

# Mathletics

## Western Australian Curriculum

Activities (Courses), Skill Quests and eBooks



**Years 3-6**

October, 2025

Mathletics

# Mathletics

Western Australia Curriculum

Activities (Courses), Skill Quests and eBooks

October, 2025

<b>Year 3 .....</b>	<b>4</b>
<b>Number &amp; algebra.....</b>	<b>4</b>
Understanding number .....	4
Understanding equalities and inequalities .....	7
Patterns and relationships.....	7
Calculating with number.....	7
Financial mathematics .....	8
Modelling with number .....	8
<b>Measurement &amp; geometry .....</b>	<b>9</b>
Two-dimensional space and structures .....	9
Three-dimensional space and structures .....	10
Non-spatial measurement.....	11
<b>Probability &amp; statistics .....</b>	<b>11</b>
Probability .....	11
Statistics.....	12
<b>Year 4 .....</b>	<b>13</b>
<b>Number &amp; algebra.....</b>	<b>13</b>
Understanding number .....	13
Understanding equalities and inequalities .....	15
Patterns and relationships.....	16
Calculating with number.....	16
Financial mathematics .....	17
Modelling with number .....	18
<b>Measurement &amp; geometry .....</b>	<b>18</b>
Two-dimensional space and structures .....	18
Three-dimensional space and structures .....	19
Non-spatial measurement .....	20
Modelling with measurement and geometry.....	21
<b>Probability &amp; statistics .....</b>	<b>21</b>
Probability .....	21
Statistics.....	22
<b>Year 5 .....</b>	<b>23</b>
<b>Number &amp; algebra.....</b>	<b>23</b>
Understanding number .....	23
Understanding equalities and inequalities .....	25
Patterns and relationships.....	25
Calculating with number.....	26
Financial mathematics .....	28
Modelling with number .....	28
<b>Measurement &amp; geometry .....</b>	<b>28</b>
Two-dimensional space and structures .....	28
Three-dimensional space and structures .....	30
Non-spatial measurement .....	31
Modelling with measurement and geometry.....	32

<b>Probability &amp; statistics .....</b>	<b>32</b>
Probability .....	32
Statistics.....	33
<b>Year 6 .....</b>	<b>34</b>
<b>Number &amp; algebra.....</b>	<b>34</b>
Understanding number .....	34
Understanding equalities and inequalities .....	35
Patterns and relationships.....	36
Calculating with number.....	36
Financial mathematics .....	39
Modelling with number .....	39
<b>Measurement &amp; geometry .....</b>	<b>40</b>
Two-dimensional space and structures .....	40
Three-dimensional space and structures .....	41
Non-spatial measurement .....	42
Modelling with measurement and geometry.....	42
<b>Probability &amp; statistics .....</b>	<b>43</b>
Probability .....	43
Statistics.....	43

# Year 3

## Number & algebra

### Understanding number

#### 3.NA.Number.1

Read, write and order numbers to at least four-digits, including on a number line. Recognise the repetition of the 0–999 sequence of digits.

##### Activities

Read, write & order numbers	Numbers from Words to Digits 1
	Ascending Order
	Descending Order
	Smallest and largest numbers
	Put in Order 1

##### Skill Quests

Read, write & order numbers to 10 000	Identifying & counting numbers to 4 digits
	Reading & writing numbers to 4 digits
	Comparing & ordering numbers to 4 digits

##### Ebooks

Year 3, Series D: Reading and Understanding Whole Numbers	Looking at whole numbers
Year 4, Series E: Reading and Understanding Whole Numbers	Looking at whole numbers
Year 3 Rich Learning Task: Number	Build a number

#### 3.NA.Number.2

Explore different ways to represent and partition numbers up to four-digits, including groups of 10 (tens), 10 groups of 10 (hundreds) and beyond, using concrete materials and number sentences. Recognise that the value of a digit is determined by its place in a numeral.

##### Activities

Place value	Place Value 3
	Place Value to Thousands
	Expanding Numbers
	Partition and Rename 2
	Partition and Rename 3
	Rounding Numbers

##### Skill Quests

Represent & partition numbers to 10 000	Place value to 4 digits
	Partitioning numbers to 4 digits - standard
	Partitioning numbers to 4 digits - non-standard

##### Ebooks

Year 3, Series D: Reading and Understanding Whole Numbers	Place value of whole numbers
Year 4, Series E: Reading and Understanding Whole Numbers	Place value of whole numbers
Year 3, Series D: Reading and Understanding Whole Numbers	Round and estimate

### 3.NA.Number.3

Represent and explain the relationship between addition and subtraction, using part-part-whole models and number sentences.

#### Activities

##### Addition & subtraction facts to 20

Adding in Any Order

Related Facts 1

#### Skill Quests

##### Relationship addition & subtraction

Relationship between addition & subtraction

### 3.NA.Number.4

Recall addition and subtraction facts to 20.

#### Activities

##### Addition & subtraction facts to 20

Adding in Any Order

Related Facts 1

All about Twenty

Problems: Addition and Subtraction

Problems: Add and Subtract

Add and Subtract Problems

#### Skill Quests

##### Addition & subtraction facts to 20

Finding fact families for addition & subtraction

Adding & subtracting within 20 fluently

Number bonds to 20

#### Ebooks

##### Year 3, Series D: Addition and Subtraction

Addition mental strategies

Subtraction mental strategies

### 3.NA.Number.5

Explore the relationship between multiplication and division, using diagrams, arrays and number sentences.

#### Activities

##### Multiply & divide

Multiplication Turnarounds

Arrays 1

Arrays 2

Fact Families: Multiply and Divide

Related Facts 2

Frog Jump Multiplication

Frog Jump Division

Equivalent Facts: Multiply

Divide Into Equal Groups

#### Skill Quests

##### Multiplication & division

Using repeated addition to multiply

Using repeated subtraction to divide

Relating multiplication & division

Interpreting & solving mult/div word problems

Multiplication strategies: 1-digit numbers

Multiplying 2-digit numbers by a 1-digit number

#### Ebooks

##### Year 3, Series D: Multiplication and Division

Introducing multiplication

Mental multiplication strategies

Division

### 3.NA.Number.6

Recall multiplication facts of 2, 3, 4, 5 and 10, and related division facts.

#### Activities

##### Multiplication & division facts

Counting by Twos
Counting by Fives
Counting by Tens
Count by 2s, 5s and 10s
Dividing Twos
Dividing by Two
Dividing Fives
Dividing by Five
Dividing Tens
Grouping in Fours
Dividing Fours
Grouping in Threes
Dividing Threes

#### Skill Quests

##### Multiplication & division facts

Multiplication/division facts for 2
Multiplication/division facts for 10
Multiplication/division facts for 5
Multiplication/division facts for 2, 5, 10
Multiplication/division facts for 3

##### Multiplication word problems

Word problems and missing numbers
-----------------------------------

#### Ebooks

##### Year 3, Series D: Multiplication and Division

Introducing multiplication
Multiplication facts

### 3.NA.Number.7

Recognise, represent and describe unit fractions  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{5}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$  and  $\frac{1}{10}$ . Combine unit fractions with the same denominator to create a complete whole.

#### Activities

##### Unit fractions

Shade Fractions
Identifying Fractions on a Number Line
Fractions of a Collection 1
Fraction Length Models 1
Unit Fractions
Shade Fractions

#### Skill Quests

##### Fraction symbols

Exploring the meaning of fraction symbols
Introducing terms numerator & denominator

##### Find & count in halves & quarters




Finding half of a set or quantity (symbols)
Finding quarters of sets or shapes (symbols)
Finding halves & quarters (symbols)
Counting in halves & quarters to 1

#### Ebooks




##### Year 3, Series D: Fractions

Introducing fractions
-----------------------


## Understanding equalities and inequalities

<b>3.NA.Inequalities.1</b> Explore and use the greater than, less than and equality symbols to compare two whole numbers and statements involving addition and subtraction.	
 <b>Activities</b>	
Equality & inequality	Compare Numbers to 100
	Greater Than or Less Than?
	Greater Than or Less Than 1
	Balance Additions to 20
 <b>Skill Quests</b>	
Understand equivalence	Understanding equivalence
 <b>Ebooks</b>	
Year 3, Series D: Patterns and Algebra	Equations and equivalence



## Patterns and relationships

<b>3.NA.Patterns.1</b> Create and represent increasing or decreasing additive patterns from any starting point, using concrete materials and numbers, and describe rules to represent the pattern.	
 <b>Activities</b>	
Patterns	Odd and Even Numbers 1
	Describing Patterns
	Missing Numbers 1
 <b>Skill Quests</b>	
Create & represent additive patterns	Creating & representing patterns (1, 2, 5, 10, 25)
	Create & represent patterns (3, 4, 6, 7, 8, 9)
 <b>Ebooks</b>	
Year 3, Series D: Patterns and Algebra	Patterns and functions

## Calculating with number



<b>3.NA.Calculating.1</b> Add and subtract two- and three-digit numbers, using a range of strategies.	
 <b>Activities</b>	
Up to 3 digit add & subtract	Add 3 Numbers: Bonds to 100
	Partition Puzzles 2
	Bar Model Problems 1
	Bar Model Problems 2
	Magic Mental Addition
	Compensation - Add
	Add Two 2-Digit Numbers
	Adding to 2-digit numbers
	Subtract Tens
	Magic Mental Subtraction
	Repartition to Subtract
	Compensation - Subtract
	Bump Add and Subtract
	Columns that Subtract
	Subtract Numbers






	Estimate Differences
	Estimate Sums
	Estimation: Add and Subtract
<b> Skill Quests</b>	
<b>Add &amp; subtract 2- &amp; 3-digit numbers</b>	Add & subtract using number facts within 1000
	Add & subtract 2- & 3-digit using jump strategy
	Add & subtract 2- & 3-digit using place value
	Add & subtract 2- & 3-digit using bridging to 10
	Adding & subtracting - bridging with unknowns
	Adding & subtracting 3-digits using partitioning
	Adding & subtracting 3-digits using place value
	Add & subtract 2- & 3-digit using split strategy
	Add & subtract 2-digit rounding & compensation
	Add & subtract 3-digit rounding & compensation
	Adding & subtracting to make 100
	Add & subtract multiples of 100, 1000 & 10 000
	Add & subtract using non-standard partitioning
<b> Ebooks</b>	
<b>Year 3, Series D: Addition and Subtraction</b>	Addition mental strategies
	Subtraction mental strategies
	Written methods

### 3.NA.Calculating.2

Explore additive estimation strategies to evaluate the reasonableness of a calculation in familiar contexts.


