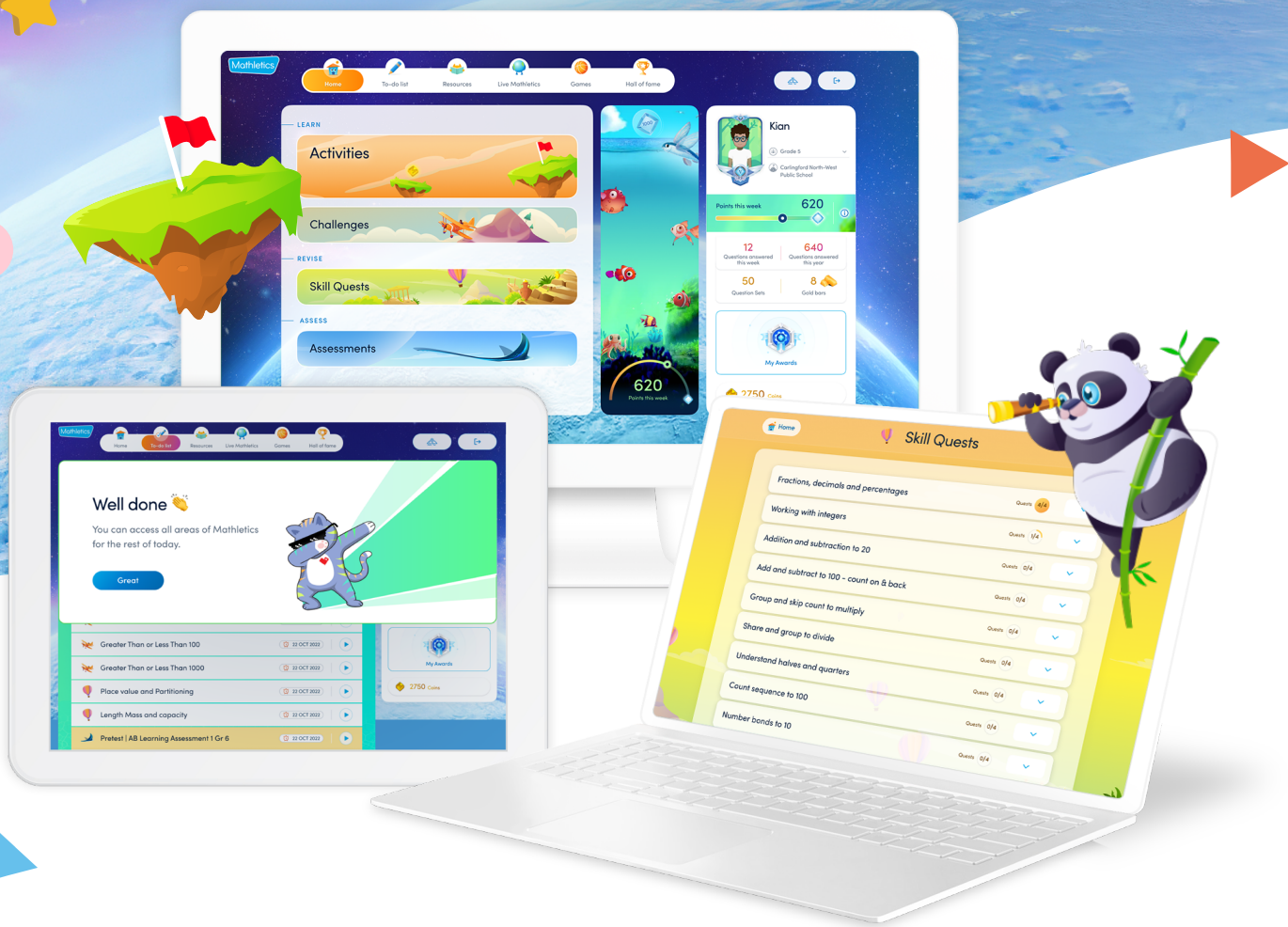
Mathletics

White Rose Maths Aligned

Skill Quests & Activities



Years 1-3

November 2023

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	Consolidation
Spring	Number: Place value (within 20)			Number: Addition and subtraction (within 20)			Number: Place value (within 50)		Measurement: Length and height		Measurement: Mass and volume	
Summer	Number: Multiplication and division			Number: Fractions		Geometry: Position and direction	Number: Place value (within 100)		Measurement: Money	Measurement: Time		Consolidation

Autumn

Number: Place value (within 10)	
Curriculum Links	**Small Steps**
• 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 • Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • Compare numbers using <, > and = signs • Read and write numbers from 1 to 20 in numerals and words	Step 1 Sort objects Step 2 Count objects Step 3 Count objects from a larger group Step 4 Represent objects Step 5 Recognise numbers as words Step 6 Count on from any number Step 7 1 more Step 8 Count backwards within 10 Step 9 1 less Step 10 Compare groups by matching Step 11 Fewer, more, same Step 12 Less than, greater than, equal to Step 13 Compare numbers Step 14 Order objects and numbers Step 15 The number line

