Mathletics White Rose Maths (WRM) Summer Scheme of Learning, 2018 Alignment with Mathletics

Year 3 - Year	ly Overview
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	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	Numb	er – Place	Value	Nur	nber – Ad	ldition and	d Subtrac	tion	Numbe a	r – Multip nd Divisio	lication n	Consolidation
Spring	Numbe a	er - Multip nd Divisio	lication on	Measurement: Money	Stati	stics	Measure	ement: ler perimeter	ngth and	Num Frac	ber - tions	Consolidation
Summer	Num	ber – frac	tions	Me	easureme Time	nt:	Geom Prope Sha	netry – rties of apes	Me Mass	easureme s and Cap	nt: acity	Consolidation

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







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Mathletics

Alignment with Mathletics

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Purpose:

The aim of this document is to support Mathletics teachers, who use the WRM 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 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 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 WRM Summer scheme of learning. You may wish to set this course for your class/groups.

England Yr 03 WRM Aligned



Data-Driven Teaching and Learning



Differentiation



Feedback and Reflection



Student Growth



Blended Learning

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Examples of alignment to Mathletics Block 1 (Weeks 1–3) Number: Fractions

National Curriculum Objectives	WRM Small Steps
 Recognise and show, using diagrams, equivalent fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators. Add and subtract fractions with the same denominator within one whole [for example ⁵/₇ + ¹/₇ = ⁶/₇.] 	 Equivalent Fractions (1) Equivalent Fractions (2) Equivalent Fractions (3) Compare Fractions Order Fractions Add Fractions Cultrant Fractions
Solve problems that involve all of the above.	Subtract Fractions

Small step: Equivalent Fractions (1)



Types of fractions – equivalent fractions

This fraction wall shows fractions that are equivalent. Equivalent fractions are fractions that are the same amount. How many equivalent fractions can you find?



Topic: Fractions Activity: *Uneven partitioned shapes 1*

Reasoning about unevenly partitioned shapes encourages pupils to think more deeply about the relationship between the part and the whole as well as with other parts.

Mathletics

eBook, D series: Fractions, pages 15-16

Using a fraction wall as a visual, pupils identify pairs of equivalent fractions. In exercise 3, pupils shade equivalent fractions and label them.



Rainforest Maths — Level D — Fractions — equivalent fractions

The pieces on this fraction wall can be moved to clearly show equivalent fractions. Pupils enter the equivalent fraction and press 'check' for instant feedback. This visual is ideal for use on an interactive whiteboard and for class discussion of equivalent fractions.

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Examples of alignment to Mathletics Block 2 (Weeks 4–6) Measurement: Time

National Curriculum Objectives	WRM Small Steps
 Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, a.m/p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example to calculate the time taken by particular events or tasks]. 	 Months and Years Hours in a Day Telling the Time (1) Telling the Time (2) AM and PM 24-Hour Clock Finding the Duration Comparing the Duration Start and End Times Measuring Time in Seconds
Small stop: Months and Voars	



Topic: Time

Activity: Months After and Before

In this activity, pupils identify the months that come before and/or after a given month.

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Topic: Time Activity: *Using a Calendar*

Pupils use a calendar to locate the day of the week for a particular date. The support area reinforces the steps required to answer the question. That is, locate the month first and then match the date to the day of the week.

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Sun Mon Tue Wed Thu Fri Sat

 15
 16
 17
 18
 19
 20

 22
 23
 24
 25
 26
 27

 2
 3
 4
 5
 6
 7

 9
 10
 11
 12
 13
 14

and lay them face down. Take

turns to draw a card and tick off an item on the checklist. The person who ticks off all their items first wins.

1 The 8th month of the year.

 Your birthday month
 The month before Christmas.

Checklist

apply

C

copy

Alignment with Mathletics

Measuring time - calendars

A calendar shows how the year is organised into months, weeks and days. One year can be thought of as 12 months long or 52 weeks long or 365 days long (sometimes 366 days long).