<b> Activities</b>	
<b>Up to 3 digit add &amp; subtract</b>	Estimate Differences
	Estimate Sums
	Estimation: Add and Subtract
<b> Skill Quests</b>	
<b>Additive estimation strategies</b>	Add & subtract: choosing efficient strategies

## Financial mathematics

<b>3.NA.Financial.1</b>	
Investigate financial transactions, recognising equivalent values and change.	
<b> Activities</b>	
<b>Financial mathematics</b>	Money
	Who's got the Money?
	How much Change?
<b> Skill Quests</b>	
<b>Money</b>	Counting Australian dollars & cents
	Using money to make purchases
<b> Ebooks</b>	
<b>Year 3, Series D: Addition and Subtraction</b>	Money




## Modelling with number




<b>3.NA.Modelling.1</b>	
Identify and represent a range of real-world addition and subtraction situations with part-part-whole models, and multiplication and division situations with arrays. Write number sentences to reach a solution and interpret in context.	


 Activities	
Addition & subtraction facts to 20	Problems: Addition and Subtraction
	Problems: Add and Subtract
	Add and Subtract Problems
 Skill Quests	
Real-world mathematical problems	Real-world addition & subtraction problems
	Real-world multiplication & division problems
 Ebooks	
Year 3, Series D: Addition and Subtraction	Addition mental strategies
	Subtraction mental strategies
Year 3, Series D: Multiplication and Division	Mental multiplication strategies
	Division
	Games and investigations
Year 3 Rich Learning Task: Number	Fish Nets



## Measurement & geometry




### Two-dimensional space and structures




<b>3.MG.2D.1</b>	
Explore one-step slides (translations) and flips (reflections) of familiar two-dimensional shapes, make connections to line symmetry and describe the movement of the shape.	
 Activities	
2D space & structures	Flip, Slide, Turn
	Symmetry
 Skill Quests	
Explore one-step slides & flips	Transforming shapes by translation & reflections
	Recognising line symmetry
 Ebooks	
Year 3, Series D: Space, Shape and Position	Lines and angles
	Investigating 2D shapes

<b>3.MG.2D.2</b>	
Estimate, measure and order lengths in uniform units, including millimetres, centimetres and metres.	
 Activities	
2D space & structures	How Long is That?
	Measure to the Nearest Half Centimetre
	Ordering Lengths (cm)
 Skill Quests	
Estimate, measure & order length	Measuring in m, cm, mm
	Selecting measures for length (m, cm, mm)
	Comparing length measurements
	Ordering length measurements
 Ebooks	
Year 3, Series D: Measurement	Units of length




<b>3.MG.2D.3</b>	
Compare the areas of two shapes indirectly, using uniform informal units, without gaps and overlaps.	
 Activities	




<b>2D space &amp; structures</b>	Equal Areas
 <b>Skill Quests</b>	
<b>Compare area</b>	Measuring & estimating area using square units
 <b>Ebooks</b>	
<b>Year 3, Series D: Measurement</b>	Area

<b>3.MG.2D.4</b>	
Identify angles as measures of turn between two lines that intersect and directly compare angle sizes in everyday situations.	
 <b>Activities</b>	
<b>2D space &amp; structures</b>	Comparing Angles
	Equal Angles
 <b>Skill Quests</b>	
<b>Identify &amp; compare angles</b>	Introducing angles
	Introducing right angles
 <b>Ebooks</b>	
<b>Year 3, Series D: Space, Shape and Position</b>	Lines and angles




<b>3.MG.2D.5</b>	
Create and interpret simple maps to show positions and pathways, considering the relative position of key features.	
 <b>Activities</b>	
<b>2D space &amp; structures</b>	Following Directions
	Coordinate Meeting Place
	Map Coordinates
	Where is it?
 <b>Skill Quests</b>	
<b>Interpret &amp; create maps</b>	Interpreting simple maps
 <b>Ebooks</b>	
<b>Year 3, Series D: Space, Shape and Position</b>	Position




## Three-dimensional space and structures

<b>3.MG.3D.1</b>	
Visualise and make models of three-dimensional objects. Compare and classify objects according to the key features of faces, edges and vertices.	
 <b>Activities</b>	
<b>3D space &amp; structures</b>	How Many Faces?
	How many Edges?
	Count the Corners
	Relate Shapes and Solids
	Collect the Objects
 <b>Skill Quests</b>	
<b>3D objects</b>	Exploring prisms & pyramids
	Introducing nets
	Recognising & comparing 3D objects
	Describing & sorting 3D objects
	Comparing 2D shapes & 3D objects
 <b>Ebooks</b>	
<b>Year 3, Series D: Space, Shape and Position</b>	Investigating 3D shapes

<b>3.MG.3D.2</b>	
Measure and order capacity in uniform units, including millilitres. Estimate larger capacities using a litre container.	
 <b>Activities</b>	
<b>3D space &amp; structures</b>	Using a Litre
 <b>Skill Quests</b>	
<b>Measure, estimate &amp; order capacity</b>	Measuring, estimating & comparing capacity
 <b>Ebooks</b>	
<b>Year 3, Series D: Measurement</b>	<b>Volume and capacity</b>


## Non-spatial measurement



<b>3.MG.NSM.1</b>	
Compare objects to common benchmarks, including 100 g, 250 g, half and one kilogram.	
 <b>Activities</b>	
<b>Non-spatial measurement</b>	How Heavy?
	Ordering Mass (g)
 <b>Skill Quests</b>	
<b>Measure &amp; compare mass</b>	Measuring & comparing mass
 <b>Ebooks</b>	
<b>Year 3, Series D: Measurement</b>	Mass




<b>3.MG.NSM.2</b>	
Tell the time in minutes using analogue and digital clocks. Describe duration in hours, minutes and seconds and identify the relationship between them.	
 <b>Activities</b>	
<b>Non-spatial measurement</b>	Five Minute Times
	What is the Time?
 <b>Skill Quests</b>	
<b>Tell time</b>	Telling time to five minutes
	Telling time to the minute
<b>Introduce units of time</b>	Introducing hours
	Introducing minutes
	Introducing seconds
<b>Duration &amp; units of time</b>	Understanding relationship between units of time
	Understanding duration
 <b>Ebooks</b>	
<b>Year 3, Series D: Time</b>	Telling time
	Measuring time
<b>Year 3 Rich Learning Task: Number</b>	Passing time

## Probability & statistics




### Probability




<b>3.PS.Probability.1</b>	
Describe familiar events using the language of chance. Identify and list possible outcomes of everyday chance events.	
 <b>Activities</b>	
<b>Probability and chance</b>	Will it Happen?

	Most Likely and Least Likely
	Introductory Probability
	What are the Chances?
	How many Combinations?
<b> Skill Quests</b>	
<b>Language of chance</b>	Using basic probability language
<b> Ebooks</b>	
<b>Year 3, Series D: Chance and Data</b>	Chance

<b>3.PS.Probability.2</b> Recognise the likelihood of outcomes for planned, equally likely, repeated chance experiments. Conduct the experiments and recognise variation in the results.	
<b> Activities</b>	
<b>Teacher directed</b>	
<b> Skill Quests</b>	
<b>Chance experiments</b>	Conducting chance experiments
<b> Ebooks</b>	
<b>Year 3, Series D: Chance and Data</b>	Chance

## Statistics

<b>3.PS.Statistics.1</b> Describe and interpret real-life data represented in dot plots and column graphs with scale intervals of one.	
<b> Activities</b>	
<b>Represent &amp; interpret data</b>	Pictographs
	Interpreting Tables
	Reading from a Column Graph
	Column Graphs
<b> Skill Quests</b>	
<b>Describe &amp; interpret data displays</b>	Describing & interpreting column graphs
	Describing & interpreting dot plots
<b> Ebooks</b>	
<b>Year 3, Series D: Chance and Data</b>	Chance

<b>3.PS.Statistics.2</b> In a real-world context, explore questions of interest by collecting categorical or discrete numerical data through observation or surveys. Organise and represent data in dot plots, tables and column graphs and interpret to answer a question.	
<b> Activities</b>	
<b>Represent &amp; interpret data</b>	Tallies
	Sorting Data
<b> Skill Quests</b>	
<b>Collect &amp; represent data</b>	Collecting & recording category data
	Using tables
<b> Ebooks</b>	
<b>Year 3, Series D: Chance and Data</b>	Data

# Year 4

## Number & algebra

### Understanding number

#### 4.NA.Number.1

Read, write and order numbers to at least six-digits. Recognise the significance of the final digit to determine odd and even numbers.

