives | WRM Small Steps |
|---|---|
| ▸ Measure and begin to record mass/weight, capacity and volume.<br>▸ **Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/ empty, more than**, less than, half, half full, quarter]. | ▸ Introduce Weight & Mass<br>▸ Measure Mass<br>▸ Compare Mass<br>▸ Introduce Capacity<br>▸ Measure Capacity<br>▸ Compare Capacity |

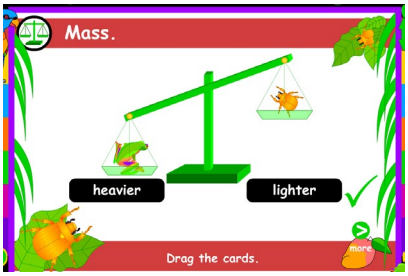
### Small step: Introduce Weight & Mass



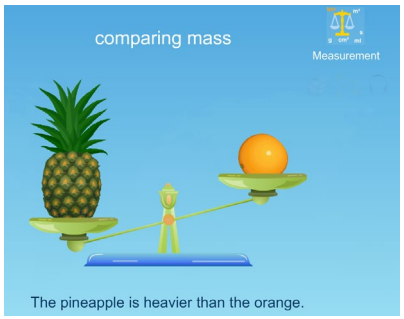

Topic: Weight and Volume
Activity: *Everyday Mass*
In this activity, an unbalanced scale is presented. Pupils click to add objects to 1 side in order to balance the scale.




eBook, A series: Measurement, pages 17-23
In these pages the concepts and language of weight and mass are introduced. Pupils use direct comparison to describe objects as 'heavier' or 'lighter'. Balance scales are also used to illustrate the concepts.



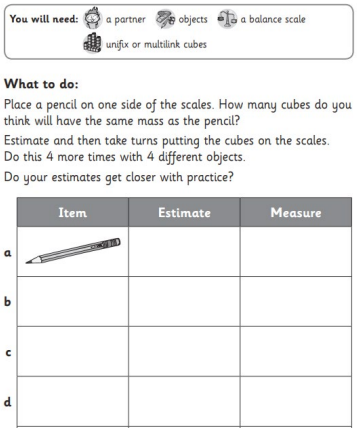

Rainforest Maths — Level A — Mass
Pupils practise 'reading' a balance scale to determine which object is 'heavier' and which is 'lighter'.




### Concept search — comparing mass

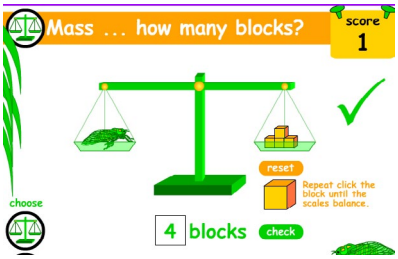
In this short animation, pupils are able to see the effect of adding objects to a balance scale and how the scales can be used to compare the mass of objects.

## Small step: Measure Mass




### eBook, B series: Measurement, pages 20-21

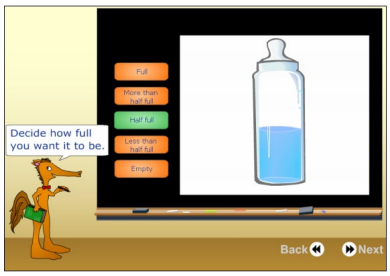
Pupils practise using a balance scale and uniform non-standard units to measure the mass of various classroom objects.




### Rainforest Maths — Level B — Mass

Pupils use non-standard units to measure the mass of various creatures. They place the cubes onto the balance scales until they balance and record the number of cubes used.

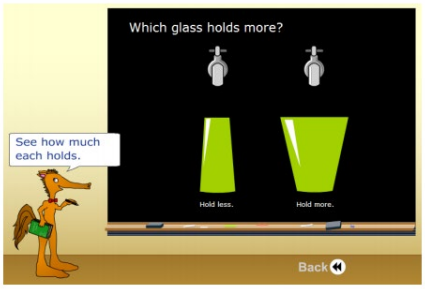
## Small step: Introduce Capacity




Topic: Weight and Volume

Activity: *How Full?*

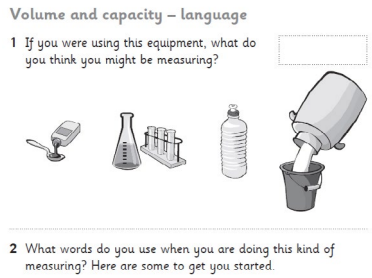
Pupils use the language of capacity to describe how full a container is by selecting the correct description.