Sun Mon Tue Wed Thu Fri Sat

 Jan
 Her
 Her
 Her
 Her
 Her
 Jan

 4
 5
 6
 7
 8
 9
 10

 11
 12
 13
 14
 15
 16
 17

 18
 19
 20
 21
 22
 23
 24

 25
 26
 27
 28
 29
 30
 31

a How many school days are there in February?b What day of the week is the 20th January?

Getting This is a race for 2 players. You will need a copy of this

page because you will need to cut out the cards below

what to do Cut out the months of the year cards (there are 24). Shuffle them

January

February

March

April

Answer the questions about the first 2 months of the year

eBook, D series: Time, page 13

This page outlines the number of months, weeks and days in a year. Pupils use 2 months from a calendar to answer questions.

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eBook, D series: Time, page 16

In this paired activity, pupils match months of the year with events. Pupils can also use the cards provided to order the months of the year.

Small step: Hours in a Day

Time – a day

Calendar match

January

February

March

April



) in the morning	in the afternoon
) in the morning	() in the evening

eBook, C series: Time and Money, page 17

Pupils are asked to identify different activities they are likely to be doing at different times of the day. They are encouraged to recognise that a day consists of 2 full rotations on a clock and that times repeat, for example, 9 o'clock in the morning and 9 o'clock in the evening.

Measuring time – time facts



eBook, D series: Time, page 10

This page shows the time facts of how many seconds in a minute, minutes in an hour and hours in a day. Pupils use the facts to answer questions and reinforce their learning.

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Rainforest Maths – Level D – Time – timetables

Pupils are shown a timetable from a wildlife sanctuary. They are asked to complete questions, finding times and durations of activities. The timetable also provides a reallife example to engage pupils in calculating durations of time.

Rich Learning Task, Series D: Passing Time

The interactive is designed to be used on a large screen. The start and end time can be set to the nearest minute and pupils then work out the duration between the times. The exercise also has a sheet featuring pairs of clocks, so pupils can choose to work independently.

Small step: Comparing the Duration

Use your basic time facts to work out who took longer. Circle the correct answer:

hunnin

a Max took 75 seconds to brush his teeth. Milly took $1\frac{1}{2}$ minutes.

Max / Milly

eBook, D series: Time, page 10

 b
 Charlie completed the hike after 130 minutes. It took Claire 2 hours.
 Charlie / Claire

 c
 The Darnleys went on holiday for 22 days. The Sommers went on their holidays for 3 weeks.
 Darnleys / Sommers
 In exercise 3, pupils look at examples of activities where the duration is given in different time measures. They compare the times and state which is the longer time period.

Small step: Start and End Times

What time will it be

1 hr 20 min after 7:40 AM?



Topic: Time

Activity: What Time Will it Be?

Pupils are asked to represent time in digital format. They are provided with a start time and then asked to calculate what time it will be, given an hour and minute combination. Pupils are also required to use am and pm to consolidate their understanding.

Measuring time – time trails



eBook, D series: Time, pages 11-12

Pupils begin by showing the time an hour after a given start time, and then an hour before an end time. They move on to explore half an hour before and after a given time, and then complete clocks to show a range of time intervals.

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Small step: Measuring Time in Seconds



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Examples of alignment to Mathletics Block 3 (Weeks 7–8) Geometry: Properties of Shape