##### Activities

Read, write & order numbers	Place Value to Millions
	Numbers from Words to Digits 1
	Numbers from Words to Digits 2
	Smallest and largest numbers
	Greater Than or Less Than?

##### Skill Quests

Numbers to 1 000 000	Reading & representing numbers to 6 digits
	Comparing & ordering numbers to 6 digits
	Counting by ones, tens & hundreds
Numbers of any size	Reading & representing numbers of any size
	Comparing & ordering numbers of any size
Identify odd & even numbers	Identifying odd & even numbers

##### Ebooks

Year 5, Series F: Reading and Understanding Whole Numbers	Looking at whole numbers
---	--------------------------

#### 4.NA.Number.2

Read and write decimal numbers up to two decimal places.

##### Activities

Introducing decimals	Decimals from Words to Digits 1
	Decimals on the Number Line
	Decimal Place Value
	Nearest Whole Number
	Who's got the Money?
	Money
	Money Problems: Four Operations
	Decimals from Words to Digits 1

##### Skill Quests

Place value to hundredths	Introducing decimal notation
	Understanding decimal tenths
	Understanding decimal hundredths
	Partitioning decimal hundredths
Round decimal tenths & hundredths	Rounding decimal tenths & hundredths
Decimals used in money	Understanding decimals used in money

##### Ebooks

Year 4, Series E: Fractions	Fractions, decimals and percentages
-----------------------------	-------------------------------------

### 4.NA.Number.3

Represent numbers up to five-digits using place value and non-standard partitions with equations. Recognise the '10 times as many' place value relationship between adjacent places from right to left.

#### Activities

##### Place Value

Place Value 3

Expanded Notation

Partition and Rename 2

Partition and Rename 3

#### Skill Quests

##### Represent numbers to 5-digits

Partitioning 5-digit numbers

Understanding place value relationships

#### Ebooks

##### Year 4, Series E: Reading and Understanding Whole Numbers

Place value of whole numbers

##### Year 5, Series F: Reading and Understanding Whole Numbers

Place value of whole numbers

### 4.NA.Number.4

Represent and explain the relationship between one whole being shared equally among 10 as 0.1 or  $\frac{1}{10}$  and being shared equally among 100 as 0.01 or  $\frac{1}{100}$  using concrete materials.

#### Activities

##### Teacher directed

#### Skill Quests

##### Connect decimals & fractions

Connecting fractions & decimal notation

#### Ebooks

##### Year 4, Series E: Fractions

Fractions, decimals and percentages

### 4.NA.Number.5

Represent and explain the relationship between multiplication and division, using arrays and equations.

#### Activities

##### Multiplication & division relationship

Double and Halve to Multiply

Fact Families: Multiply and Divide

Multiplication Arrays

Arrays 1

Arrays 2

Related Facts 2

#### Skill Quests

##### Relationship between mult/div

Using the conventions of multiplication

Inverse facts: multiplication & division

#### Ebooks

##### Year 4, Series E: Multiplication and Division

Division

### 4.NA.Number.6

Recall multiplication facts up to  $10 \times 10$ , and related division facts.




#### Activities

##### Multiplication & division facts


Model Multiplication to  $5 \times 5$

Grouping in Threes



	Grouping in Fours
	Grouping in Sixes
	Grouping in Sevens
	Grouping in Eights
	Grouping in Nines
	Dividing Threes
	Dividing Fours
	Dividing Sixes
	Dividing Sevens
	Dividing Eights
	Dividing Nines
	Missing Numbers: $\times$ and $\div$ facts
	Times Tables
 <b>Skill Quests</b>	
<b>Multiplication &amp; division facts</b>	Multiplication & division facts up to 5
	Multiplying & dividing by 6 up to 60
	Multiplying & dividing by 7 up to 70
	Multiplying & dividing by 8 up to 80
	Multiplying & dividing by 9 up to 90
	Multiplying & dividing to 10 $\times$ 10
 <b>Ebooks</b>	
<b>Year 4, Series E: Multiplication and Division</b>	Multiplication facts
	Using known facts
	Division
<b>Year 4 Rich Learning Task: Number</b>	Split that fact

<b>4.NA.Number.7</b>	
Explore and represent common equivalent fractions and make connections to their decimal representation.	
 <b>Activities</b>	
<b>Fractions &amp; equivalents</b>	Thirds and Sixths
	What Fraction Is Shaded 1
	What Fraction is Shaded?
	What Mixed Number Is Shaded?
	Equivalent Fraction Wall 1
	Equivalent Fraction Wall 2
 <b>Skill Quests</b>	
<b>Equivalent fractions</b>	Investigating equivalent fractions less than 1
	Investigating equivalent fractions greater than 1
	Patterns in equivalent fractions
	Using multiplication to find equivalent fractions
 <b>Ebooks</b>	
<b>Year 4, Series E: Fractions</b>	Types of fractions
<b>Year 5, Series F: Fractions</b>	Types of fractions




## Understanding equalities and inequalities

<b>4.NA.Inequalities.1</b>	
Decide if statements of equality and inequality involving the four operations are true, and explain reasoning.	
 <b>Activities</b>	






<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Equality &amp; inequality in add/sub</b>	Finding missing numbers in add/sub equations
	Relationship between addition & subtraction
	Add/sub equivalent number sentences
	Word problems for finding unknown quantities
<b>Equality &amp; inequality in mult/div</b>	Finding missing numbers in mult/div equations
<b>Equality &amp; inequality all 4 operations</b>	Mult/div equivalent number sentences
 <b>Ebooks</b>	
<b>Year 4, Series E: Patterns and Algebra</b>	Equations and equivalence

## Patterns and relationships

<p align="center"><b>4.NA.Patterns.1</b></p> <p align="center">Create and represent increasing multiplicative patterns, using concrete materials and numbers, and describe rules to represent the pattern.</p>	
 <b>Activities</b>	
<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Represent multiplicative patterns</b>	Investigating sequences with multiples
	Exploring number patterns
	Generating multiplication patterns from a rule
 <b>Ebooks</b>	
<b>Year 4, Series E: Patterns and Algebra</b>	Patterns and functions

## Calculating with number

<p align="center"><b>4.NA.Calculating.1</b></p> <p align="center">Add and subtract whole numbers up to four-digits, using flexible and efficient strategies.</p>	
 <b>Activities</b>	
<b>Addition &amp; subtraction strategies</b>	Complements to 10, 20, 50
	Bump Add and Subtract
	Jump Add and Subtract
	Split Add and Subtract
	Compensation - Add
	Add Two 2-Digit Numbers
	Column Addition 1
	Subtract Numbers
	2-Digit Differences: Regroup
	Magic Symbols 1
 <b>Skill Quests</b>	
<b>Addition &amp; subtraction strategies</b>	Add & subtract using a bar model
	Add & subtract using place value partitioning
	Add & subtract using jump strategies
	Add & subtract using split strategies
	Add & subtract using round & compensate strategies
 <b>Ebooks</b>	
<b>Year 5, Series F: Addition and Subtraction</b>	Addition mental strategies
	Subtraction mental strategies
	Written methods

## 4.NA.Calculating.2

Multiply two-digit numbers by one-and two-digit numbers, and divide whole numbers by one-digit numbers, where there is no remainder, using flexible and efficient strategies.

### Activities

<b>Multiplication &amp; division strategies</b>	Problems: Times and Divide
	Grid Methods 1
	Bar Model Problems 1
	Bar Model Problems 2
	Multiply 3 single-digit numbers
	Multiply 2 Digits Area Model
	Multiplying by 10, 100, 1000
	Multiply: 2-Digit by 1-Digit
	Dividing by 10, 100, 1000
	Mental Methods Division
	Divide: 1-Digit Divisor 1

### Skill Quests

<b>Multiplication &amp; division</b>	Multiplication strategies: 1-digit numbers
	Practising multiplication strategies
	Multiplying 2-digit numbers by a 1-digit number
	Multiplying 2-digit numbers using doubling
	Multiplying 2-digit numbers using factorising
	Selecting effective multiplication strategies
	Selecting effective division strategies
	Comparisons using the language of multiplication
	Dividing a 2-digit number by a 1-digit number

### Ebooks

<b>Year 4, Series E: Multiplication and Division</b>	Mental multiplication strategies
	Division
	Mental division strategies

## 4.NA.Calculating.3

Explore a range of additive estimation strategies for different situations, including using knowledge of odd and even numbers.

### Activities

<b>Additive estimation strategies</b>	Estimate Sums
	Estimate Differences
	Odd and Even Numbers 1

### Skill Quests

<b>Use estimation &amp; rounding</b>	Rounding & estimating with addition
	Checking accuracy of addition & subtraction
	Using estimating with money

### Ebooks



<b>Year 4, Series E: Reading and Understanding Whole Numbers</b>	Round and estimate
--	--------------------

## Financial mathematics




## 4.NA.Financial.1

Explore saving and spending, recognising that limited amounts of money are available.