Course Topic	Activities Title
Autumn: Number (place value within 10)	Dot Display
	How Many?
	Matching Numbers to 10
	Order Numbers to 10
	Picture Graphs: More or Less
	Pictograms: Who has the Goods?
	More, Less or the Same to 10

Number: Addition and subtraction (within 10)	
Curriculum Links	**Small Steps**
• 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) • Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Represent and use number bonds and related subtraction facts within 20 • Add and subtract 1-digit and 2-digit numbers to 20, including zero	Step 1 Introduce parts and wholes Step 2 Part-whole model Step 3 Write number sentences Step 4 Fact families – addition facts Step 5 Number bonds within 10 Step 6 Systematic number bonds within 10 Step 7 Number bonds to 10 Step 8 Addition – add together Step 9 Addition – add more Step 10 Addition problems Step 11 Find a part Step 12 Subtraction – find a part Step 13 Fact families – the eight facts Step 14 Subtraction – take away/cross out (How many left?) Step 15 Take away (How many left?) Step 16 Subtraction on a number line Step 17 Add or subtract 1 or 2

Course Topic	Activities Title
Autumn: Number (addition and subtraction within 10)	Adding to make 5 and 10
	Adding to Ten
	Adding to 10 Word Problems
	Model Addition
	Model Subtraction
	All about Ten
	Subtracting from Ten
	Balance Numbers to 10

Geometry: Shape	
Curriculum Links	**Small Steps**
• Recognise and name common 2-D and 3-D shapes, including: 2-D shapes [for example, rectangles (including squares), circles and triangles]; 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]	Step 1 Recognise and name 3-D shapes
	Step 2 Sort 3-D shapes
	Step 3 Recognise and name 2-D shapes
	Step 4 Sort 2-D shapes
	Step 5 Patterns with 2-D and 3-D shapes
Course Topic	**Activities Title**
Autumn: Geometry (shape)	Collect Simple Shapes
	Match the Solid 1
	Collect the Objects 1
	Complete the Pattern

Spring

Number: Place value (within 20)	
Curriculum Links	**Small Steps**
• Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • 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 • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • Read and write numbers from 1 to 20 in numerals and words • Given a number, identify 1 more and 1 less	Step 1 Count within 20 Step 2 Understand 10 Step 3 Understand 11, 12 and 13 Step 4 Understand 14, 15 and 16 Step 5 Understand 17, 18 and 19 Step 6 Understand 20 Step 7 1 more and 1 less Step 8 The number line to 20 Step 9 Use a number line to 20 Step 10 Estimate on a number line to 20 Step 11 Compare numbers to 20 Step 12 Order numbers to 20

Course Topic	Activities Title
Spring: Number (place value within 20)	Counting Up to 20
	Making Teen Numbers
	Before, After and Between to 20
	More, Less or the Same to 20
	1 more 2 less
	Matching Numbers to 20
	Order Numbers to 20
	Compare Numbers to 20
	Concept of Zero

Number: Addition and subtraction (within 20)	
Curriculum Links	**Small Steps**
• Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • Add and subtract 1-digit and 2-digit numbers to 20, including zero • Represent and use number bonds and related subtraction facts within 20 • Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial	Step 1 Add by counting on within 20 Step 2 Add ones using number bonds Step 3 Find and make number bonds to 20 Step 4 Doubles Step 5 Near doubles Step 6 Subtract ones using number bonds Step 7 Subtraction – counting back Step 8 Subtraction – finding the difference Step 9 Related facts Step 10 Missing number problems

representations, and missing number problems such as 7 = ? – 9	

Course Topic	Activities Title
Spring: Number (add and subtract within 20)	Addictive Addition
	Simple Subtraction
	All about Twenty
	Doubles and halves to 20
	Doubles and Near Doubles
	Adding in any order
	Related Facts 1
	Add and Subtract Problems

Number: Place value (within 50)	
Curriculum Links	**Small Steps**
• Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • 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 • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • Given a number, identify 1 more and 1 less	Step 1 Count from 20 to 50 Step 2 20, 30, 40 and 50 Step 3 Count by making groups of tens Step 4 Groups of tens and ones Step 5 Partition into tens and ones Step 6 The number line to 50 Step 7 Estimate on a number line to 50 Step 8 1 more, 1 less

Course Topic	Activities Title
Spring: Number (place value within 50)	Counting Forwards
	Counting Backwards
	Making Numbers Count
	Compare Numbers to 50

Measurement: Length and height	
Curriculum Links	**Small Steps**
• Compare, describe and solve practical problems for: lengths and height; mass/weight; capacity and volume; time • Measure and begin to record the following: lengths and heights; mass/weight; capacity and volume; time	Step 1 Compare lengths and heights Step 2 Measure length using objects Step 3 Measure length in centimetres

Course Topic	Activities Title
Spring: Measurement (length and height)	Everyday Length
	Compare Length

Measurement: Mass and volume	
Curriculum Links	**Small Steps**
• Compare, describe and solve practical problems for: lengths and heights; mass/weight; capacity and volume; time • Measure and begin to record the following: lengths and heights; mass/weights; capacity and volume; time	Step 1 Heavier and lighter Step 2 Measure mass Step 3 Compare mass Step 4 Full and empty Step 5 Compare volume Step 6 Measure capacity Step 7 Compare capacity

Course Topic	Activities Title
Spring: Measurement (mass and volume)	Everyday Mass
	How Full?
	Which Holds More?
	Filling Fast!