	/	
National Curriculum Objectiv	/es	WRM Small Steps
 Recognise angles as a property of sho description of a turn. Identify right angles, recognise that two angles make a half-turn, three make to quarters of a turn and four a complete identify whether angles are greater the less than a right angle. Identify horizontal and vertical lines are of perpendicular and parallel lines. Draw 2-D shapes and make 3-D shape modelling materials. Recognise 3-D shapes in different orige 	ape or a vo right three e turn; an or nd pairs pes using entations	 Turns and Angles Right Angles in Shapes Compare Angles Draw Accurately Horizontal and Vertical Parallel and Perpendicular Recognise and Describe 2D Shapes Recognise and Describe 3D Shapes Make 3D Shapes
and describe them.		
Small step: Turns and Angles		
Lines and angles – angles Angle is the amount of turning the true to the stratifier the true to the strue to the stratifier the true to the true to the stratifier the true to the true to th	eBook, D s This page requiring p	series: Geometry, page 5 includes an introduction to angles and exercises oupils to identify angles in objects.
The amount of turn from one line to another	Concept S The definit animation lines that	Search – Angle tion of an angle is provided along with an a showing angle as the amount of turn between 2 meet.
Small step: Right Angles in Shape	s	



Topic: Properties of Shapes Activity: *Right Angle Relation*

This activity helps pupils become familiar with right angles as they identify whether an angle is the same as, larger than or smaller than a right angle.

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Topic: Properties of Shapes Activity: *Collect More Shapes*

Pupils identify 2D shapes by the number and nature of sides and angles, including circles, squares, rectangles, triangles, trapeziums, rhombuses, parallelograms, pentagons, hexagons and octagons.

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An octagon is a shape with 8 sides. 'Octa' means 8. A regular octagon has 8 equal sides and 8 equal angles.

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the properties of both regular and irregular shapes including circle, triangle, square, rectangle, pentagon, hexagon, octagon, quadrilateral, rhombus, trapezium and parallelograms.



Rainforest Maths - Level D - 2D Shapes

This page contains a comprehensive list of 2D shapes to explore. Clicking on the image opens a small screen with further details of the properties of the shapes. Both regular and irregular shapes are explained. Pupils can click on the 'Circle, parts of circles' tab to explore 2D shapes with curved sides.

Small step: Recognise and Describe 3D Shapes





Topic: Properties of Shapes Activity: Collect the Objects

Pupils recognise and select the correct 3D shapes given the name of the 3D shape. Pupils need to recognise a prism, cone, pyramid, sphere and cylinder. The support area identifies some of the properties of the shapes, such as the 2D base shape or whether it has curved or flat surfaces.

Topic: Properties of Shapes Activity: Faces, Edges and Vertices

Pupils identify the number of faces, edges and vertices on a prism or pyramid.

Other related activities in this topic are:

Activity: Count the Edges

Activity: Count the Faces

Activity: How many Vertices?

Investigating 3D shapes - properties of shapes

In this topic, we are looking at the properties of 3D shapes

1 Match the label to each 3D shape by connecting them with a line.



eBook, D series: Geometry, pages 19-23

Pupils explore the properties and cross sections of 3D shapes, including cubes, cylinders, spheres, cuboids, prisms and pyramids. They recognise and label features including vertex, faces and edges.

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Examples of alignment to Mathletics Block 4 (Weeks 9–11) Measurement: Mass & Capacity

National Curriculum Objectives	WRM Small Steps
Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/ capacity (I/mI).	 Measure Mass (1) Measure Mass (2) Compare Mass Add & Subtract Mass Measure Capacity (1) Measure Capacity (2) Compare Capacities Add & Subtract Capacities

Small step: Measure Mass (1)	
How heavy? Look at the position of the area of the ar	Topic: Mass and Capacity Activity: <i>How Heavy is it?</i> In this activity pupils move an object onto the scale to measure its mass (up to 100 grams). The scale is in multiples of ten, however pupils must also read measurements to the nearest 5 grams.
<text></text>	eBook, D series: Measurement, page 10 The concept of measuring the weight of an object as mass and using the units kilogram and gram is introduced. Pupils use measuring scales to find the mass of a range of objects.
Choose Choose	Rainforest Maths – Level D – Mass – kilograms Using the illustrations of balance scales, pupils identify whether objects weigh more than or less than a kilogram and ½ kilogram. Pupils then use the scales to read the mass and enter the number of kilograms (whole numbers only).