### Activities



Introducing decimals	Who's got the Money?
	Money Problems: Four Operations
 Skill Quests	
Addition & subtraction money problems	Adding & subtracting money
 Ebooks	
Year 4, Series E: Addition and Subtraction	Money



## Modelling with number


<b>4.NA.Modelling.1</b> Identify and represent real-world additive and multiplicative situations with diagrams and equations to reach a solution. Interpret and communicate findings in context.	
 Activities	
Introducing decimals	Money Problems: Four Operations
Multiplication & division strategies	Problems: Times and Divide
 Skill Quests	
Addition & subtraction word problems	Addition & subtraction word problems
	Expressing word problems as equations
Multiplication & division word problems	Expressing equations as word problems
	Solving multiplication & division word problems
 Ebooks	
Year 4, Series E: Addition and Subtraction	Addition mental strategies
	Subtraction mental strategies
	Written methods
	Money
Year 4, Series E: Multiplication and Division	Games and investigations
Year 4 Rich Learning Task: Number	Split that fact
	Coin Count




## Measurement & geometry




### Two-dimensional space and structures




<b>4.MG.2D.1</b> Explore, visualise, describe and create two-dimensional shapes that result from combining or splitting familiar shapes.	
 Activities	
Teacher directed	
 Skill Quests	
Identify & create composite shapes	Composing & decomposing 2D shapes

<b>4.MG.2D.2</b> Estimate, measure and compare the perimeter of two-dimensional shapes, using scaled instruments and appropriate informal or formal units.	
 Activities	
2D space & structures	Perimeter of Shapes
	Perimeter: Squares and Rectangles
 Skill Quests	
Measure perimeter	Introducing perimeter
	Measuring perimeter


 <b>Ebooks</b>	
<b>Year 4, Series E: Length, Area and Perimeter</b>	Perimeter



<b>4.MG.2D.3</b> Estimate, measure and compare the areas of rectangles, using uniform informal square units in arrays.	
 <b>Activities</b>	
<b>2D space &amp; structures</b>	Biggest Shape
	Equal Areas
	Area of Shapes
 <b>Skill Quests</b>	
<b>Measure area</b>	Measuring & estimating area using square units
 <b>Ebooks</b>	
<b>Year 4, Series E: Length, Area and Perimeter</b>	Area




<b>4.MG.2D.4</b> Indirectly compare angles and identify as being equal to, greater than or less than a right angle.	
 <b>Activities</b>	
<b>2D space &amp; structures</b>	Equal Angles
	Comparing Angles
	Right Angle Relation
	What Type of Angle?
 <b>Skill Quests</b>	
<b>Classify angles</b>	Classifying angles
 <b>Ebooks</b>	
<b>Year 4, Series E: Space, Shape and Position</b>	Lines, angles and shapes




<b>4.MG.2D.5</b> Create or interpret a grid map, describe positions and pathways, and explore scale and legends.	
 <b>Activities</b>	
<b>2D space &amp; structures</b>	Coordinate Meeting Place
	Map Coordinates
	Using a Key
	What Direction was That?
	More Directions!
 <b>Skill Quests</b>	
<b>Create &amp; interpret grid references</b>	Working with grid reference systems
 <b>Ebooks</b>	
<b>Year 4, Series E: Space, Shape and Position</b>	Position

### Three-dimensional space and structures




<b>4.MG.3D.1</b> Connect three-dimensional objects to their two-dimensional representations and visualise and describe key features that cannot be seen.	
 <b>Activities</b>	
<b>3D space &amp; structures</b>	Relate Shapes and Solids
	Collect the Objects 2


 <b>Skill Quests</b>	
<b>Connect 3-D objects to 2-D shapes</b>	Connecting 3-D objects to 2-D shapes
 <b>Ebooks</b>	
<b>Year 4, Series E: Space, Shape and Position</b>	Investigating 3D shapes



<b>4.MG.3D.2</b> Estimate, measure and compare capacity in litres and millilitres using scaled instruments.	
 <b>Activities</b>	
<b>3D space &amp; structures</b>	Using a Litre
 <b>Skill Quests</b>	
<b>Estimate, measure &amp; compare capacity</b>	Measuring capacity in litres
	Measuring capacity in millilitres
 <b>Ebooks</b>	
<b>Year 4, Series E: Volume, Capacity and Mass</b>	Volume and capacity

<b>4.MG.3D.3</b> Explore and directly compare volumes and recognise that objects with different shapes can have the same volume.	
 <b>Activities</b>	
<b>3D space &amp; structures</b>	How many Blocks?
	Comparing Volume
	Volume of Solids and Prisms - 1cm <sup>3</sup> blocks
 <b>Skill Quests</b>	
<b>Explore &amp; compare volume</b>	Exploring & comparing volume
 <b>Ebooks</b>	
<b>Year 4, Series E: Volume, Capacity and Mass</b>	Volume and capacity




## Non-spatial measurement

<b>4.MG.NSM.1</b> Estimate and measure mass in kilograms and grams using analogue and digital scales.	
 <b>Activities</b>	
<b>Non-spatial measurement</b>	How Heavy?
 <b>Skill Quests</b>	
<b>Introducing kilograms &amp; grams</b>	Introducing kilograms
	Introducing grams
	Selecting appropriate units to measure mass
<b>Comparing, ordering &amp; measuring mass</b>	Comparing, ordering & measuring mass
 <b>Ebooks</b>	
<b>Year 4, Series E: Volume, Capacity and Mass</b>	Mass

<b>4.MG.NSM.2</b> Convert between units of time, tell the time on digital and analogue clocks using 'am' and 'pm' notation and determine duration.	
 <b>Activities</b>	
<b>Non-spatial measurement</b>	What is the Time?
	Time Conversions: Whole Numbers 1



	Time Conversions: Whole Numbers 2
	Time Conversions: Simple Fractions
	Time Conversions: Simple Decimals (0.25, 0.5, 0.75)
<b> Skill Quests</b>	
<b>Convert units of time</b>	Converting units of time
<b>Solve duration of time problems</b>	Understanding am & pm notation
<b> Ebooks</b>	
<b>Year 4, Series E: Time</b>	Telling time
	Measuring time


## Modelling with measurement and geometry

<b>4.MG.Modelling.1</b> In real-world situations involving two-dimensional shapes, three-dimensional objects, grid maps, determining length, capacity or mass in metric units or converting between units of time, mathematically represent the problem to reach a solution. Interpret and communicate findings in the context of the situation.	
<b> Activities</b>	
<b>3D space &amp; structures</b>	Volume of Solids and Prisms - 1cm <sup>3</sup> blocks
<b>Non-spatial measurement</b>	How Heavy?
	Time Conversions: Whole Numbers 1
	Time Conversions: Whole Numbers 2
	Time Conversions: Simple Fractions
	Time Conversions: Simple Decimals (0.25, 0.5, 0.75)
<b> Skill Quests</b>	
<b>Real-world measurement &amp; geometry</b>	Reading scales with metric units
	Real-life mass situations
	Identifying objects in the environment
	Calculating start & end times of events
	Solving duration of time problems
<b> Ebooks</b>	
<b>Year 4, Series E: Space, Shape and Position</b>	Lines, angles and shapes
	Investigating 3D shapes
	Position
<b>Year 4, Series E: Time</b>	Telling time
	Measuring time
<b>Year 4, Series E: Volume, Capacity and Mass</b>	Volume and capacity
	Mass




## Probability & statistics

### Probability




<b>4.PS.Probability.1</b> Order the likelihood of everyday chance events. Identify when events are not affected by previous events.	
<b> Activities</b>	
<b>Probability &amp; chance</b>	Chance Gauge
	What are the Chances?
	Introductory probability
	Counting Techniques 1
<b> Skill Quests</b>	
<b>Chance events</b>	Describing & ordering chance of events




 <b>Ebooks</b>	
<b>Year 4, Series E: Chance and data</b>	Chance

<p align="center"><b>4.PS.Probability.2</b></p> <p align="center">Predict the likelihood of outcomes of unequally likely, repeated chance experiments. Conduct the experiments, describe variation and compare to the prediction.</p>	
 <b>Activities</b>	
<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Conduct chance experiments</b>	Conducting chance experiments Investigating equally likely outcomes of chance
 <b>Ebooks</b>	
<b>Year 4, Series E: Chance and data</b>	Chance

## Statistics

<p align="center"><b>4.PS.Statistics.1</b></p> <p align="center">Describe and interpret real-life data represented in many-to-one pictographs and column graphs.</p>	
 <b>Activities</b>	
<b>Interpreting data</b>	Picture Graphs: with scale & half symbols Making Picture Graphs: With Scale Column Graphs Reading from a Column Graph
 <b>Skill Quests</b>	
<b>Represent data with many-to-one graphs</b>	Column graphs using many-to-one correspondence Picture graphs with many-to-one correspondence
 <b>Ebooks</b>	
<b>Year 4, Series E: Chance and data</b>	Data

<p align="center"><b>4.PS.Statistics.2</b></p> <p align="center">In a real-world context, pose questions and collect categorical or discrete numerical data, checking for accuracy and consistency. Organise and represent data in pictographs and column graphs and interpret the data to communicate findings in terms of the context.</p>	
 <b>Activities</b>	
<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Collect data</b>	Surveys & sorting data
 <b>Ebooks</b>	
<b>Year 4, Series E: Chance and data</b>	Data

# Year 5

## Number & algebra

### Understanding number

#### 5.NA.Number.1

Read, write and order seven-digit numbers and beyond.

