



Year 4 White Rose Maths Hub (WRMH)

Autumn Scheme of Learning, 2017

Alignment with Mathletics

Year 4 – 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				Number- Addition and Subtraction			Measurement - Length and Perimeter	Number- Multiplication and Division			Consolidation
Spring	Number- Multiplication and Division			Measurement - Area	Fractions				Decimals			Consolidation
Summer	Decimals		Measurement- Money		Time	Statistics		Geometry- Properties of Shape		Geometry- Position and Direction		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



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Content

Examples of alignment to Mathletics

Weeks 1-4 Number: Place Value	01
Weeks 5-7 Number: Addition and Subtraction	06
Weeks 8 Measurement: Length and Perimeter	10
Weeks 9-11 Number: Multiplication and Division	13

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 gives 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 04 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 in multiples of 6, 7, 9, 25 and 1000. ▶ Find 1000 more or less than a given number. ▶ Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones). ▶ Order and compare numbers beyond 1000. ▶ Identify, represent and estimate numbers using different representations. ▶ Round any number to the nearest 10, 100 or 1000. ▶ Solve number and practical problems that involve all of the above and with increasingly large positive numbers. ▶ Count backwards through zero to include negative numbers. 	<ul style="list-style-type: none"> ▶ Roman numerals to 100 ▶ Round to the nearest 10 ▶ Round to the nearest 100 ▶ Count in 1,000s ▶ 1,000s, 100s, 10s and 1s ▶ Partitioning ▶ Number line to 10,000 ▶ 1,000 more or less ▶ Compare numbers ▶ Order numbers ▶ Round to the nearest 1,000 ▶ Count in 25s ▶ Negative numbers

Small step: Roman numerals to 100

<p>Convert to Roman Numerals.</p> <p>68 LXVIII ✓</p> <p> <input type="text"/> I V X L C D M </p>	<p>Topic: Number and Place Value</p> <p>Activity: Converting to Roman Numerals to 100</p> <p>Support button shows pupils the value of each symbol and explains how to convert numbers to Roman numerals.</p> <p>Activity supports practising converting to Roman numerals.</p>
<p>Whole numbers – Roman numerals</p> <p>During the 16th century the Hindu-Arabic number system, which we still use today, became widely established in Europe. Before this, numbers were expressed using Roman numerals, but there were problems with this system. The main ones were that there was no zero and no system of place value, which made calculating difficult.</p> <p>Occasionally, you will still encounter Roman numerals today. For example, on some old-fashioned clock and watch faces, for the dates at the end of TV show credits and for monarchs (Queen Elizabeth II is the second queen called Elizabeth, not the eleventh!). In the Roman system:</p> <p>I = 1 V = 5 X = 10 L = 50 C = 100</p>	<p>eBook, E series: Whole Numbers and Place Value, page 10</p> <p>Gives brief history of Roman numerals and explains how to convert to and from Roman numerals. Provides exercises to convert from Roman numerals.</p>

Small step: Round to the nearest 10

<p>Drag the number to the bucket showing the nearest ten.</p> <p>71</p> <p>30 40 50 60 70 80</p>	<p>Topic: Number and Place Value (Rounding)</p> <p>Activity: Nearest 10?</p> <p>This activity supports rounding of 2-digit numbers to the nearest 10.</p>
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Mathletics

Small step: Round to the nearest 100

1 Drag the number to the bucket showing the nearest hundred.



Topic: **Number and Place Value (Rounding)**

Activity: **Nearest 100?**

This activity involves pupils dropping a counter into the cup displaying the nearest 100.

Small step: 1,000s, 100s, 10s and 1s

Express in expanded notation

7,891

$$7000 + 800 + 90 + 1$$



Topic: **Number and Place Value**

Activity: **Expanding Numbers**

This adaptive activity moves from expanded notation of 2-digit numbers, to 3 and 4-digit numbers.

