

# Mathletics

## Victorian Program of Studies

Skill Quests

Years 1 – 2

May, 2022

Mathletics

# Mathletics

Victoria Program of Studies

Skill Quests

May 2021

<b>Year 1 .....</b>	<b>3</b>
<b>1 Number and Algebra .....</b>	<b>3</b>
<b>2 Measurement and Geometry .....</b>	<b>5</b>
<b>3 Statistics and Probability .....</b>	<b>6</b>
<b>Year 2 .....</b>	<b>7</b>
<b>1 Number and Algebra .....</b>	<b>7</b>
<b>2 Measurement and Geometry .....</b>	<b>9</b>
<b>3 Statistics and Probability .....</b>	<b>10</b>

# Year 1

## 1 Number and Algebra

Outcome	Quests	Content
Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (VCMNA086)	Whole number – counting	Count forwards and backwards to 100
		Find numbers before and after to 100
		Identify ordinal numbers up to 31st
	Whole number - skip counting	Skip count by 2s
		Skip count by 5s
Count collections to 100 by partitioning numbers using place value (VCMNA088)	Whole number - counting collections	Skip count by 10s
		Skip count by 2s, 5s and 10s
		Count collections 0 to 100
		Use groups of 10 to count large collections
		Identify place value up to 2 digits
		Solve problems using place value up to 2 digits
		Partition 2-digit numbers (standard)
Partition 2-digit numbers (non-standard)		
Recognise, model, read, write and order numbers to at least 100; locate these numbers on a number line (VCMNA087)	Whole number – place value	Count collections 0 to 100
		Use groups of 10 to count large collections
		Identify place value up to 2 digits
		Solve problems using place value up to 2 digits
Recognise, describe and order Australian coins according to their value (VCMNA092)	Whole number – money	Partition 2-digit numbers (standard)
		Partition 2-digit numbers (non-standard)
		Model, read, write and count 2-digit numbers
Represent and solve simple addition and subtraction problems using a range of strategies, including counting on, partitioning and rearranging parts (VCMNA089)	Addition and subtraction	Compare and order numbers to 100
		Round numbers up to 100
		Solve problems with 2-digit numbers on number lines
		Recognise Australian coins
		Model and record combinations that make 5 – 9
		Model and record combinations that make 11 – 20
		Recognise and recall bonds to 10
Add zero to a number (up to 20)		
Introduce the commutative property of addition	Add and subtract by counting on/back up to 100	Add doubles up to 20
		Add and subtract by counting on/back up to 100
		Add doubles up to 20

		Add and subtract near doubles
		Find the difference between 2 numbers (to 20)
		Add compatible numbers (doubles or bonds to 10)
		Add and subtract using bridging to 10 up to 100
		Add using place value up to 100
		Solve addition and subtraction word problems
		Explore equality and inequality up to 10 and 20
Represent practical situations that model sharing (VCMNA090)	Division - sharing	Share objects to divide
Recognise and describe one-half as one of two equal parts of a whole (VCMNA091)	Fractions and decimals	Find half of a set or quantity (no symbols)
		Find half of a set or quantity (symbols)
Investigate and describe number patterns formed by skip counting and patterns with objects (VCMNA093)	Patterns and algebra	Explore repeating numeric patterns
		Explore repeating patterns with objects
		Relate number and object patterns
		Explore number patterns (1, 2, 5, 10)
		Additive and subtractive patterns (within 5)
		Odd and even number patterns (up to 20)
Recognise the importance of repetition of a process in solving problems (VCMNA094)	Equality and inequality	Explore equality and inequality up to 10 and 20

## 2 Measurement and Geometry

Outcome	Quests	Content
Measure and compare the lengths, masses and capacities of pairs of objects using uniform informal units (VCMMG095)	Length	Explore informal units of length and distance
	Volume and capacity	Explore volume and capacity using informal units
		Measure volume and capacity (informal units)
Mass	Measure mass using a pan balance	
Tell time to the half-hour (VCMMG096 )	Time – telling the time	Tell time to the hour and half hour (analogue)
		Tell time to the hour and half hour (digital)
Describe duration using months, weeks, days and hours (VCMMG097)	Time - describe duration	Describing duration (hours)
Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (VCMMG098)	Two-dimensional shapes	Sort quadrilaterals from other 2D shapes
		Identify, sort and name octagons
		Identify, sort and name pentagons
		Identify, sort and name hexagons
		Identify and name simple 2D shapes
		Compare, describe and sort simple 2D shapes
		Identify vertical and horizontal lines
		Identify parallel lines
	Three-dimensional objects	Explore surfaces and faces
		Recognise and describe spheres
		Recognise and describe cones
		Recognise and describe cubes
		Recognise and describe cylinders
		Recognise, sort and name 3D objects
		Recognise and describe prisms (no formal names)
Give and follow directions to familiar locations (VCMMG099)	Position	Position using left, right and ordinal numbers

### 3 Statistics and Probability

Outcome	Quests	Content
Identify outcomes of familiar events involving chance and describe them using everyday language, such as 'will happen', 'won't happen' or 'might happen' (VCMSP100)	Chance	Use the everyday language of chance
Choose simple questions and gather responses and make simple inferences (VCMSP101)	Gathering data	Ask suitable questions for data collection
		Complete tally charts
Represent data with objects and drawings where one object or drawing represents one data value and describe the displays (VCMSP102)	Representing data	Represent data in a simple display
		Read simple data displays using objects