Summer

Number: Multiplication and division	
Curriculum Links	**Small Steps**
• Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • Solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	Step 1 Count in 2s
	Step 2 Count in 10s
	Step 3 Count in 5s
	Step 4 Recognise equal groups
	Step 5 Add equal groups
	Step 6 Make arrays
	Step 7 Make doubles
	Step 8 Make equal groups – grouping
	Step 9 Make equal groups – sharing

Course Topic	Activities Title
Summer: Number (multiply and divide)	Grouping in Twos
	Grouping in Tens
	Grouping in Fives
	Groups
	Share the Treasure

Number: Fractions	
Curriculum Links	**Small Steps**
• Recognise, find and name a half as one of two equal parts of an object, shape or quantity • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Step 1 Recognise a half of an object or a shape
	Step 2 Find a half of an object or a shape
	Step 3 Recognise a half of a quantity
	Step 4 Find a half of a quantity
	Step 5 Recognise a quarter of an object or a shape
	Step 6 Find a quarter of an object or a shape
	Step 7 Recognise a quarter of a quantity
	Step 8 Find a quarter of a quantity

Course Topic	Activities Title
Summer: Number (fractions)	Halves
	Is it Half?
	Halves and Quarters

Geometry: Position and direction	
Curriculum Links	**Small Steps**
• Describe position, direction and movement, including whole, half, quarter and three-quarter turns • Use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down,	Step 1 Describe turns
	Step 2 Describe position – left and right
	Step 3 Describe position – forwards and backwards
	Step 4 Describe position – above and below
	Step 5 Ordinal numbers

forwards and backwards, inside and outside (non-statutory guidance) • Practise counting (1, 2, 3...), ordering (for example, 1st, 2nd, 3rd ...) (non-statutory guidance)	

Course Topic	Activities Title
Summer: Geometry (position and direction)	Left or Right?
	Where is it?
	Following Directions
	Ordinal Numbers

Number: Place value (within 100)	
Curriculum Links	**Small Steps**
• Count to and across 100, forwards and backwards, beginning with zero or 1, or from any given number • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s • 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	Step 1 Count from 50 to 100 Step 2 Tens to 100 Step 3 Partition into tens and ones Step 4 The number line to 100 Step 5 1 more, 1 less Step 6 Compare numbers with the same number of tens Step 7 Compare any two numbers

Course Topic	Activities Title
Summer: Number (place value within 100)	Going Up
	Going Down
	Making Big Numbers Count
	Number Lines
	Number line order
	1 More, 2 Less
	Compare Numbers to 100
	Arranging Numbers

Measurement: Money	
Curriculum Links	**Small Steps**
• Recognise and know the value of different denominations of coins and notes • Count, read and write numbers to 100 in numerals; count in multiples of 2s, 5s and 10s	Step 1 Unitising Step 2 Recognise coins Step 3 Recognise notes Step 4 Count in coins

Course Topic	Activities Title
Summer: Measurement (money)	Identify Everyday Money (GBP)

Measurement: Time	
Curriculum Links	**Small Steps**
• Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening) • Recognise and use language relating to dates, including days of the week, weeks, months and years • Compare, describe and solve practical problems for time • Measure and begin to record time (hours, minutes, seconds)	Step 1 Before and after Step 2 Days of the week Step 3 Months of the year Step 4 Hours, minutes and seconds Step 5 Tell the time to the hour Step 6 Tell the time to the half hour

Course Topic	Activities Title
Summer: Measurement (time)	Tell Time to the Half Hour (UK)
	Tell Time to the Hour (UK)
	Tomorrow and Yesterday (Scaffolded)
	Tomorrow and Yesterday (without scaffold)
	Days of the Week
	Days: After and Before
	Calendar: Days and Dates
	Months of the Year
	Weekdays and Weekends

Year 2

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					Geometry: Shape		
Spring	Measurement: Money		Number: Multiplication and division					Measurement: Length and height		Measurement: Mass, capacity and temperature		
Summer	Number: Fractions				Measurement: Time		Statistics		Geometry: Position and direction		Consolidation	

Autumn

Number: Place value	
Curriculum Links	**Small Steps**
• Read and write numbers from 1 to 20 in numerals and words (Y1) • Read and write numbers to at least 100 in numerals and in words • Identify, represent and estimate numbers using different representations, including the number line • Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward • Recognise the place value of each digit in a 2-digit number (tens, ones) • Compare and order numbers from 0 up to 100; use and = signs	Step 1 Numbers to 20 Step 2 Count objects to 100 by making 10s Step 3 Recognise tens and ones Step 4 Use a place value chart Step 5 Partition numbers to 100 Step 6 Write numbers to 100 in words Step 7 Flexibly partition numbers to 100 Step 8 Write numbers to 100 in expanded form Step 9 10s on the number line to 100 Step 10 10s and 1s on the number line to 100 Step 11 Estimate numbers on a number line Step 12 Compare objects Step 13 Compare numbers Step 14 Order objects and numbers Step 15 Count in 2s, 5s and 10s Step 16 Count in 3s