Place value of whole numbers – expanded notation

Expanded notation is when we break a number down into its thousands, hundreds, tens and ones. For example, if we show 7346 using place value cards it looks like this:

7 3 4 6

If we then separate the cards we can clearly see the thousands, hundreds, tens and ones that make up the number:

7 0 0 0 3 0 0 4 0 6

1 Write the number shown on each numeral expander:

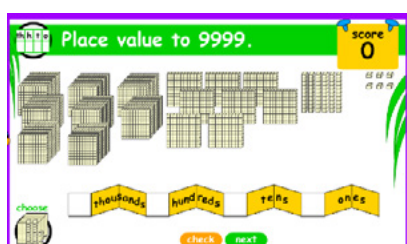
a 1 3 8 4 thousands hundreds tens ones

b 9 0 0 0 2 0 0 5 0 1

eBook, E series: **Whole Numbers and Place Value**

Models place value with 4-digit numbers using both an abacus and place value arrow cards.

Includes exercises to practise partitioning numbers into 1,000s, 100s, 10s and 1s.

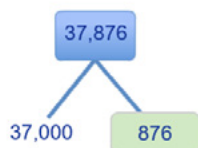


Rainforest Maths – Level E – Place value to 9,999

Models 4-digit numbers – partitioning into 1,000s 100s, 10s and 1s.

Small step: Partitioning

1 Complete the partition and then rename.

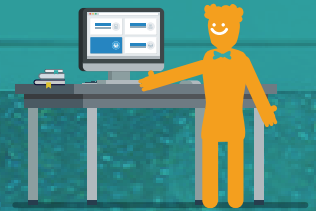


37 thousands + 876 ones

Topic: **Number and Place Value**

Activity: **Partition and Rename 3**

This activity gets pupils to apply their understanding of 1,000s, 100s, 10s and 1s and to look at other ways of partitioning which requires the understanding that 1,000 is actually 10 x 100 or 100 x 10 etc.



Rainforest Maths — Level E — Expanding numbers to 9,999

Activity to practise expanding 4-digit numbers into 1,000s, 100s, 10s and 1s.

Small step:

- 1,000 more or less
- Count in 1,000

Whole numbers – counting in 1000s and 1000 more or less

Counting in 1000s is straightforward. For every 1000 you count on, you add 1000 and the thousands digit goes up one; for every 1000 you count back, you subtract 1000 and the thousands digit goes down one. So, counting up in 1000s from 0:

1000 2000 3000 4000 5000 6000 7000...

Counting back in 1000s from 10 000:

1000 2000 3000 4000 5000 6000 7000...

To find 1000 more or less than any number, the process is the same. Just the thousands digit will go up or come down one. So, 1000 more than 3429 is 4429; 1000 less than 7237 is 6237.

1 Fill in the gaps in these number sequences:

a 17 000 [] 15 000 [] 12 000 []

b 8702 9702 [] [] 12 702 [] 14 702

eBook, E series: Whole Numbers and Place Value, page 7

Explains and models counting on and back in 1,000s.

Activities to practise 1,000 more or less.

Small step: Compare numbers

3 246 < 3 296 ✓

= >

Topic: Number and Place Value

Activity: *Greater Than or Less Than?*

This adaptive activity begins with the comparison of two 2-digit numbers and moves on to 3-digit and 4-digit numbers. Uses the <, > and = symbols.

Whole numbers – create and compare numbers

1 Use only one of each of these digit cards to:



a Make four different 4-digit numbers.

[] [] [] []

b Make the second largest 4-digit number possible.

You can only use each digit card once.

[] [] [] []

c Write a number between 4000 and 7000.

You can only use each digit card once.

[] [] [] []

d Make a list of odd 3-digit numbers.

eBook, E series: Whole Numbers and Place Value, page 6+

Exercises to encourage pupils to reason, using their knowledge of place value to 4+ digits.

Small step: Order numbers

Here is part of a number grid.
Enter the missing numbers.

3950		3952	✓
	3961		
	3971	3972	3973

Topic: Number and Place Value

Activity: *Missing Numbers 2*

Activity requires pupils to apply their understanding of number and place value in order to fill in the missing numbers (4 digits).



Year 4 White Rose Maths Hub (WRMH)

Autumn Scheme of Learning, 2017

Mathletics

Whole numbers – ordering numbers to 9999

Ascending means going up. When we put numbers in ascending order it means we put them in order smallest to largest.

For example:



Descending means going down. When we put numbers in descending order it means we put them in order largest to smallest.

For example:



1 Write the numbers which come before and after the given number:

a 1093 b 6529

2 Circle the smallest number and underline the largest number in each group:

a 837 542 261 b 999 909 929
c 1024 3852 7203 d 5469 5117 5078

eBook, E series: Whole Numbers and Place Value, page 3+

Explains ascending and descending order.