Topic: Weight and Volume

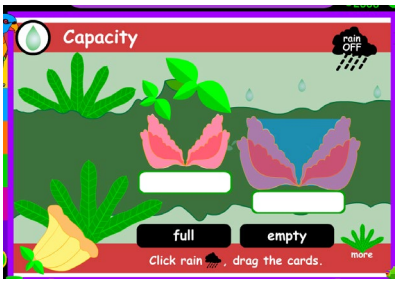
Activity: *Which Holds More?*

Pupils determine which container holds more or less by comparing the size of the containers. The animation shows the containers filling at the same rate.




**eBook, B series: Measurement, page 26**

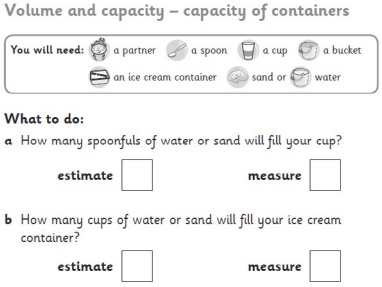
Pupils are introduced to a range of equipment used to measure capacity and to the language needed to compare capacity and volume, eg 'full', 'empty', 'more' and 'less'.




**Rainforest Maths — Level A — Capacity**

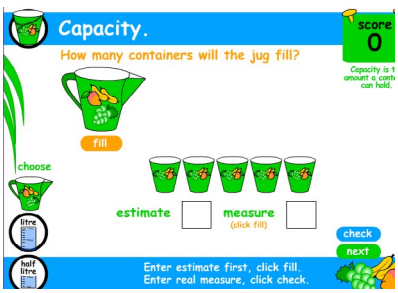
In this task, pupils click the rain icon to see a flower fill with rain. They then choose the correct label to describe whether the flower is full or empty.

## Small step: Measure Capacity




**eBook, B series: Measurement, page 30**

These practical exercises explore using a range of containers as informal measures of capacity. Pupils work collaboratively, giving them the opportunity to discuss their estimates and use the language of capacity together.

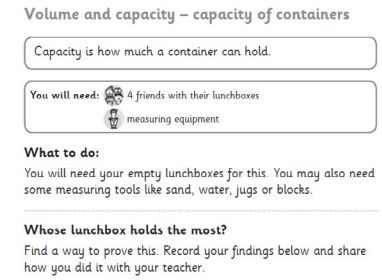



**Rainforest Maths — Level C — Capacity**

Pupils estimate the number of cups the container will fill and then watch the container pouring fluid into the cups. After discussing this task as a class, pupils can do the exercise practically, filling cups from a variety of containers.

## Small step: Compare Capacity


Volume and capacity – capacity of containers

Capacity is how much a container can hold.

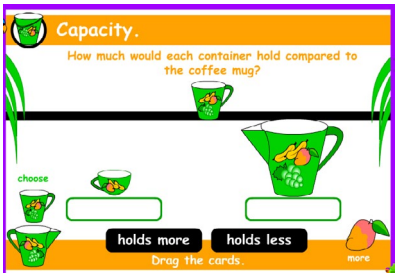
You will need: 4 friends with their lunchboxes
measuring equipment

**What to do:**
You will need your empty lunchboxes for this. You may also need some measuring tools like sand, water, jugs or blocks.

**Whose lunchbox holds the most?**
Find a way to prove this. Record your findings below and share how you did it with your teacher.

### eBook, B series: Measurement, page 28

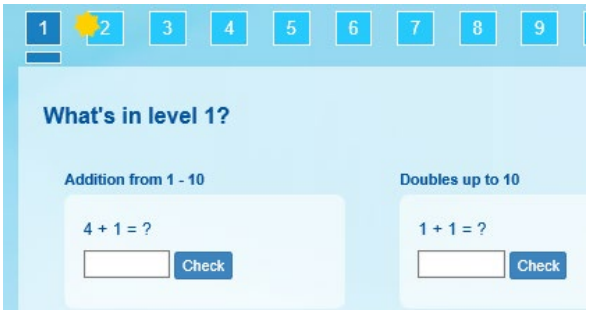
Pupils work in groups of 4 to find and compare the capacity of their lunchboxes, using non-formal measures. They record their findings and are asked to explain their work.




### Rainforest Maths — Level B — Capacity

Introducing the idea of capacity and the language of more and less, pupils compare a cup and 2 containers to decide which one holds more or less.

## Live Mathletics




This exciting activity in Mathletics offers timed practice for pupils 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, they can select to play against their peers, the computer, or with other pupils from around the world.

Mathletics

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For more information about Mathletics, contact our friendly team.

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