##### Activities

##### Read, write & order numbers

Place Value to Millions

Place Value to Billions

Numbers from Words to Digits 1

Numbers from Words to Digits 2

Greater Than or Less Than?

Equal, less or Greater Than?

##### Skill Quests

##### Read, write & order any numbers

Representing & ordering numbers of any size

##### Ebooks

##### Year 5, Series F: Reading and Understanding Whole Numbers

Looking at whole numbers

#### 5.NA.Number.2

Read, write, compare and order decimal numbers, including on a number line.

##### Activities

##### Decimal numbers

Decimals from Words to Digits 2

Decimals on the Number Line

Nearest Whole Number

Comparing Decimals

Comparing Decimals 2

Decimal Order

##### Skill Quests

##### Read & order decimals to thousandths

Introducing decimal thousandths

Comparing & ordering decimals

Interpreting zeros at end of decimals

Decimal & fraction equivalences

Connecting decimals to the metric system

##### Ebooks

##### Year 5, Series F: Fractions, Decimals and Percentages

Fractions, decimals and percentages

#### 5.NA.Number.3

Represent and partition numbers up to seven-digits. Use the multiplicative place value relationship between adjacent places to explain the value of a digit.

##### Activities

##### Place value


Partition and Rename 3

Expanded Notation

Rounding Numbers

##### Skill Quests



Represent & partition numbers to 7-digit	Partitioning 6-digit numbers
	Partitioning numbers of any size
 <b>Ebooks</b>	
Year 5, Series F: Reading and Understanding Whole Numbers	Place value of whole numbers

### 5.NA.Number.4

Represent and partition decimal numbers. Use the multiplicative place value relationship between adjacent places to explain the value of a digit.

#### Activities

Represent & partition decimal numbers	Decimal Place Value
	Multiply Decimals: 10, 100, 1000
	Multiply Decimals and Powers of 10

#### Skill Quests

Partition decimals of any size	Partitioning decimals of any size
--------------------------------	-----------------------------------

#### Ebooks

Year 5, Series F: Fractions, Decimals and Percentages	Fractions, decimals and percentages
Year 6, Series G: Fractions, Decimals and Percentages	Decimal fractions

### 5.NA.Number.5

Explore, identify and represent factors and multiples of whole numbers in arrays and explain reasoning.

#### Activities

Factors & multiples	Multiples
	Lowest Common Multiple
	Factors
	Highest Common Factor
	Find the Factor
	Divisibility Tests (2, 5, 10)
	Divisibility Tests (3, 4, 9)
	Tests of Divisibility 1

#### Skill Quests

Multiples & factors	Finding multiples
	Finding factors
	Solving problems using factors & multiples

#### Ebooks

Year 5, Series F: Multiplication and Division	Mental multiplication strategies
	Mental division strategies
Year 5 Rich Learning Task: Number	Hotdogs

### 5.NA.Number.6


Count by unit fractions, locate and represent on number lines and extend to mixed numerals.




#### Activities

Count by unit fractions	Identifying Fractions on a Number Line
	Identifying Fractions Beyond 1
	Counting with Fractions on a Number Line
	Mixed and Improper Fractions on a Number Line




#### Skill Quests

Count & represent unit fractions	Counting & representing unit fractions
----------------------------------	--



	Comparing unit fractions
 <b>Ebooks</b>	
<b>Year 5, Series F: Fractions</b>	Fractions
	Types of fractions

<b>5.NA.Number.7</b> Identify the use of percentages in everyday situations and recognise that 100% represents a complete whole, which is equal to one.	
 <b>Activities</b>	
<b>Introducing percentages</b>	Modelling Percentages
	Percents and Decimals
	Common Fractions as Percentages (AU)
 <b>Skill Quests</b>	
<b>Fractions, decimals &amp; percentages</b>	Introducing percentages
	Connecting percentages & decimals
	Connecting percentages & fractions
	Relationship - percentages, decimals & fractions
 <b>Ebooks</b>	
<b>Year 5, Series F: Fractions</b>	Fractions, decimals and percentages

## Understanding equalities and inequalities

<b>5.NA.Inequalities.1</b> Complete and check statements of equality and inequality involving the four operations, and explain reasoning.	
 <b>Activities</b>	
<b>Equality &amp; inequality</b>	Equivalent Facts: Multiply
	Missing Values
	Missing Numbers: Variables
	Solve Equations: Multiply, Divide 1
	I am Thinking of a Number!
 <b>Skill Quests</b>	
<b>Equality &amp; inequality - 4 operations</b>	Equality & inequality involving 4 operations
 <b>Ebooks</b>	
<b>Year 5, Series F: Patterns and Algebra</b>	Equations and equivalence
	Using equations

## Patterns and relationships

<b>5.NA.Patterns.1</b> Follow rules to create increasing or decreasing additive and multiplicative patterns using concrete materials and numbers. Explore ways to predict unknown values.	
 <b>Activities</b>	
<b>Equality &amp; inequality</b>	Missing Values
	I am Thinking of a Number!
	Fit the Conditions 1
	Describing Patterns
 <b>Skill Quests</b>	
<b>Additive &amp; multiplicative patterns</b>	Additive & multiplicative patterns

Ebooks	
Year 5, Series F: Patterns and Algebra	Patterns and functions

## Calculating with number

5.NA.Calculating.1	
Add and subtract any whole numbers, using flexible and efficient strategies.	
Activities	
Addition & subtraction strategies	Complements to 10, 20, 50
	Bump Add and Subtract
	Jump Add and Subtract
	Split Add and Subtract
	Compensation - Add
	Add Two 2-Digit Numbers
	Column Addition 1
	Add 3-Digit Numbers
	Adding Colossal Columns
	Subtract Numbers
	2-Digit Differences: Regroup
	3-Digit Differences
	3-Digit Differences: 1 Regrouping
	Add Subtract Fractions 1
	Magic Symbols 1
Skill Quests	
Add & subtract numbers of any size	Adding strategies with numbers of any size
	Subtracting strategies with numbers of any size
	Selecting efficient strategies to add & subtract
	Using rounding to estimate
	Checking the accuracy of answers
Ebooks	
Year 5, Series F: Addition and Subtraction	Addition mental strategies
	Subtraction mental strategies
	Written methods

5.NA.Calculating.2	
Add and subtract fractions with the same denominator, using flexible and efficient strategies.	
Activities	
Add & subtract related fractions	Add: Common Denominator
	Subtract: Common Denominator
	Common Denominator
	One Take Fraction
	Add Like Mixed Numbers
	Subtract Like Mixed Numbers
Skill Quests	
Add & subtract fractions	Add & subtract proper fractions - same denominator
	Add & subtract mixed numerals - same denominator
Ebooks	
Year 5, Series F: Fractions	Calculating

### 5.NA.Calculating.3

Multiply larger whole numbers by one- and two-digit numbers and divide whole numbers by one-digit numbers, including those with remainders, using flexible and efficient strategies.

#### Activities

Multiplication & division strategies	Bar Model $\times \div$
	Problems: Times and Divide
	Multiply Multiples of 10
	Multiply More Multiples of 10
	Multiply 2 Digits Area Model
	Grid Methods 1
	Double and Halve to Multiply
	Mental Methods Multiplication 1
	Dividing by 10, 100, 1000
	Division Facts 1
	Remainders by Arrays
	Mental Methods Division 1
	Mental Methods Division
	Multiply: 1-Digit Number
	Multiply: 2-Digit by 1-Digit
	Multiply: 2-Digit Number, Regroup
	Divide: 1-Digit Divisor 1

#### Skill Quests

Strategies to multiply by 1- or 2-digits	Multiplication using multiples of 10
	Multiplying: rounding, compensating & partitioning
	Multiplying: doubling, halving & thirding
	Multiplying using the split method
	Multiplying using an area model
	Multiplying by factorising
	Multiplying using expanded algorithm
	Multiplying using contracted algorithm
Division strategies incl. remainders	Multiplying using extended form of algorithm
	Dividing by a 1-digit number using decomposition
	Dividing by a 2-digit number using decomposition
	Extended division - no remainders or zeros
	Extended division with remainders
	Extended division with & without remainders
	Contracted division - no remainders or zeros
	Contracted division- no remainders
	Contracted division - with & without remainders
	Dividing by 2-digit numbers - formal algorithms

#### Ebooks

Year 5, Series F: Multiplication and Division	Mental multiplication strategies
	Mental division strategies
	Written methods

### 5.NA.Calculating.4

Explore multiplicative estimation strategies and their appropriateness in different situations.