Includes exercises to practise putting 3-digit and 4-digit numbers in order.

Rainforest Maths – Level E – Ordering numbers to 9,999
Activity supported by 100 square – 4-digit numbers.

Small step: Round to the nearest 1,000

4 Drag the number to the bucket showing the nearest thousand.

6567



Topic: Number and Place Value (Rounding)

Activity: *Nearest 1000?*

Pupils round the number to the nearest 1,000.

Round 13,063 to the nearest thousand.

13,063

Number

13000

Nearest thousand

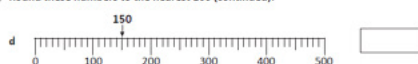
Topic: Number – Place Value and Rounding

Activity: *Rounding Numbers*

Adaptive activity which begins with rounding to the nearest 10 and moves on to 3-digit, 4- and 5-digit numbers and rounding to nearest 100 and 1,000.

Round and estimate – rounding to 10, 100 and 1000

2 Round these numbers to the nearest 100 (continued):

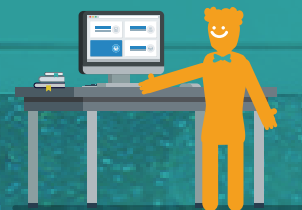


3 Round these according to the table directions. The first one has been done for you.

Number	Nearest 10	Nearest 100	Nearest 1000
567	570	600	1000
673			
287			

eBook, E series: Number and Place Value, page 21

Explains, models and provides exercises to practise rounding to nearest 10, 100 and 1,000.



Small step: Count in 25s

Whole numbers – counting in 25s

Look at this number sequence. The numbers are going up by 25 each time.
Can you see a pattern?

0 25 50 75 100 125 150 175 200 225 250 275 300

The tens and always follow this sequence: 0 25 50 75

Being able to count up and down in 25s can be particularly useful when you are dealing with money. If you are counting up in 25p the sequence would look like this:

£0.25 £0.50 £0.75 £1.00 £1.25 £1.50 £1.75 £2.00

1 Fill in the gaps in these number sequences:

a 225 275 300 350 375

b 875 825 775 750

c 2075 9025 9075 4025 4050

eBook, E series: Number and Place Value, page 8

Explains, models and gives exercises to practise counting in 25s.

Small step: Negative numbers

What number is shown on the number line?



The number shown is **-16** . ✓

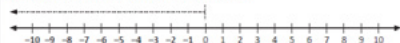
Topic: Number and Place Value

Activity: *Integers on a Number Line*

Pupils have to enter the number represented on the number line. It provides a range of scales.

Whole numbers – negative numbers

A **negative number** is any number less than zero.



We use negative numbers in different ways in real life. 0°C is the temperature at which water freezes. Any temperature below 0°C is expressed as a negative number, so -3°C is 3 degrees below freezing.

If someone spends more money than they have in their bank account, the amount they have overspent will be shown as a negative number.

For example, if your bank balance shows -£100.00, it means that you owe the bank £100.00!



eBook, E series: Whole Numbers and Place Value, page 9

Explains negative numbers, provides examples and then exercises to practise the identification of negative numbers.



Examples of alignment to Mathletics

Weeks 5-7 Number: Addition and Subtraction

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none">▶ Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate.▶ Estimate and use inverse operations to check answers to a calculation.▶ Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.	<ul style="list-style-type: none">▶ Add and subtract 1s, 10s, 100s and 1000s▶ Add two 4-digit numbers – no exchange▶ Add two 4-digit numbers – one exchange▶ Add two 4-digit numbers – more than one exchange▶ Subtract two 4-digit numbers – no exchange▶ Subtract two 4-digit numbers – one exchange▶ Subtract two 4-digit numbers – more than one exchange▶ Efficient subtraction▶ Estimate answers▶ Checking strategies

When assigning activities with addition and subtraction calculations that do not have spaces for recording any regroupings, consider getting pupils to record the calculation in their Maths books, then answer the question on Mathletics. Pupils can then self-mark their work after each question. If they realise they have made a mistake, they can do the correction in their book immediately. In Mathletics, pupils will be shown the correct answer. If they cannot see where they have gone wrong in their calculations they can access the support button in the activity and it will take them through the exact question they have just answered incorrectly.