Course Topic	Activities Title
Autumn: Number (place value)	Matching Numbers to 20
	Compare Numbers to 20
	Reading Numbers to 30
	Making Numbers Count
	Make Big Numbers Count
	Place Value 1
	Repartition Two-digit Numbers
	Number Lines
	Before, After & Between to 100
	Compare Numbers to 50
	Compare Numbers to 100
	Arranging Numbers
	Count by Twos
	Count by Fives
	Count by Tens
	Count by 2s, 5s and 10s
	Counting on a 100 grid

Number: Addition and subtraction	
Curriculum Links	**Small Steps**
• Represent and use number bonds and related subtraction facts within 20 (Y1)	Step 1 Bonds to 10 Step 2 Fact families - addition and subtraction bonds within 20 Step 3 Related facts Step 4 Bonds to 100 (tens) Step 5 Add and subtract 1s

• Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit number and 1s, a 2-digit number and 10s, two 2-digit numbers and adding three 1-digit numbers • Compare and order numbers from 0 up to 100; use and = signs	Step 6 Add by making 10
	Step 7 Add three 1-digit numbers
	Step 8 Add to the next 10
	Step 9 Add across a 10
	Step 10 Subtract across 10
	Step 11 Subtract from a 10
	Step 12 Subtract a 1-digit number from a 2-digit number (across a 10)
	Step 13 10 more, 10 less
	Step 14 Add and subtract 10s
	Step 15 Add two 2-digit numbers (not across a 10)
	Step 16 Add two 2-digit numbers (across a 10)
	Step 17 Subtract two 2-digit numbers (not across a 10)
	Step 18 Subtract two 2-digit numbers (across a 10)
	Step 19 Mixed addition and subtraction
	Step 20 Compare number sentences
	Step 21 Missing number problems

Course Topic	Activities Title
Autumn: Number (addition and subtraction)	Adding to Make 5 and 10
	Adding In Any Order
	Commutative Property of Addition
	Fact Families: Add and Subtract
	Complements to 10, 20, 50
	Add 3 Numbers Using Bonds to 10
	Add 3 Single Digit Numbers
	1 More, 2 less
	Adding to 2-digit numbers
	10 More, 10 Less
	Subtract Tens
	Magic Mental Addition
	Subtract Numbers
	Subtract Numbers: Regroup
	Magic Mental Subtraction
	Repartition to Subtract
	Balance Additions to 20
	All about Twenty

Geometry: Shape	
Curriculum Links	**Small Steps**
• Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line • Compare and sort common 2-D and 3-D shapes and everyday objects	Step 1 Recognise 2-D and 3-D shapes
	Step 2 Count sides on 2-D shapes
	Step 3 Count vertices on 2-D shapes
	Step 4 Draw 2-D shapes
	Step 5 Lines of symmetry on shapes
	Step 6 Use lines of symmetry to complete shapes
	Step 7 Sort 2-D shapes
	Step 8 Count faces on 3-D shapes

• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify 2-D shapes on the surface of 3-D shapes	Step 9 Count edges on 3-D shapes
	Step 10 Count vertices on 3-D shapes
	Step 11 Sort 3-D shapes
	Step 12 Make patterns with 2-D and 3-D shapes

Course Topic	Activities Title
Autumn: Geometry (shape)	Collect Simple Shapes
	Count Sides and Corners
	Symmetry
	Faces, Edges and Vertices
	Collect the Objects 1
	Pattern Error

Spring

Measurement: Money	
Curriculum Links	**Small Steps**
• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Step 1 Count money – pence
	Step 2 Count money – pounds (notes and coins)
	Step 3 Count money – pounds and pence
	Step 4 Choose notes and coins
	Step 5 Make the same amount
	Step 6 Compare amounts of money
	Step 7 Calculate with money
	Step 8 Make a pound
	Step 9 Find change
	Step 10 Two-step problems

Course Topic	Activities Title
Spring: Measurement (money)	Skip Counting with Coins
	How much Change? (GBP)

Number: Multiplication and division	
Curriculum Links	**Small Steps**
• Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Step 1 Recognise equal groups
	Step 2 Make equal groups
	Step 3 Add equal groups
	Step 4 Introduce the multiplication symbol
	Step 5 Multiplication sentences
	Step 6 Use arrays
	Step 7 Make equal groups – grouping
	Step 8 Make equal groups – sharing
	Step 9 The 2 times-table
	Step 10 Divide by 2
	Step 11 Doubling and halving
	Step 12 Odd and even numbers
	Step 13 The 10 times-table
	Step 14 Divide by 10
	Step 15 The 5 times-table
	Step 16 Divide by 5
	Step 17 The 5 and 10 times-tables