# Year 2

## 1 Number and Algebra

Outcome	Quests	Content
Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences (VCMNA103)	Whole number – counting	Count in ones up to 1000
		Identify numbers before and after up to 1000
	Whole number – sequences	Identify, describe and continue number sequences
		Count in tens with 2- and 3-digit numbers
Recognise, model, represent and order numbers to at least 1000 (VCMNA104)	Whole number – place value	Find numbers 10 before and 10 after up to 1000
		Read and represent 3-digit numbers
Group, partition and rearrange collections of up to 1000 in hundreds, tens and ones to facilitate more efficient counting (VCMNA105)	Whole number – partition and group	Compare and order numbers to 1000
		Identify place value in 3-digit numbers
		Count in hundreds, tens and ones
		Partition 3-digit numbers (standard)
		Partition 3-digit numbers (non-standard)
Count and order small collections of Australian coins and notes according to their value (VCMNA111)	Whole number – money	Round numbers up to 1000 to the nearest 100
		Count and order Australian notes and coins
Explore the connection between addition and subtraction (VCMNA106)	Addition and subtraction relationship	Find fact families for addition and subtraction
Solve simple addition and subtraction problems using a range of efficient mental and written strategies (VCMNA107)	Addition and subtraction strategies	Use mental strategies to add and subtract (to 100)
		Add and subtract tens from a 2-digit number
		Introduce place value to add and subtract (to 200)
		Use place value to add and subtract (to 200)
		Use place value (no models) to add and subtract
		Use place value to add (crossing a 10)
		Subtract using addition
		Solve word problems with start or change unknown
		Add and subtract using rounding and compensating



Recognise and represent multiplication as repeated addition, groups and arrays (VCMNA108)	Mult/div – models, repeated addition	Use repeated addition to multiply
		Explore arrays (no x symbol)
		Use the commutative property of multiplication
Represent division as grouping into equal sets and solve simple problems using these representations (VCMNA109)	Mult/div – equal groups	Divide by sharing and grouping
		Solve simple multiplication problems (2,5,10x)
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (VCMNA110)	Fractions and decimals	Explore the meaning of fraction symbols
		Find quarters of sets or shapes (no symbols)
		Find quarters of sets or shapes (symbols)
		Find halves and quarters (no symbols)
		Find halves and quarters (symbols)
		Find eighths of objects or shapes
		Find halves, quarters and eighths of shapes
Describe patterns with numbers and identify missing elements (VCMNA112)	Patterns	Number patterns (1, 2, 5, 10, 25 up to 100)
		Add or subtract patterns (within 10) up to 100
Solve problems by using number sentences for addition or subtraction (VCMNA113)	Patterns and algebra	Write simple number sentences
Apply repetition in arithmetic operations, including multiplication as repeated addition and division as repeated subtraction (VCMNA114)	Repetition in operations	Use repeated subtraction to divide

## 2 Measurement and Geometry

Outcome	Quests	Content
Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (VCMMG115)	Length	Compare and order lengths using informal units
	Area	Compare and order areas (informal units)
		Measure and estimate area using square units
Volume and capacity	Compare and order volume using blocks	
Compare the masses of objects using balance scales (VCMMG116)	Mass	Compare and order mass using informal units
Tell time to the quarter-hour using the language of 'past' and 'to' (VCMMG117)	Time - telling the time	Tell time to the half and quarter hour
Name and order months and seasons (VCMMG118)	Time – months and seasons	Months of the year
		Know the seasons
Use a calendar to identify the date and determine the number of days in each month (VCMMG119)	Time - using a calendar	Use a calendar to identify the date
		Use calendars to solve simple problems
Describe and draw two-dimensional shapes, with and without the use of digital technologies (VCMMG120)	Two-dimensional shapes	Represent and describe regular polygons
Describe the features of three-dimensional objects (VCMMG121)	Three-dimensional objects	Compare 2D shapes and 3D objects
		Identify faces, edges and vertices on 3D objects
		Faces, edges, vertices and surfaces of 3D objects
Investigate the effect of one-step slides and flips, with and without the use of digital technologies (VCMMG123)	Translations of shapes	Translations of shapes (slides, flips, turns)
Identify and describe half-turns and quarter-turns (VCMMG124)	Turns of shapes	Turns of shapes
Interpret simple maps of familiar locations and identify the relative positions of key features (VCMMG122)	Reading maps	Read simple maps

### 3 Statistics and Probability

Outcome	Quests	Content
Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (VCMSP125)	Chance	Use basic probability language
Identify a question of interest based on one categorical variable and gather data relevant to the question (VCMSP126)	Gathering data	Answer questions related to simple data displays
Create displays of data using lists, tables and picture graphs and interpret them (ACMSP050)	Creating displays of data	Read and interpret simple picture graphs
		Represent and read data in tables or lists

# Mathletics

For more information about Mathletics,  
contact our friendly team.

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



A 3P Learning Product