Encourage students to use the strategies they are being taught in class and to use manipulatives if needed.

If they are not recording in their Maths books, it is necessary that pupils have whiteboards or other means of recording so that they can record their working out and use the strategies they are learning in class.

With most activities, including these calculation activities, questions are generated from a pool of questions allowing students to complete the activities more than once without getting the same set of questions.



Small steps:

- Add and subtract 1s, 10s, 100s and 1000s
- Add two 4-digit numbers – no exchange
- Add two 4-digit numbers – one exchange
- Add two 4-digit numbers – more than one exchange

+ Addition ... to 9999.

No regrouping (trading, exchanging or carrying).

score 0

th	h	t	o
3	7	1	6
2	1	0	0
5	8	1	6

Thousands hundreds tens ones

with regrouping (trading)

check

Rainforest Maths — Level E — Addition to 9,999

Models addition with an abacus – no exchanges.

Written methods – 4-digit subtraction

1 Subtract these 4-digit numbers:

Th	H	T	O
6	4	5	3
-	3	2	7

Th	H	T	O
4	2	7	5
-	4	0	6

Th	H	T	O
8	4	7	9
-	3	4	5

Th	H	T	O
7	1	6	3
-	4	0	2

Th	H	T	O
3	2	9	8
-	3	0	6

Th	H	T	O
3	2	9	6
-	8	1	3

eBook, E series: Addition and Subtraction, page 33

Addition of two 4-digit numbers with no exchanges.

2 Add these 4-digit numbers by regrouping:

Th	H	T	O
6	6	3	8
+	1	2	3

Th	H	T	O
4	2	4	5
+	2	5	1

Th	H	T	O
3	4	2	9
+	1	1	3

3 Add these 4-digit numbers by regrouping:

Th	H	T	O
2	4	6	6
+	2	1	8

Th	H	T	O
3	1	8	7
+	3	0	5

Th	H	T	O
3	2	9	6
+	2	1	5

Addition and Subtraction
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eBook, E series: Addition and Subtraction, page 33

Addition of two 4-digit numbers with one exchange and then two exchanges.

+ Addition ... to 9999.

With regrouping (trading, exchanging or carrying).

EXAMPLE:

th	h	t	o
1	2	5	6
4	7	8	6
9	0	4	2

If you have to regroup (trade), enter the numbers in the top boxes.

th	h	t	o
4	8	7	6
1	3	5	9
6	2	3	5

Enter other answers here.

check as you go.

Rainforest Maths — Level E — Addition to 9,999

Exercises for adding two 4-digit numbers with exchanges.

$$\begin{array}{r}
 6,338 \\
 + 387 \\
 \hline
 6,725
 \end{array}$$

6,725 ✓

Topic: Addition and Subtraction

Activity: *Adding Colossal Columns (UK)*

Adaptive activity which works through adding 3-digit numbers with 2-digit numbers, crossing 10 and 100, then moves on to adding a 4-digit number with a 3-digit number, crossing 10 and 100.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Small steps:

- Subtract two 4-digit numbers – no exchange
- Subtract two 4-digit numbers – one exchange
- Subtract two 4-digit numbers – more than one exchange

Written methods – 4-digit subtraction

1 Subtract these 4-digit numbers:

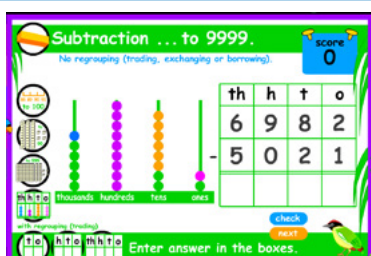
Th	H	T	O
6	4	5	3
-	3	2	1

Th	H	T	O
4	2	7	5
-	4	0	5

Th	H	T	O
8	4	7	9
-	3	4	5

eBook, E series: Addition and Subtraction, page 44

Subtraction of two 4-digit numbers with no exchanges necessary.



Rainforest Maths — Level E: Subtraction to 9,999

Subtraction exercises where no exchanges necessary.

2 Subtract these 4-digit numbers by regrouping:

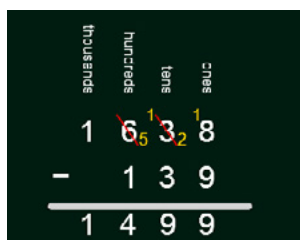
Th	H	T	O
5	4	3	6
-	3	3	1

Th	H	T	O
2	7	2	8
-	1	5	4

Th	H	T	O
6	3	4	7
-	2	6	1

eBook, E series: Addition and Subtraction, page 34

Subtraction with two 4-digit numbers. One exchange and then two exchanges necessary.