Course Topic	Activities Title
Spring: Number (multiplication and division)	Groups
	Frog Jump Multiplication
	Multiplication Arrays
	Arrays 1
	Arrays 2
	Share the Treasure
	Fill the Jars
	Multiplication Turnarounds
	Groups of Two
	Dividing Twos
	Doubles and Halves to 20

	Odd or Even
	Groups of Ten
	Dividing Tens
	Groups of Five
	Dividing Fives

Measurement: Length and height	
Curriculum Links	**Small Steps**
• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using >, < and = • Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	Step 1 Measure in centimetres Step 2 Measure in metres Step 3 Compare lengths and heights Step 4 Order lengths and heights Step 5 Four operations with lengths and heights
Course Topic	**Activities Title**
Spring: Measurement (length and height)	How Long is That? Ordering Lengths (cm)

Measurement: Mass, capacity and temperature	
Curriculum Links	**Small Steps**
• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels • Compare and order lengths, mass, volume/capacity and record the results using >, < and =	Step 1 Compare mass Step 2 Measure in grams Step 3 Measure in kilograms Step 4 Four operations with mass Step 5 Compare volume and capacity Step 6 Measure in millilitres Step 7 Measure in litres Step 8 Four operations with volume and capacity Step 9 Temperature

Course Topic	Activities Title
Spring: Measurement (mass, capacity and temperature)	Balancing Objects
	How Heavy?
	How Heavy is it?
	Ordering Mass (g)
	How Full?
	Using a Litre
	What's the Temperature (Celsius)?

Summer

Number: Fractions	
Curriculum Links	**Small Steps**
• Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • Write simple fractions, for example 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2	Step 1 Introduction to parts and whole
	Step 2 Equal and unequal parts
	Step 3 Recognise a half
	Step 4 Find a half
	Step 5 Recognise a quarter
	Step 6 Find a quarter
	Step 7 Recognise a third
	Step 8 Find a third
	Step 9 Find the whole
	Step 10 Unit fractions
	Step 11 Non-unit fractions
	Step 12 Recognise the equivalence of a half and two-quarters
	Step 13 Recognise three-quarters
	Step 14 Find three-quarters
	Step 15 Count in fractions up to a whole

Course Topic	Activities Title
Summer: Number (fractions)	Is it Half?
	Halves
	Thirds and Sixths
	Shade Fractions
	Halves and Quarters

Measurement: Time	
Curriculum Links	**Small Steps**
• Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clockface to show these times • Know the number of minutes in an hour and the number of hours in a day	Step 1 O'clock and half past
	Step 2 Quarter past and quarter to
	Step 3 Tell the time past the hour
	Step 4 Tell the time to the hour
	Step 5 Tell the time to 5 minutes
	Step 6 Minutes in an hour
	Step 7 Hours in a day

Course Topic	Activities Title
Summer: Measurement (time)	Tell Time to the Hour (UK)
	Tell Time to the Half Hour (UK)
	Quarter To and Quarter Past
	Five Minute Times

Statistics	
Curriculum Links	**Small Steps**
• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables	Step 1 Make tally charts
	Step 2 Tables
	Step 3 Block diagrams
	Step 4 Draw pictograms (1–1)
	Step 5 Interpret pictograms (1–1)

• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity • Ask and answer questions about totalling and comparing categorical data • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Step 6 Draw pictograms (2, 5 and 10) Step 7 Interpret pictograms (2, 5 and 10)

Course Topic	Activities Title
Summer: Statistics	Tallies
	Interpreting Tables
	Picture Graphs: single-unit scale
	Pictograms: Who has the Goods?
	Pictographs

Geometry: Position and direction	
Curriculum Links	**Small Steps**
• Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anticlockwise)	Step 1 Language of position Step 2 Describe movement Step 3 Describe turns Step 4 Describe movement and turns Step 5 Shape patterns with turns

Course Topic	Activities Title
Summer: Geometry (position and direction)	Left or Right?
	Where is it?
	Following Directions
	Ordinal Numbers

Problem solving	
Course Topic	**Activities Title**
Problem solving	Partition Puzzles 1
	Missing Numbers
	Bar Model Problems 1
	Add and Subtract Problems
	Problems: Add and Subtract

Year 3

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					Number: Multiplication and division A			
Spring	Number: Multiplication and division B			Measurement: Length and Perimeter			Number: Fractions A			Measurement: Mass and capacity		
Summer	Number: Fractions B		Measurement: Money		Measurement: Time			Geometry: Shape		Statistics		Consolidation