#### Activities

Rounding & estimating	Estimate Products
	Estimate Quotients
	Estimation: Multiply and Divide

Skill Quests	
Use multiplicative estimation strategies	Using multiplicative estimation strategies
Ebooks	
Year 5, Series F: Reading and Understanding Whole Numbers	Round and estimate

## Financial mathematics

5.NA.Financial.1	
Identify features of budgets and create a simple budget, comparing prices where possible.	
Activities	
Financial mathematics	Money Problems: Four Operations
	Budgeting
Skill Quests	
Create a simple budget	Creating a simple budget



## Modelling with number




5.NA.Modelling.1	
Identify and represent a range of real-world additive and multiplicative situations with equations, using diagrams where needed. Interpret and communicate findings in context.	
Activities	
Multiplication & division strategies	Bar Model $\times \div$
	Problems: Times and Divide
Skill Quests	
Add & subtract real-world problems	Addition & subtraction word problems
	Expressing word problems as equations: add/sub
	Solving add & subtract money problems
Multiply & divide real-world problems	Multiplication & division word problems
	Expressing word problems as equations: mult/div
	Solving multi-step mult/div word problems
	Solving mult & div money problems
All operations real-world problems	Express equations as word problems all operations
Ebooks	
Year 5, Series F: Addition and Subtraction	Addition mental strategies
	Subtraction mental strategies
	Written methods
Year 5, Series F: Multiplication and Division	Mental multiplication strategies
	Mental division strategies
	Written methods
Year 5 Rich Learning Task: Number	The age of Aunt Lil




## Measurement & geometry




### Two-dimensional space and structures


5.MG.2D.1	
Explore line and rotational symmetry in two-dimensional shapes.	
Activities	



2D space & structures	Rotational Symmetry
 Skill Quests	
Explore line & rotational symmetry	Exploring line & rotational symmetry
 Ebooks	
Year 5, Series F: Geometry	Transformation, tessellation and symmetry




<b>5.MG.2D.2</b>	
Choose and use appropriate metric units and part units to estimate and measure lengths.	
 Activities	
2D space & structures	Centimetres and Metres
	Kilometre Conversions
	Metres and Kilometres
 Skill Quests	
Estimate & measure length	Selecting & using appropriate measures for length
	Comparing & ordering lengths
 Ebooks	
Year 5, Series F: Length, Perimeter and Area	Units of length

<b>5.MG.2D.3</b>	
Describe and test a sequence of steps to determine the perimeter of rectangles.	
 Activities	
2D space & structures	Perimeter: Squares and Rectangles
 Skill Quests	
Calculate perimeter	Calculating the perimeter of rectangles
 Ebooks	
Year 5, Series F: Length, Perimeter and Area	Perimeter




<b>5.MG.2D.4</b>	
Identify dimensions of a metric square unit. Estimate, measure and compare areas using metric square units.	
 Activities	
2D space & structures	Area of Shapes
	Biggest Shape
	Equal Areas
	Area: Squares and Rectangles
 Skill Quests	
Calculate area	Calculating area
 Ebooks	
Year 5, Series F: Length, Perimeter and Area	Area




<b>5.MG.2D.5</b>	
Estimate, measure and construct angles in degrees using a protractor. Classify acute, right, obtuse, reflex and straight angles.	
 Activities	
2D space & structures	Classifying Angles
	Measuring Angles
	Estimating Angles




 Skill Quests	
Measure & classify angles	Estimating, measuring & comparing angles
	Constructing & classifying angles
 Ebooks	
Year 5, Series F: Geometry	Lines and angles
Year 5 Rich Learning Task: Geometry	What triangle?

<b>5.MG.2D.6</b> Use directional language, grid references and grid coordinates to describe positions and pathways.	
 Activities	
2D space & structures	Map Coordinates
	Coordinate Graphs: 1st Quadrant
	More Directions!
 Skill Quests	
Use coordinates in a grid system	Working with grid referenced maps
	Using Cartesian coordinate system - 1st quadrant
Use directional language	Using landmarks & directional language
 Ebooks	
Year 5, Series F: Position	Spatial orientation
	Coordinates
	Directions




### Three-dimensional space and structures




<b>5.MG.3D.1</b> Visualise and connect three-dimensional objects to their nets and build objects from their nets.	
 Activities	
3D space & structures	Nets
	What Pyramid am I?
	What Prism am I?
	Prisms and Pyramids
 Skill Quests	
Connect objects to nets	Connecting prisms & pyramids with their nets
	Connecting 3D objects with their nets
 Ebooks	
Year 5, Series F: Geometry	3D shapes

<b>5.MG.3D.2</b> Choose appropriate units to estimate and measure capacity.	
 Activities	
3D space & structures	Millilitres and Litres
	Litre Conversions
 Skill Quests	
Use appropriate units for capacity	Using appropriate units for capacity (L & mL)
 Ebooks	
Year 5, Series F: Volume, Capacity & Mass	Volume and capacity

<b>5.MG.3D.3</b> Identify the dimensions of a metric cubic unit. Construct and compare rectangular prisms using cubes and determine their volume.	
 <b>Activities</b>	
3D space & structures	Volume of Solids and Prisms - 1cm <sup>3</sup> blocks
	Volume: Rectangular Prisms 1
 <b>Skill Quests</b>	
Investigate volume using cubes	Investigating volume using cubes
 <b>Ebooks</b>	
Year 5, Series F: Volume, Capacity & Mass	Volume and capacity

## Non-spatial measurement

<b>5.MG.NSM.1</b> Choose appropriate units to estimate, measure and compare mass.	
 <b>Activities</b>	
Non-spatial measurement	Kilogram Conversions
	Grams and Kilograms
	Converting Units of Mass
	Mass Word Problems
 <b>Skill Quests</b>	
Use appropriate units for mass	Choosing appropriate units for mass
	Decimal representations - metric system
 <b>Ebooks</b>	
Year 5, Series F: Volume, Capacity & Mass	Mass

<b>5.MG.NSM.2</b> Explore, describe and convert between 12- and 24-hour time systems and use to determine duration.	
 <b>Activities</b>	
Non-spatial measurement	Time Conversions: Simple Fractions
	Time Conversions: Simple Decimals (0.25, 0.5, 0.75)
	What Time Will it Be?
	Time Mentals
	Elapsed Time
	24 Hour Time
	Using Timetables
 <b>Skill Quests</b>	
Use 24-hour time	Using 24-hour notation
 <b>Ebooks</b>	
Year 5, Series F: Time	Measuring time
	Calculating time
	Timetables



## Modelling with measurement and geometry

5.MG.Modelling.1	
In real-world situations involving transformation of two-dimensional shapes, nets, grid reference systems, determining length, area, capacity, volume or mass in metric units or converting between 12- and 24-hour time, mathematically represent the problem to reach a solution. Interpret and communicate findings in the context of the situation.	
Activities	
2D space & structures	Centimetres and Metres
	Kilometre Conversions
	Metres and Kilometres
	Equal Areas
	Map Coordinates
	More Directions!
3D space & structures	Millilitres and Litres
Non-spatial measurement	What Time Will it Be?
	Using Timetables
Skill Quests	
Real-world measurement & geometry	Calculating practical perimeter problems
	Calculating practical area problems
	Identifying & describing transformations
	Using 24-hour time in timetables
Ebooks	
Year 5, Series F: Length, Perimeter and Area	Units of length
	Travelling far
	Perimeter
	Area
Year 5, Series F: Time	Calculating time
	Timetables
Year 5, Series F: Volume, Capacity & Mass	Volume and capacity
	Mass
Year 5, Series F: Geometry	Lines and angles
	Transformation, tessellation and symmetry
	3D shapes

## Probability & statistics

### Probability

5.PS.Probability.1	
Compare a range of everyday chance events, grouping into those with outcomes that are equally likely or not equally likely.	
Activities	
Chance & probability	What are the Chances?
	Chance Gauge
	Introductory Probability
	Fair Games
Skill Quests	
Compare outcomes of chance events	Investigating equally likely outcomes
	Exploring fair & unfair chance experiments
Ebooks	
Year 5, Series F: Chance and Probability	Chance and probability

## 5.PS.Probability.2

Conduct repeated chance experiments with equally likely outcomes, including with the use of digital tools. Represent results as fractions, compare with others and discuss variation.

### Activities

Teacher directed

### Skill Quests

Represent chance results as fractions

Representing chance results as fractions

### Ebooks

Year 5, Series F: Chance and Probability

Chance and probability

## Statistics

## 5.PS.Statistics.1

Describe and interpret line graphs that show how real-life continuous data changes over time.

### Activities

Statistics

Line Graphs: Interpretation

### Skill Quests

Interpret line graphs

Interpreting line graphs

### Ebooks

Year 5, Series F: Data Representation

Types of graphs 3

## 5.PS.Statistics.2

In a real-world context, pose and refine questions, and collect categorical or discrete numerical data. Organise and make choices to represent data. Interpret and communicate findings in terms of the context, and reflect on variation and accuracy.

### Activities

Statistics

Travel Graphs

Stem and Leaf Plots: Concept

Dot Plots

Divided Bar Graphs

### Skill Quests

Collect & organise data

Conducting surveys or statistical investigations

Interpret data

Interpreting data

### Ebooks

Year 5, Series F: Data Representation

Types of graphs 1

Types of graphs 2

Types of graphs 3

Collecting and analysing data

Data investigations

# Year 6

## Number & algebra

### Understanding number

#### 6.NA.Number.1

Investigate the use of positive and negative integers to represent everyday situations. Read, write and order integers on a number line.

##### Activities

Introducing integers	Integers on a Number Line
	Directed Numbers
	Ordering Integers (Number Line)
	Comparing Integers (<, =, >)
	What's the Temperature (Celsius)?

##### Skill Quests

Understand integers	Recognising situations that use integers
	Locating & representing integers on a number line

##### Ebooks

Year 7, Series H: Directed Numbers	Plotting on number lines
	Opposite directions – negative numbers
	Extending the number line

#### 6.NA.Number.2

Represent and explain the multiplicative place value relationship between places in any number, including decimals.