Topic: Addition and Subtraction

Activity: *Subtracting Colossal Columns (UK)*

Adaptive activity which works through subtraction with exchanges necessary for two 3-digit numbers before moving on to 4-digit numbers.

Written methods – addition and subtraction challenges

1 Write the numbers which are above each problem in the correct place:

+	3	2	1	
+	3	4	2	

+	3	2	1	
+	3	4	2	

2 Solve these. The same symbol means the same number.

+	3	2	1	
+	3	4	2	

+	3	2	1	
+	3	4	2	

eBook, E series: Addition and Subtraction, page 35

Addition and subtraction challenges to encourage a deeper understanding of the written method.



Small step: Estimate answers

$$764 + 367 \approx$$

1,500

1,200

1,700

800

Hint:
Round each number
to the nearest
hundred.

Topic: **Addition and Subtraction**Activity: ***Estimate Sums***

Pupils round numbers to the nearest 100 to estimate answers to additions.

Activity: ***Estimate Differences***

Similar activity for estimating to support subtraction.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Examples of alignment to Mathletics

Weeks 8 Measurement: Length and Perimeter

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> ▶ Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. ▶ Convert between different units of measure [for example, kilometre to metre]. 	<ul style="list-style-type: none"> ▶ Kilometres ▶ Perimeter on a grid ▶ Perimeter of a rectangle ▶ Perimeter of rectilinear shapes

Small step: Kilometres



Topic: [Length and Perimeter](#)

Activity: [Metres and Kilometres](#)

This video explains the relationships between units of measurement for length (click the lightbulb to access the support video in Mathletics).

2,000 m = km ✓

Topic: [Length and Perimeter](#)

Activity: [Metres and Kilometres](#)

Pupils practise converting between metres and kilometres.



Rainforest Maths — Level F — Length: Conversions

This exercise practises converting between millimetres, centimetres, metres and kilometres.

Units of length – kilometres

Kilometres, metres, centimetres and millimetres are units of measurement in the metric system. The largest metric unit of length is the kilometre.

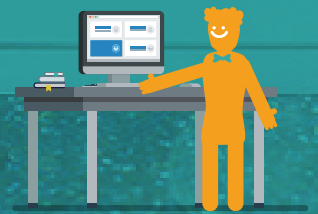
1 kilometre (km) = 1000 metres (m)

1 Convert these metre measurements into kilometres:

a 2000 m = b 6000 m =

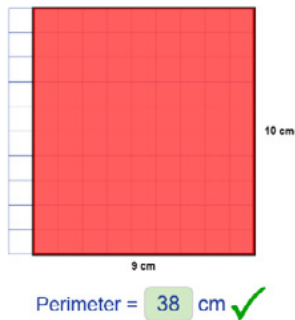
eBook, G series: [Length, Perimeter and Area, page 9](#)

Exercises which recap centimetres, millimetres and metres and how to convert between them (includes exercises for converting between kilometres and metres).



Small step: Perimeter on a grid

What is the perimeter of the rectangle?



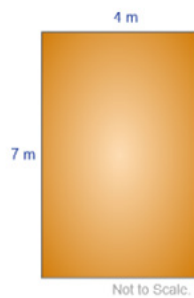
Topic: Length and Perimeter

Activity: *Perimeters of Shapes*

Pupils find the perimeter of squares and rectangles displayed on a grid.

Small step: Perimeter of a rectangle

Calculate the perimeter.



Perimeter = m

Topic: Length and Perimeter

Activity: *Calculate Perimeter of Squares and Rectangles*

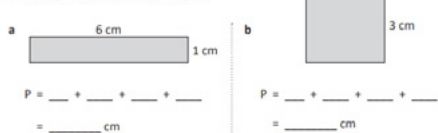
Shapes are shown with side dimensions in metric units. The support explains how to calculate the perimeter.

Perimeter – measuring shapes

Perimeter is the total length around the outside of an enclosed space.
To find the perimeter of this shape, we add the lengths of all the sides.