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Mass – word problems

Solve these mass word problems

a Samira bought 6 apples from the greengrocer Each had a mass of 50 g.

b | baked 3 cakes for the school cake sale. The chocolate cake had a mass of $\frac{1}{2}$ kg, the walnut cake weighed 300 g and the carrot cake was 350 g.

c Aaliyah weighs 25 kg, which is 3 kg 200 g more than her little brothe

How much did they weigh altogether?

What did all 3 cakes weigh together?

How much does her brother weigh?

- - - - -

Object

A can of baked beans

Write the total for each of these combinations of weights a 500g + 250g + 100g + 100g = b 100g + 550g + 1kg + 100g = c 250g + 100g + 250g = d 250g + 100g + 500g + 1kg =



Small step: Add & Subtract Mass

eBook, D series: Measurement, pages 14 and 16

On page 14, pupils use addition and subtraction to solve problems relating to mass, placing the concept in a reallife context.

Page 16 asks pupils to use addition to total the weights on one side of a balance scale, and then use subtraction to work out the unidentified mass on the other side of the scale.

eBook, E series: Measurement, page 9

Pupils measure and add weights given in both grams and kilograms.



Raked

Caro

1 kg 500 g 250 g 100 g 1 kg 500 g 250 g 100 g

 1 kg
 500 g
 250 g
 100 g

 1 kg
 500 g
 250 g
 100 g

 1 kg
 500 g
 250 g
 100 g

02

Rainforest Maths - Level D - Mass - grams

A range of gram weights is presented to students highlighting that there are 1000 grams in 1 kilogram. Pupils add the weights together and enter the number of grams.

Small step: Measure Capacity (1)

Volume and capacity – litres



Here is a selection of containers. Work out how many times each container can be filled from a 1 litre carton, such as a fruit juice carton.





eBook, D series: Measurement, page 17

Pupils are introduced to the concept of measuring volume and capacity in litres. In practical exercises pupils explore how many times they can fill smaller containers by pouring from a litre carton.

Volume and capacity – millilitres



eBook, D series: Measurement, page 19

Pupils are introduced to the concept of measuring a smaller volume or capacity in millilitres. They are asked to label how much water is in each jug. Their knowledge is consolidated by asking them to then mark specific levels on a jug.

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Rainforest Maths – Level D – Capacity – litres, millilitres

When pupils select the 'L / ml' activity, they are shown a range of containers, labelled with their capacities in litres and millilitres. The questions ask pupils to work out the total capacity of several containers.

Live Mathletics

		Addition from 1 - 100	Subtraction from 1 - 100
		35 + 30 + 10 = ?	30 - 6 = ?
What's in level 3?		Check	Check
Addition from 1 - 50	Subtraction from 1 - 50	Times tables to 10 × 10	Doubles and halves up to 100
3+9=?	6-3=?	8 × 6 = ?	Half of 96 = ?
Check	Check	Check	Check
2s, 3s, 4s, 5s and 10s times tables	Doubles and halves up to 50	2s. 3s. 4s. 5s and 10s division facts	Addition from 1 - 50 with a missing
2 × 9 = ?	15 + 15 = ?	20 - 2 - 2	25 + 2 = 50
Check	Check	50 + 5 = 7 Check	25 + 7 = 50 Check
Addition from 1 - 20 with a missing addend			
8 + 7 = 20		Times tables to 10 × 10 with a missing factor	
Check		7 × ? = 49	

Live Mathletics engages pupils in 60-second real-time games, testing speed and accuracy of maths facts.

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

Teachers can set minimum levels on 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. As a resource which is also used in secondary schools, the levels from 6 upwards are intended for older students.)

When assigning activities with calculations that do not have spaces for recording any working out, consider getting pupils to record their thinking strategies in their Maths books or on a whiteboard, before answering the question in Mathletics. Pupils can then self-mark their work after each question. If they have made a mistake, they can correct their work using the support feature in the activities. Instant feedback and learning!



For more information about Mathletics, contact our friendly team.

www.mathletics.com/contact