##### Activities

Multiplicative relationship of place value	Place Value to Millions
	Place Value to Billions
	Decimal Place Value

##### Skill Quests

Represent multiplicative place value	Represent multiplicative place value relationships
--------------------------------------	--

##### Ebooks

Year 6, Series G: Reading and Understanding Whole Numbers	Read and understand numbers
Year 6, Series G: Fractions, Decimals and Percentages	Calculating

#### 6.NA.Number.3

Explore, identify and represent square, prime and composite numbers in arrays and explain reasoning.

##### Activities

Multiples, factors, primes & composites	Multiples
	Multiples of
	Highest Common Factor
	Lowest Common Multiple
	Prime or Composite?

##### Skill Quests

Prime, composite & square numbers	Introducing prime & composite numbers
	Introducing square numbers

Ebooks	
Year 6, Series G: Reading and Understanding Whole Numbers	Types of numbers
Year 7, Series H: Special Numbers, Factors and Multiples	Odd, even, prime and composite numbers
	Square numbers

### 6.NA.Number.4

Order common fractions with the same and related denominators, including mixed numerals, using diagrams and number lines.

Activities	
Comparing & ordering fractions	Identifying Fractions on a Number Line
	Mixed and Improper Fractions on a Number Line
	Compare Fractions 2
	Comparing Fractions 2
	Ordering Fractions
Skill Quests	
Compare & order common fractions	Recognise, compare & represent common fractions
	Comparing common fractions on a number line
Ebooks	
Year 6, Series G: Fractions, Decimals and Percentages	Fractions

### 6.NA.Number.5

Connect commonly used percentages, including 10%, 25% and 50% to fractions and decimals, including on a number line.



Activities	
Fractions, decimals & percentages	Modelling Percentages
	Fraction Wall Labelling 2
	Fractions to Decimals
	Decimals to Fractions 1
	Percentage to Fraction
	Decimals to Percentages
	Common Fractions as Percentages (AU)
	Fractions to Percentages (Non-Calculator)
	Percents and Decimals
	Match Decimals and Percentages
	Calculating Percentages (Mental)
	Complementary Percentages
	Percentage of an amount using fractions (<100%)
Skill Quests	
Fractions, decimals & percentages	Representing fractions, decimals & percentages
	Connecting percentages to fractions & decimals
Ebooks	
Year 6, Series G: Fractions, Decimals and Percentages	Decimal fractions

## Understanding equalities and inequalities




### 6.NA.Inequalities.1

Complete, check and construct statements of equality and inequality involving the four operations, including the use of brackets and order of operations, and explain reasoning.


Activities
------------



Equality & inequality	Solve Equations: Add, Subtract 1
	Solve Equations: Multiply, Divide 1
	Equivalent Facts: Multiply
	Order of Operations 1 (BIDMAS)
	Identifying errors in applying the order of operations
 Skill Quests	
Equality & inequality - 4 operations	Equality & inequality involving 4 operations
Understand order of operations	Order of operations with no grouping symbols
	Order of operations using grouping symbols
 Ebooks	
Year 6, Series G: Patterns and Algebra	Solving equations
	Properties of arithmetic

## Patterns and relationships

<b>6.NA.Patterns.1</b> Create and represent increasing or decreasing patterns using concrete materials and numbers. Use words to generalise rules that relate each element of a pattern to its position.	
 Activities	
Patterns & rules	Increasing Patterns
	Decreasing Patterns
	Describing Patterns
	Find the Pattern Rule
	Table of Values
	Pattern Rules and Tables
	Number Sequences Up to 1 Million
	Find the Missing Number 2
	Missing Numbers: Variables
 Skill Quests	
Recognise & use rules for patterns	Continuing & creating number sequences
	Manipulating numbers using a given rule
	Creating algorithms for sets
 Ebooks	
Year 6, Series G: Patterns and Algebra	Patterns and functions
	Algebraic thinking




## Calculating with number

<b>6.NA.Calculating.1</b> Choose and use flexible and efficient strategies to calculate with whole numbers, involving any of the four operations and explore the use of the order of operations.	
 Activities	
Operations with whole numbers	Jump Add and Subtract
	Split Add and Subtract
	Compensation - Add
	Add 3-Digit Numbers
	Add Multi-Digit Numbers 1
	Add Three 2-Digit Numbers: Regroup
	Add 3-Digit Numbers: Regroup
	Adding Colossal Columns

	3-Digit Differences
	3-Digit Differences: 1 Regrouping
	Subtracting Colossal Columns
	Grid Methods 2
	Grid Methods 1
	Multiplying by 10, 100, 1000
	Dividing by 10, 100, 1000
	Mental Methods Multiplication 2
	Mental Methods Division 2
	Long Multiplication
	Short Division
 <b>Skill Quests</b>	
<b>Operations with whole numbers</b>	Adding & subtracting to solve word problems
	Multiplying & dividing by multiples of 10
	Selecting efficient mult/div strategies
	Division problems
 <b>Ebooks</b>	
<b>Year 6, Series G: Addition and Subtraction</b>	Mental strategies
	Applying strategies
	Written methods
<b>Year 6, Series G: Multiplication and Division</b>	Mental multiplication strategies
	Mental division strategies
	Written methods
	Puzzles and investigations


## 6.NA.Calculating.2



Add and subtract fractions with related denominators, using flexible and efficient strategies, based on knowledge of equivalence.




 <b>Activities</b>	
<b>Add &amp; subtract fractions</b>	Add Subtract Fractions 1
	Common Denominator
	Add: Common Denominator
	Subtract: Common Denominator
	One Take Fraction
	Add Like Mixed Numbers
	Subtract Like Mixed Numbers
 <b>Skill Quests</b>	
<b>Add &amp; subtract proper fractions</b>	Adding fractions with related denominators
	Subtracting fractions with related denominators
	Add & subtract fractions - related denominators
<b>Add &amp; subtract mixed numerals</b>	Adding fractions & mixed numerals
	Subtracting fractions & mixed numerals
 <b>Ebooks</b>	
<b>Year 6, Series G: Fractions, Decimals and Percentages</b>	Calculating




## 6.NA.Calculating.3


Add and subtract decimals to two decimal places, using flexible and efficient strategies.



 <b>Activities</b>	
<b>Add &amp; subtract decimals</b>	Estimate Decimal Sums 2
	Estimate Decimal Differences 2

	Decimal Complements
	Estimate Decimal Sums 1
	Estimate Decimal Differences 1
<b> Skill Quests</b>	
<b>Add/sub decimals - mental strategies</b>	Adding decimals using mental strategies
	Subtracting decimals using mental strategies
<b>Add/sub decimals - digital technologies</b>	Adding decimals using written method
	Subtracting decimals using written method
<b>Add/sub decimals - written method</b>	Adding decimals using written method
	Subtracting decimals using written method
<b>Add/sub decimals - estimating</b>	Estimating sums & differences of decimals
<b> Ebooks</b>	
<b>Year 6, Series G: Fractions, Decimals and Percentages</b>	Calculating



<b>6.NA.Calculating.4</b>	
Multiply decimals by whole numbers and multiply and divide decimals by powers of 10, using flexible and efficient strategies.	
<b> Activities</b>	
<b>Fractions, decimals &amp; percentages calculations</b>	Model Fractions to Multiply
	Multiply Decimals: 10, 100, 1000
	Divide Decimals: 10, 100, 1000
	Estimate Decimal Operations
<b> Skill Quests</b>	
<b>Multiply/divide decimals by powers of 10</b>	Multiplying decimals by powers of 10
	Dividing decimals by powers of 10
	Using estimation
<b> Ebooks</b>	
<b>Year 6, Series G: Fractions, Decimals and Percentages</b>	Calculating

<b>6.NA.Calculating.5</b>	
Determine a familiar fraction, decimal or percentage of a whole number.	
<b> Activities</b>	
<b>Fractions, decimals &amp; percentages calculations</b>	Estimate Products with Fractions
	Fraction Word Problems
	Fractions of a Collection 1
	Fractions of a Collection 2
	Percentage Word Problems
<b> Skill Quests</b>	
<b>Find a fraction of a quantity</b>	Finding a fraction of a quantity
<b>Calculate percentages</b>	Calculating percentages
<b> Ebooks</b>	
<b>Year 6, Series G: Fractions, Decimals and Percentages</b>	Fractions of an amount




<b>6.NA.Calculating.6</b>	
Use estimation and rounding to make reasonable evaluations and justify results.	
<b> Activities</b>	
<b>Fractions, decimals &amp; percentages calculations</b>	Estimate Decimal Operations
	Estimate Products with Fractions

 Skill Quests	
Estimate to make reasonable evaluations	Estimating to make reasonable evaluations
	Using rounding to estimate
	Estimation strategies with financial calculations
 Ebooks	
Year 6, Series G: Reading and Understanding Whole Numbers	Round and estimate
Year 6, Series G: Fractions, Decimals and Percentages	Decimal fractions

## Financial mathematics

6.NA.Financial.1	
Create a plan for a savings goal, predict expenses and identify that saving money with a bank attracts interest.	
 Activities	
Financial mathematics	Money Problems: Four Operations
	Budgeting
 Skill Quests	
Create a financial plan	Creating a financial plan