Find the perimeters of these shapes:



eBook, E series: Length, Area and Perimeter, page 11

Explains how to measure the perimeter of a shape and includes exercises to practise finding the perimeter in metric units.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Small step: Perimeter of rectilinear shapes

Length ... perimeter.

Perimeter is the distance around the outside of a shape.

centimetre dot paper

Example:

$$6 + 3 + 3 + 2 + 2 + 1 + 1 + 2 = 20$$

Perimeter = 20cm

check

next

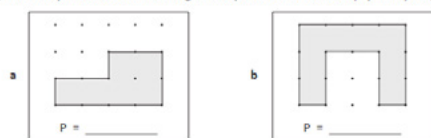
The perimeter of the shape is centimetres.

Rainforest Maths — Level E — Length: Perimeter

Calculate the perimeter of rectilinear shapes in metric units.

Perimeter – measuring shapes

1 Find the perimeters of these irregular shapes. Use the 1 cm dot paper as your guide.



eBook, G series: Length, Area and Perimeter, page 12

Exercises to find out the perimeter of irregular rectilinear shapes using a grid for support.



Examples of alignment to Mathletics

Weeks 9–11 Number: Multiplication and Division

National Curriculum Objectives	WRMH Small Steps
<ul style="list-style-type: none"> Recall and use multiplication and division facts for multiplication tables up to 12×12. Count in multiples of 6, 7, 9, 25 and 1000. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. 	<ul style="list-style-type: none"> Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Multiply by 1 and 0 Divide by 1 Multiply and divide by 6 6 times-table and division facts Multiply and divide by 9 9 times-table and division facts Multiply and divide by 7 7 times-table and division facts

Small steps:

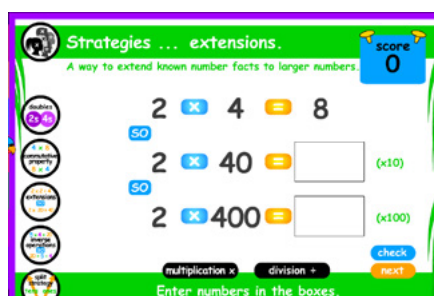
- Multiply by 10
- Divide by 10
- Multiply by 100
- Divide by 100

$$3 \times 800 = 2400$$

Topic: **Multiplication and Division**

Activity: **Multiply Multiples of 10**

This adaptive activity begins by multiplying by multiples of 10 up to 100 and then extends to multiples of 100.



Rainforest Maths — Level E: Multiplication and Division Strategies

Pupils are encouraged to use known facts to multiply numbers by 10s or 100s. Division problems are also included.

Mental multiplication strategies – multiplying by 10 and 100

When we multiply any whole number by 10, the number is getting 10 times bigger. This means that each digit moves one place value column to the left and we use 0 as a place holder in the ones column.

When we multiply any whole number by 100 the number gets 100 times bigger. This means that each digit moves two place value columns to the left and we use 0 as a place holder in the ones and tens columns.

Thousands	Hundreds	Tens	Units
		4	5
	4	5	0
4	5	0	0

eBook, E series: Multiplication and Division, Topic 3, page 17

Explains multiplication by 10 and 100 showing digits moving across place value markers.

Exercises to practise and secure understanding.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Small steps:

- Multiply by 1 and 0
- Divide by 1

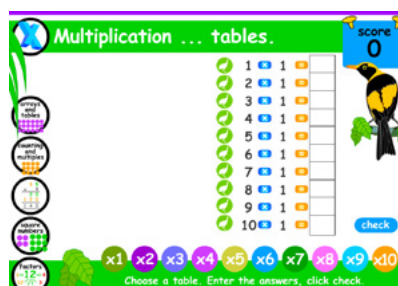
Mental multiplication strategies – multiplying/dividing by 0 and 1

If you multiply by 0 the answer will always be 0.
 5×0 means '5 lots of 0', which is nothing.
 The answer is not going to change, whether you have 5 or 35 or 3,005 lots of nothing. The answer will always be zero.
 Multiplying by 1 is also very simple.
 8×1 means '8 lots of 1'. 73×1 means '73 lots of 1', which is 73.
 So if you multiply any number by 1 the answer will always be the number with which you started.

eBook, E series: Multiplication and Division, Topic 3, page 19

Explains multiplying by 0 and 1.

Exercises to secure understanding.