Autumn

Number: Place value	
Curriculum Links	**Small Steps**
• Identify, represent and estimate numbers using different representations • Recognise the place value of each digit in a 3-digit number (hundreds, tens, ones) • Count from zero in multiples of 4, 8, 50 and 100- find 10 or 100 more or less than a given number • Count from zero in multiples of 4, 8, 5 and 100 • Read and write numbers up to 1,000 in numerals and words • Compare and order numbers up to 1,000	Step 1 Represent numbers to 100 Step 2 Partition numbers to 100 Step 3 Number line to 100 Step 4 Hundreds Step 5 Represent numbers to 1,000 Step 6 Partition numbers to 1,000 Step 7 Flexible partitioning of numbers to 1,000 Step 8 Hundreds, tens and ones Step 9 Find 1, 10 or 100 more or less Step 10 Number line to 1,000 Step 11 Estimate on a number line to 1,000 Step 12 Compare numbers to 1,000 Step 13 Order numbers to 1,000 Step 14 Count in 50s

Skill Quests	Skills
A1 Place value review	Represent numbers to 100
	Partition numbers to 100
	Number line to 100
A1 Place value	Hundreds
	Represent numbers to 1,000
	Partition numbers to 1,000
	Flexible partitioning to 1000
	Hundreds, tens & ones
	Find 1, 10 or 100 more or less than a number
	Number line to 1,000
A1 Ordering & comparing numbers	Compare numbers to 1,000
	Order numbers to 1,000
A1 Skip counting in 50s	Count in 50s

Course Topic	Activities Title
Autumn: Number (place value)	Before, After & Between to 100
	Compare Numbers to 100
	Place Value 1
	Number Line Order
	Place Value 2
	Model Numbers
	Place Value to Thousands
	Partition and Rename 1
	Place Value Partitioning
	Repartition Two-digit Numbers
	Which is Bigger?
	Which is Smaller?
	Ascending Order
	Descending Order

Number: Addition and Subtraction	
Curriculum Links	**Small Steps**
• Add and subtract numbers mentally, including: • a 3-digit number and ones • a 3-digit number and tens • a 3-digit number and hundreds • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction • Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction • Estimate the answer to a calculation and use inverse operations to check answers	Step 1 Apply number bonds within 10 Step 2 Add and subtract 1s Step 3 Add and subtract 10s Step 4 Add and subtract 100s Step 5 Spot the pattern Step 6 Add 1s across a 10 Step 7 Add 10s across a 100 Step 8 Subtract 1s across a10 Step 9 Subtract 10s across a 100 Step 10 Make connections Step 11 Add two numbers (no exchange) Step 12 Subtract two numbers (no exchange) Step 13 Add two numbers (across a 10) Step 14 Add two numbers (across a 100) Step 15 Subtract two numbers (across a 10) Step 16 Subtract two numbers (across a 100) Step 17 Add 2-digit and 3-digit numbers Step 18 Subtract a 2-digit number from a 3-digit number Step 19 Complements to 100 Step 20 Estimate answers Step 21 Inverse operations Step 22 Make decisions

Skill Quests	Skills
A2 Addition & subtraction review	Number bonds within 10
	Add & subtract 1s
	Add & subtract 10s
	Add & subtract 100s
	Spot the pattern - making it explicit
A2 Addition & subtraction with exchanges	Add 1s across a 10
	Add 10s across 100
	Subtract 1s across a 10
	Add/subtract two numbers-not crossing 100
	Add two numbers - crossing 10 & 100
	Subtract two numbers - crossing 10 & 100
	Add/subtract 2/3-digit numbers-not crossing 10/100
	Add 2 & 3-digit numbers - crossing 10 or 100
	Subtract 2-digits from 3-digits crossing 10 or 100
A2 Addition & Subtraction Strategies	Complements to 100
	Estimate answers to calculations
	Inverse operations
	Making decisions

Course Topic	Activities Title
Autumn: Number (addition and subtraction)	Add 3 Numbers Using Bonds to 10
	Add 3 Numbers: Bonds to Multiples of 10
	Columns that Add
	Add Two 2-Digit Numbers
	Add 3-Digit Numbers

	Columns that Subtract
	Subtract Numbers
	3-Digit Differences
	Add Numbers: Exchange a Ten (UK)
	Column Addition 1 (UK)
	Add 3-Digit Numbers: Exchanging (UK)
	2-Digit Differences: Exchanging (UK)
	Add Multi-Digit Numbers 1 (UK)
	Magic Mental Addition
	Magic Mental Subtraction
	Bump Add and Subtract

Number: Multiplication and division A	
Curriculum Links	**Small Steps**
• Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods • Show that multiplication of two numbers can be done in any order (commutative) and division on one number by another cannot (Y2) • Count in steps of 2, 3 and 5 from 0, and in 10s from any number, forward and backward (Y2) • Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2) • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Step 1 Multiplication – equal groups Step 2 Use arrays Step 3 Multiples of 2 Step 4 Multiples of 5 and 10 Step 5 Sharing and grouping Step 6 Multiply by 3 Step 7 Divide by 3 Step 8 The 3 times-table Step 9 Multiply by 4 Step 10 Divide by 4 Step 11 The 4 times-table Step 12 Multiply by 8 Step 13 Divide by 8 Step 14 The 8 times-table Step 15 The 2, 4 and 8 times-tables