## Modelling with number




6.NA.Modelling.1	
In real-world situations involving whole numbers, order of operations and fractions with the same denominator. I. analyse the situation and identify relevant information II. mathematically represent the situation, including using equations to reach a solution III. interpret and communicate findings in the context, exploring and justifying decisions	
 Activities	
Fractions, decimals & percentages calculations	Fraction Word Problems
 Skill Quests	
Work with real-world situations	Addition & subtraction word problems
	Multiplication & division word problems
	Order of operations practical situations
 Ebooks	
Year 6, Series G: Reading and Understanding Whole Numbers	Read and understand numbers
	Types of numbers
	Round and estimate
Year 6, Series G: Addition and Subtraction	Applying strategies
Year 6, Series G: Multiplication and Division	Puzzles and investigations
Year 6, Series G: Fractions, Decimals and Percentages	Fractions
	Decimal fractions
	Fractions of an amount
	Calculating
Year 6 Rich Learning Task: Reasoning	The Gumball Heist
	Pyramid prediction






## Measurement & geometry

### Two-dimensional space and structures

6.MG.2D.1	
Explore, visualise and describe translations, reflections or rotations of two-dimensional shapes.	
 Activities	
2D - transformation, converting & area	Transformations: Coordinate Plane
	Rotations: Coordinate Plane
 Skill Quests	
Transformation	Translating, reflecting & rotating 2D shapes
 Ebooks	
Year 6, Series G: Geometry	Transformation, tessellation and symmetry

6.MG.2D.2	
Convert between units of length, by connecting metric units to the decimal system and extend to units of mass and capacity.	
 Activities	
2D - transformation, converting & area	Grams and Kilograms Conversion
	Grams and Kilograms
	Grams and Milligrams
	Converting Units of Mass
	Mass Word Problems
	Centimetres and Metres
	Metres and Kilometres
	Millilitres and Litres
 Skill Quests	
Connect decimals to the metric system	Decimal notation & the metric system
	Decimal representation in capacity
	Decimal representation in mass
Convert metric units of measurement	Converting metric units of length
	Converting metric units of capacity
	Converting metric units of mass
 Ebooks	
Year 6, Series G: Length, Perimeter and Area	Units of length
Year 6, Series G: Volume, Capacity and Mass	Volume and capacity
	Mass

6.MG.2D.3	
Describe and test a sequence of steps to determine the area of rectangles based on dimensions.	
 Activities	
2D - transformation, converting & area	Area of Shapes
	Area: Squares and Rectangles
 Skill Quests	
Determine the area of rectangles	Determining the area of rectangles
 Ebooks	
Year 6, Series G: Length, Perimeter and Area	Area
Year 6 Rich Learning Task: Measurement	Wrapping a prism
	Predicting area

### 6.MG.2D.4

Investigate angles in a right angle, on a straight line, angles at a point and vertically opposite angles, to determine unknown angles and explain reasoning.

#### Activities

##### 2D - angles & Cartesian plane

Measuring Angles
Estimating Angles
Angle Sum of a Triangle
Quadrilaterals: Angle Sum with Equations
Exterior Angles of a Triangle
Angles of Revolution: Unknown Values
Vertically Opposite Angles: Unknown Values

#### Skill Quests

##### Understand angle properties

Understanding adjacent angles
Exploring vertically opposite angles
Calculating angles that total $360^\circ$
Investigating supplementary & complementary angles

#### Ebooks

##### Year 6, Series G: Angles

Line and angles

### 6.MG.2D.5

Explore the Cartesian plane as the intersection of two number lines at zero, using the coordinate system to locate points in all four quadrants.

#### Activities

##### 2D - angles & Cartesian plane

Ordered Pairs
Number Plane
Graphing from a Table of Values
Reading Values from a Line

#### Skill Quests

##### Cartesian plane

Locating points on the Cartesian plane

#### Ebooks

##### Year 6, Series G: Position

Coordinates

##### Year 7, Series H: The Number Plane

How does it work?
What else can you do?

## Three-dimensional space and structures

### 6.MG.3D.1

Visualise, sketch and construct three-dimensional objects, including prisms and pyramids.

#### Activities

##### Teacher directed

#### Skill Quests

##### Teacher directed




#### Ebooks

##### Year 6, Series G: Geometry




3D shapes

### 6.MG.3D.2




Describe and test a sequence of steps to determine the volume of rectangular prisms based on dimensions.

 Activities	
3D space & structures	Volume of Solids and Prisms - 1cm <sup>3</sup> blocks
	Volume: Rectangular Prisms 1
	Converting Volume
 Skill Quests	
Determine volume of rectangular prisms	Determining the volume of rectangular prisms
 Ebooks	
Year 6, Series G: Volume, Capacity and Mass	Volume and capacity

## Non-spatial measurement

6.MG.NSM.1	
Use timetables and itineraries in 12- and 24-hour time systems to determine the duration of events and journeys.	
 Activities	
Non-spatial measurement	Time Conversions: Simple Fractions
	Time Conversions: Simple Decimals
	Time Mentals
	Elapsed Time
	24 Hour Time
	Using Timetables
	Time Conversions: Simple Fractions
 Skill Quests	
Use timetables in 12- and 24-hour time	Using timetables in 12- and 24-hour time
 Ebooks	
Year 6, Series G: Time	Telling time
	Calculating time
	Time applications

## Modelling with measurement and geometry

6.MG.Modelling.1	
In real-world situations involving transformation of two-dimensional shapes, rectangular prisms, pyramids, Cartesian plane, measuring and converting metric units for length, mass and capacity, determining volume and area in metric units or determining the duration of events and journeys I. analyse the situation and identify relevant information II. mathematically represent the situation to reach a solution III. interpret and communicate findings in the context, exploring and justifying decisions	
 Activities	
2D - transformation, converting & area	Grams and Kilograms Conversion
	Converting Units of Mass
	Mass Word Problems
3D space & structures	Converting Volume
Non-spatial measurement	Elapsed Time
	Using Timetables
 Skill Quests	
Teacher directed	
 Ebooks	
Year 6, Series G: Geometry	2D shapes
	3D shapes

Year 6, Series G: Position	Coordinates
	Maps and scale
Year 6, Series G: Length, Perimeter and Area	Units of length
	Area
Year 6, Series G: Volume, Capacity and Mass	Volume and capacity
	Mass
Year 6 Rich Learning Task: Measurement	Wrapping a prism
	Predicting area

## Probability & statistics



### Probability




6.PS.Probability.1	
Order everyday chance events and phrases on a scale from 0 to 1, where 0 represents an event that is certain not to happen (impossible) and 1 represents an event that is certain to happen.	
Activities	
Probability	Simple Probability
	Probability Scale
	Complementary Events
	Dice and Coins
	Fair Games
Skill Quests	
Order everyday chance events	Probability as a fraction, decimal or percent
	Probabilities from 0 to 1
Ebooks	
Year 6, Series G: Chance and Probability	Chance and probability




6.PS.Probability.2	
Conduct repeated chance experiments and simulations with equally likely or unequally likely outcomes, including with the use of digital tools, for an increasing number of trials. Compare expected and observed frequencies in terms of variation as the number of trials increase.	
Activities	
Teacher directed	
Skill Quests	
Conduct chance experiments	Conducting chance experiments
Ebooks	
Year 6, Series G: Chance and Probability	Chance and probability

### Statistics

6.PS.Statistics.1	
Describe and interpret a range of displays for real-life numerical data, including side-by-side column graphs, using mode, range and shape.	
Activities	
Describe & interpret data	Mode
	Mode from Stem and Leaf Plot
	Mode from Frequency Table
	Data Extremes and Range
	Stem and Leaf Plots with Range

	Double Stem and Leaf Plots
	Line Graphs: Interpretation
 <b>Skill Quests</b>	
<b>Describe &amp; interpret data displays</b>	Reading two-way tables
	Reading side-by-side column graphs
	Comparing & selecting bivariate data displays
	Describing & interpreting data sets
<b>Compare mode, range &amp; shape</b>	Understanding mode, range & shape of distributions
	Comparing modes in sets of data
 <b>Ebooks</b>	
<b>Year 6, Series G: Data Representation</b>	Types of graphs 1
	Types of graphs 2
	Types of graphs 3

<p align="center"><b>6.PS.Statistics.2</b></p> <p align="center">Describe how the features of real-life data displays may influence an audience.</p>	
 <b>Activities</b>	
<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Interpret &amp; evaluate secondary data</b>	Interpreting & evaluating secondary data
 <b>Ebooks</b>	
<b>Year 6, Series G: Data Representation</b>	Collecting and analysing data

<p align="center"><b>6.PS.Statistics.3</b></p> <p align="center">In a real-world context involving numerical data.</p> <p align="center">I. analyse the situation to pose a refined question</p> <p align="center">II. choose the most appropriate way to collect data to ensure accuracy and consistency, and make choices to represent data, including line graphs and side-by-side column graphs</p> <p align="center">III. interpret and communicate findings in terms of the context and describe reasons for variation</p>	
 <b>Activities</b>	
<b>Teacher directed</b>	
 <b>Skill Quests</b>	
<b>Teacher directed</b>	
 <b>Ebooks</b>	
<b>Year 6, Series G: Data Representation</b>	Data investigations



For more information about Mathletics,  
contact our friendly team.

**[www.mathletics.com/contact](http://www.mathletics.com/contact)**