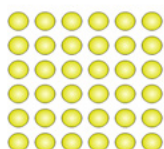


Rainforest Maths – Level E: Multiplication

Practise multiplication tables, including 1 times-table.

Small steps:

- Multiply and divide by 6
- 6 times-table and division facts

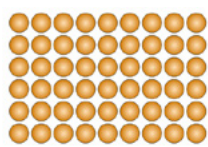


6 groups of 6 = 36

Topic: Multiply and Divide Facts

Activity: *Groups of Six*

Models multiplying by 6 with arrays.



54 shared between 6 = 9 each

Topic: Multiply and Divide Facts

Activity: *Dividing Sixes*

Shows how the visual of an array supports both the understanding of multiplication, and also division, as sharing.

Multiplication facts – 6 times table

You know more times tables facts than you realise. For example, knowing your $\times 5$ can help with your $\times 6$.
 The array shows 3 rows of 5. If we add another dot to each row we can change 3 rows of 5 to 3 rows of 6. This is called building up.
 $3 \times 5 = 15 + 3 \rightarrow 3 \times 6 = 18$

Change these $\times 5$ arrays into $\times 6$ arrays.

$2 \times 5 = \square + \square \rightarrow 2 \times 6 = \square$

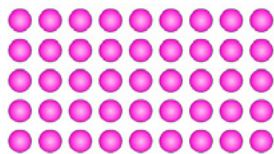
eBook, G series: Multiplication and Division, page 7

Exercises to secure understanding of the 6 times-table.



Small steps:

- Multiply and divide by 9
- 9 times-table and division facts

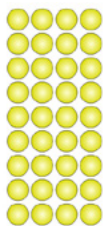


5 groups of 9 = 45 ✓

Topic: **Multiply and Divide Facts**

Activity: *Groups of Nine*

Uses the visual of an array to support understanding of the 9 times-table.



36 shared between 9 = 4 each ✓

Topic: **Multiply and Divide Facts**

Activity: *Dividing Nines*

Uses the visual of an array to show the relationship with multiplication.

The idea of placing each row in a bag supports the understanding of division as sharing.

Multiplication facts – 9 times table

If you get stuck on a 9 times table fact, you can use the 10 times table facts and then build down.

$3 \times 9 = ?$

$3 \times 10 = 30 - 3 \rightarrow \text{So, } 3 \times 9 = 27$

If you want to check whether a number is in the 9 times table add its digits together. If the answer is 9, then it is! For example, if you add the digits of 27 together, you get $2 + 7 = 9$, so you know that 27 is in the 9 times table.

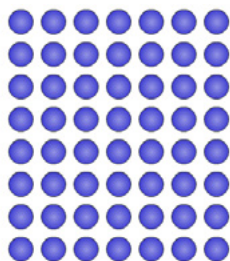
CHECK

eBook, E series: **Multiplication and Division, Topic 1, page 12**

Exercises to secure understanding of 9 times-table.

Small steps:

- Multiply and divide by 7
- 7 times-table and division facts



8 groups of 7 = 56 ✓

Topic: **Multiply and Divide Facts**

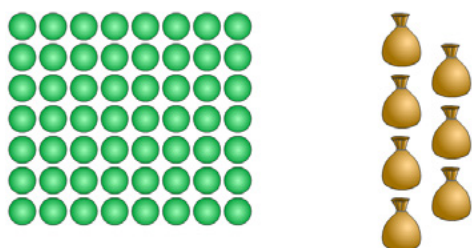
Activity: *Groups of Seven*

Uses arrays to model multiplication by 7.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics



56 shared between 7 = 8 each ✓

Topic: **Multiply and Divide Facts**

Activity: *Dividing Sevens*

Visual with array shows the relationship between multiplication and division. Each row is related to a bag which shows division as sharing.

Multiplication facts – 7 times table

Practise your 7 times table.

1 Use this array to complete the 7 times table:



1 × 7 =
2 × 7 =
3 × 7 =
4 × 7 =
5 × 7 =

2 Fill in the missing numbers:

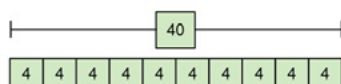
a × 7 = 63
b × 7 = 42

eBook, E series: **Multiplication and Division, Topic 1, page 9**
Exercises to secure understanding of 7 times-table.