Skill Quests	Skills
A3 Multiplication & division review	Equal groups
	Arrays
	Multiples of 2
	Multiples of 5 & 10
	Sharing & grouping
A3 Multiplication & division facts	Multiply by 3
	Divide by 3
	The 3 times-table
	Multiply by 4
	Divide by 4
	The 4 times-tables
	Multiply by 8

	Divide by 8
	The 8 times-table
	The 2,4 & 8 times-tables
Course Topic	**Activities Title**
Autumn: Number (multiplication and division A)	Arrays 1
	Arrays 2
	Fill the Jars
	Groups of Three
	Groups of Four
	Groups of Eight
	Dividing Threes
	Dividing Fours
	Dividing Eights
	Frog Jump Multiplication
	Frog Jump Division

Spring

Number: Multiplication and division B	
Curriculum Links	**Small Steps**
• Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers (Y2) • Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for 2-digit numbers times 1-digit numbers, using mental and progressing to formal written methods • Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	Step 1 Multiples of 10 Step 2 Related calculations Step 3 Reasoning about multiplication Step 4 Multiply a 2-digit number by a 1-digit number – no exchange Step 5 Multiply a 2-digit number by a 1-digit number – with exchange Step 6 Link multiplication and division Step 7 Divide a 2-digit number by a 1-digit number – no exchange Step 8 Divide a 2-digit number by a 1-digit number – flexible partitioning Step 9 Divide a 2-digit number by a 1-digit number – with remainders Step 10 Scaling Step 11 How many ways?
Skill Quests	**Skills**
Sp1 Multiplication	Multiples of 10 Related calculations Reasoning about multiplication 2-digits by 1-digit (with exchange)
Sp1 Division	Linking multiplication & division Divide 2-digit by 1-digit-no exchange or remainder Divide 2-digit by 1-digit-exchange, no remainder Divide 2-digits by 1-digit (with a remainder)
Sp1 Scaling & combinations	Scaling How many ways?
Course Topic	**Activities Title**
Spring: Number (multiplication and division B)	Grouping in Tens Multiplication Turnarounds Mental Methods Multiplication 1 Related facts 2 Remainders by Arrays

Measurement: Length and perimeter	
Curriculum Links	**Small Steps**
• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Measure the perimeter of simple 2-D shapes	Step 1 Measure in metres and centimetres Step 2 Measure in millimetres Step 3 Measure in centimetres and millimetres Step 4 Metres, centimetres and millimetres Step 5 Equivalent lengths (metres and centimetres) Step 6 Equivalent lengths (centimetres and millimetres)

	Step 7 Compare lengths
	Step 8 Add lengths
	Step 9 Subtract lengths
	Step 10 What is perimeter?
	Step 11 Measure perimeter
	Step 12 Calculate perimeter
Skill Quests	**Skills**
Sp2 Length	Measure in m & cm
	Measure in mm
	Measure in cm & mm
	Metres, centimetres & millimetres
	Equivalent lengths - m & cm
	Equivalent lengths - mm & cm
	Compare lengths
	Add & subtract lengths
Sp2 Perimeter	Introducing perimeter
	Measure perimeter
	Calculate perimeter
Course Topic	**Activities Title**
Spring: Measurement (length and perimeter)	Which Unit of Measurement?
	Measure to the Nearest Half Centimetre
	How Long is That?
	Perimeter

Number: Fractions A	
Curriculum Links	**Small Steps**
• Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators • Compare and order unit fractions, and fractions with the same denominators • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators • Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Recognise and show, using diagrams, equivalent fractions with small denominators	Step 1 Understand the denominators of unit fractions
	Step 2 Compare and order unit fractions
	Step 3 Understand the numerators of non-unit fractions
	Step 4 Understand the whole
	Step 5 Compare and order non-unit fractions
	Step 6 Fractions and scales
	Step 7 Fractions on a number line
	Step 8 Count in fractions on a number line
	Step 9 Equivalent fractions on a number line
	Step 10 Equivalent fractions as bar models
Skill Quests	**Skills**
Sp3 Fractions A	Understand denominators & numerators
	Compare & order unit fractions
	Understand the whole
	Compare & order non-unit fractions
	Counting with fractions on a number line

	Equivalent fractions on a number line
	Equivalent fractions on a bar model
Course Topic	**Activities Title**
Spring: Number (fractions A)	Model Fractions
	Partition into Equal Parts
	Fraction Length Models 2
	Identifying Fractions on a Number Line
	Compare Fractions 1a
	Equivalent Fraction Wall 1