Mental multiplication strategies and problem solving

Gran enters and wins a pie eating competition.
She eats 40 pies in 10 minutes.
How many pies did she eat per minute?

Enter the information into the bar model and finish the statement.



She ate 4 pies per minute.

Topic: **Multiplication and Division**

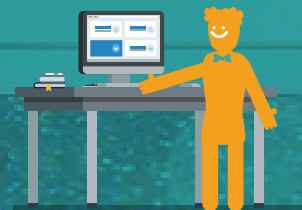
Activity: *Bar Model × ÷*

This activity shows pupils how to use the Bar Model to solve problems involving multiplication and division. The support area takes them through the process step by step and helps them learn from their mistakes if they make any.

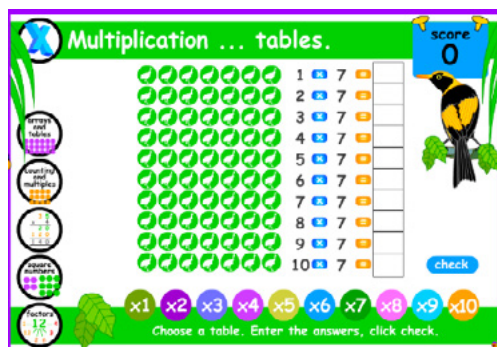


eBooks, E series: **Coin Count (rich task)**

Supports the understanding of multiplication, multiples and factors. The interactive in this rich task allows pupils to explore the outcomes when numbers are divided by 3 or by 4. Included is a printable student sheet for pupils to record their thinking and notes to guide the teacher.



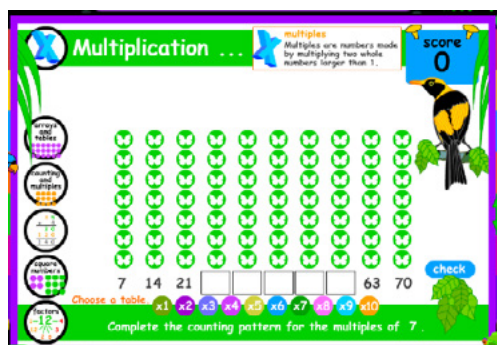
Mathletics — practising times-tables



Rainforest Maths: Level E — Multiplication

Pupils can select any times-tables from x1 to x10 and practise them in order, with the visual of an array.

They can also practise skip counting in multiples from 1 to 10.



Times Tables Toons

Times Tables Toons has catchy songs to support the learning of all the times-tables.



Year 4 White Rose Maths Hub (WRMH) Autumn Scheme of Learning, 2017

Mathletics

Live Mathletics

What's in level 3?

Addition from 1 - 50
 $3 + 9 = ?$
 [Check](#)

Subtraction from 1 - 50
 $6 - 3 = ?$
 [Check](#)

2x, 3x, 4x, 5x and 10x times tables
 $2 \times 9 = ?$
 [Check](#)

Doubles and halves up to 50
 $15 + 15 = ?$
 [Check](#)

Addition from 1 - 20 with a missing addend
 $8 + 7 = 20$
 [Check](#)

What's in level 4?

Addition from 1 - 100
 $35 + 30 + 10 = ?$
 [Check](#)

Subtraction from 1 - 100
 $30 - 6 = ?$
 [Check](#)

Times tables to 10 x 10
 $8 \times 6 = ?$
 [Check](#)

Doubles and halves up to 100
Half of 96 = ?
 [Check](#)

2x, 3x, 4x, 5x and 10x division facts
 $30 \div 3 = ?$
 [Check](#)

Addition from 1 - 50 with a missing addend
 $25 + 7 = 50$
 [Check](#)

Times tables to 10 x 10 with a missing factor
 $7 \times 7 = 49$

Live Mathletics engages pupils in 1 minute games where they are challenged to recall Maths facts.

To support progress in Year 4, challenge pupils to use Level 3 and Level 4 of Live Mathletics.

Teachers can set minimum levels in Live Mathletics by clicking the switch to old Mathletics button, selecting results, and selecting minimum levels on the left-hand side of the page.

Students can still access higher levels once you set a minimum level, so encourage students to challenge themselves and move on to the next level when they are ready.

(Note: Live Mathletics levels are a sliding scale, with no relationship to classes or old National Curriculum levels.)



powered by



For more information about Mathletics,
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