Measurement: Mass and capacity	
Curriculum Links	**Small Steps**
• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Step 1 Use scales
	Step 2 Measure mass in grams
	Step 3 Measure mass in kilograms and grams
	Step 4 Equivalent masses (kilograms and grams)
	Step 5 Compare mass
	Step 6 Add and subtract mass
	Step 7 Measure capacity and volume in millilitres
	Step 8 Measure capacity and volume in litres and millilitres
	Step 9 Equivalent capacities and volumes (litres and millilitres)
	Step 10 Compare capacity and volume
	Step 11 Add and subtract capacity and volume
Skill Quests	**Skills**
Sp4 Mass	Use scales
	Measure mass in grams
	Measure mass in kilograms & grams
	Compare & order mass
	Add & subtract mass
Sp4 Capacity	Measure capacity & volume in mL
	Measure capacity & volume in L
	Measure capacity & volume in mL & L
	Compare capacity & volume
	Add & subtract capacity
Course Topic	**Activities Title**
Spring: Measurement (mass and capacity)	How Heavy is it?
	Grams and Kilograms
	Kilogram Conversions
	Using a Litre

Summer

Number: Fractions B	
Curriculum Links	**Small Steps**
• Add and subtract fractions with the same denominator within one whole • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	Step 1 Add fractions Step 2 Subtract fractions Step 3 Partition the whole Step 4 Unit fractions of a set of objects Step 5 Non-unit fractions of a set of objects Step 6 Reasoning with fractions of an amount
Skill Quests	**Skills**
Sum1 Fractions B	Add fractions Subtract fractions Partition the whole Find a unit fraction of a set Find a non-unit fraction of a set Reasoning with fractions of amounts
Course Topic	**Activities Title**
Summer: Number (fractions B)	Add Subtract Fractions 1 Add Like Fractions Subtract Like Fractions Fractions of a Collection 1

Measurement: Money	
Curriculum Links	**Small Steps**
• Add and subtract amounts of money to give change, using both £ and p in practical contexts	Step 1 Pounds and pence Step 2 Convert pounds and pence Step 3 Add money Step 4 Subtract money Step 5 Find change
Skill Quests	**Skills**
Sum2 Money	Pounds & pence Convert pounds & pence Add & subtract money Give change
Course Topic	**Activities Title**
Summer: Measurement (money)	Money - adding (GBP) How much Change? (GBP)

Measurement: Time	
Curriculum Links	**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	Step 1 Roman numerals to 12 Step 2 Tell the time to 5 minutes Step 3 Tell the time to the minute Step 4 Read time on a digital clock Step 5 Use am and pm Step 6 Years, months and days Step 7 Days and hours

minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, 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	Step 8 Hours and minutes – use start and end times Step 9 Hours and minutes - use durations Step 10 Minutes and seconds Step 11 Units of time Step 12 Solve problems with time

Skill Quests	Skills
Sum3 Time	Telling the time to 5 minutes incl roman numerals
	Telling the time to the minute incl roman numerals
	Read time on a digital clock
	Using a.m. & p.m.
	Years, months & days
	Days & hours
	Hours & minutes: use start & end times
	Hours & minutes: use duration
	Minutes & seconds
	Units of time
	Solve problems with time

Course Topic	Activities Title
Summer: Measurement (time)	Five Minute Times
	What is the Time?
	Months After and Before
	Using a Calendar
	Elapsed Time
	What Time Will it Be?
	Time Conversions: Whole Numbers 1

Geometry: Shape	
Curriculum Links	**Small Steps**
• Recognise angles as a property of shape or a description of a turn • Identify right angles, recognise that two right angles make a half turn, three make three-quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle • Measure the perimeter of simple 2-D shapes • Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	Step 1 Turns and angles Step 2 Right angles Step 3 Compare angles Step 4 Measure and draw accurately Step 5 Horizontal and vertical Step 6 Parallel and perpendicular Step 7 Recognise and describe 2-D shapes Step 8 Draw polygons Step 9 Recognise and describe 3-D shapes Step 10 Make 3-D shapes

• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	

Skill Quests	Skills
Sum4 Shape	Turns & angles
	Right angles in shapes
	Compare angles
	Horizontal & vertical
	Parallel & perpendicular
	Recognise & describe 2-D shapes
	Recognise & describe 3-D shapes
	Make 3-D shapes

Course Topic	Activities Title
Summer: Geometry (shape)	Right Angle Relation
	What Type of Angle 2?
	What Line am I?
	Collect More Shapes
	Collect the Objects
	Count the Edges
	Count the Faces
	How many Vertices?
	Faces, Edges and Vertices of 3D Shapes

Statistics	
Curriculum Links	**Small Steps**
• Interpret and present data using bar charts, pictograms and tables • Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables	Step 1 Interpret pictograms
	Step 2 Draw pictograms
	Step 3 Interpret bar charts
	Step 4 Draw bar charts
	Step 5 Collect and represent data
	Step 6 Two-way tables

Skill Quests	Skills
Sum5 Statistics	Interpreting pictograms
	Interpreting bar charts
	Collect & represent data
	Two-way tables

Course Topic	Activities Title
Summer: Statistics	Making Picture Graphs: With Scale
	Bar Chart
	Reading from a Bar Chart
	Interpreting Tables

Problem Solving	
Course Topic	**Activities Title**
Problem solving	Pick the Next Number
	Commutative Property of Addition
	Bar Model Problems 1
	Pyramid Puzzles 1
	Magic Symbols 1
	Problems: Multiply and Divide

Mathletics

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