Mathletics

Australian Curriculum V9

Skill Quests

Years 1 – 2

February, 2023

Mathletics

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Australian Curriculum (v9)

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Year 1 – Skill Quests

1 Number

Outcome	Quests	Content
Recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts	Count numbers to 120	Counting forwards & backwards to 100
		Finding numbers before & after to 100
		Counting forwards & backwards to 120
		Numbers before & after to 120
		Reading, writing & comparing to 120
		Counting in tens & ones
	Read & write numbers to 100	Reading & writing 2-digit numbers
	Compare & order numbers to 100	Comparing numbers to 100
		Ordering numbers to 100
	Read, write & order numbers to 200	Reading & writing 3-digit numbers to 200
	Identify ordinal numbers to 31st	Identifying ordinal numbers up to 31st
Partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and ones	Recognise & recall bonds to 10	Recognising & recalling bonds to 10
	Place value of 2-digit numbers	Identifying place value up to 2 digits
		Solving problems using place value up to 2 digits
		Partitioning 2-digit numbers (non-standard)
Quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting	Skip counting	Skip counting by 2s
		Skip counting by 5s
		Skip counting by 10s
		Skip counting with money
		Skip counting by 2s, 5s & 10s
	Count collections	Counting collections 0 to 100
		Using groups of 10 to count large collections
	Count money	Counting Australian notes & coins
Add and subtract numbers within 20, using physical and virtual materials, part-part-whole knowledge to 10 and a variety of calculation strategies	Combinations that add up to 20	Model & record combinations that make 5 – 9
		Model & record combinations that make 11 – 20
		Add zero to a number (up to 20)
	Addition & subtraction strategies	Introducing the commutative property of addition
		Adding doubles up to 20

		Adding & subtracting near doubles
		Relating counting to adding & subtracting
		Adding & subtracting within 10 fluently
		Finding the difference between 2 numbers (to 20)
		Adding compatible numbers (doubles or bonds to 10)
	Explore equality & inequality	Exploring equality & inequality up to 10 & 20
Use mathematical modelling to solve practical problems involving additive situations, including simple money transactions; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problem	Add & subtract practical problems	Solving addition & subtraction word problems to 20
Use mathematical modelling to solve practical problems involving equal sharing and grouping; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problem	Explore arrays & repeated addition	Exploring arrays (no x symbol)
		Using repeated addition to multiply
	Equal sharing & grouping	Solving equal group problems
		Grouping & skip counting to multiply
		Sharing to divide up to 20
		Grouping to divide
		Solving grouping & sharing problems

2 Algebra

Outcome	Quests	Content
Recognise, continue and create pattern sequences, with numbers, symbols, shapes and objects, formed by skip counting, initially by twos, fives and tens	Pattern sequences	Relating number & object patterns
		Exploring number patterns (1, 2, 5, 10)
		Additive & subtractive patterns (within 5)
		Shape patterns
Recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit	Repeating patterns	Exploring repeating numeric patterns
		Recognising repeating patterns
		Manipulating repeating patterns
		Extending repeating patterns
		Describing & creating repeating patterns
		Exploring repeating patterns with objects

3 Measurement

Outcome	Quests	Content
Compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning	Identify measurable attributes	Introducing the attribute of length
		Introducing the attribute of mass
	Compare lengths	Indirect comparisons of lengths
	Explore, compare & order capacity	Exploring capacity using informal units
		Comparing & ordering capacity, informal units
	Explore, compare & order mass	Comparing & ordering mass, informal units
Measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end	Explore & measure length	Exploring informal units of length & distance
Describe the duration and sequence of events using years, months, weeks, days and hours	Duration & sequence of events	Introducing the months of the year
		Working with years & months
		Comparing & sequencing intervals of time
		Describing duration

4 Space

Outcome	Quests	Content
Make, compare and classify familiar shapes; recognise familiar shapes and objects in the environment, identifying the similarities and differences between them	Introduction to two-dimensional shapes	Sorting quadrilaterals from other 2D shapes
		Comparing 2D shapes
Give and follow directions to move people and objects to different locations within a space	Position & direction	Position using left, right & ordinal numbers
		Giving directions to others

5 Statistics

Outcome	Quests	Content
Acquire and record data for categorical variables in various ways including using digital tools,	Gather & record data	Asking suitable questions for data collection
		Completing tally charts

objects, images, drawings, lists, tally marks and symbols		Gathering, sorting & recording data
Represent collected data for a categorical variable using one-to-one displays and digital tools where appropriate; compare the data using frequencies and discuss the findings	Represent & read data	Representing data in a simple display
		Reading simple data displays using objects
		Picture graphs
		Ordering category data

Year 1 – Activities

1 Number

Outcome	Topic	Activity Title
Recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts	Recognise, represent & order numbers	Going Up
		Going Down
		Counting Forwards
		Counting Backwards (counting backward in CAN)
		Before, After & Between to 100
		Arranging Numbers
		Number Lines
		Number Line Order
		Matching Numbers to 10
		Matching Numbers to 20
		Reading Numbers to 30
		Numbers from Words to Digits 2
		1st to 31st
		More, Less or the Same to 20
		Greater or Less to 100
		Order Numbers to 20
		1 to 30
		Compare Numbers to 20
		Compare Numbers to 50
		Compare Numbers to 100
Partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and ones	Place value to 2 digits	Making Teen Numbers
		Place Value 1
		Repartition Two-digit Numbers
		Nearest Ten?
Quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting	Count in groups	Making Numbers Count
		Making Big Numbers Count
		Grouping in Fives
		Grouping in Tens
Add and subtract numbers within 20, using physical and virtual materials, part-part-whole knowledge to 10 and a variety of calculation strategies	Add & subtract within 20	Model Addition
		Adding to 5
		Adding to Ten
		Adding to Make 5 and 10
		Commutative Property of Addition
		Addictive Addition
		Add 3 Numbers Using Bonds to 10
		Add 3 Single Digit Numbers
		Doubles and Near Doubles
		Model Subtraction
		Subtracting From 5

		Subtracting from Ten
		Subtracting from 20
		Simple Subtraction
		All about Ten
		All about Twenty
		Doubles and Halves to 10
		Doubles and Halves to 20
		Balance Numbers to 20
		1 More, 2 Less
Use mathematical modelling to solve practical problems involving additive situations, including simple money transactions; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problem	Add & subtract problems within 20	Who's got the Money?
		Adding to 10 Word Problems
		Add and Subtract Problems
		Problems: Addition and Subtraction
		Adding In Any Order
Use mathematical modelling to solve practical problems involving equal sharing and grouping; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problem	Multiply & divide by grouping	Share the Treasure
		Divide Into Equal Groups
		Fill the Jars
		Grouping in Twos
		Grouping in Fives
		Grouping in Tens

2 Algebra

Outcome	Topic	Activity Title
Recognise, continue and create pattern sequences, with numbers, symbols, shapes and objects, formed by skip counting, initially by twos, fives and tens	Skip Counting Patterns	Count by 2s, 5s and 10s
		Counting on a 100 grid
		Count Forward Patterns
		Count Backward Patterns
		Skip Counting
		Skip Counting with Coins
Recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit	Patterns	Simple Patterns
		Missing it!
		Colour Patterns
		Complete the Pattern
		Pattern Error

3 Measure

Outcome	Topic	Activity Title
Compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning	Measuring & comparing length	Comparing Length
		Comparing Volume
		Measuring length with blocks
		Filling Fast!
		Everyday Length
		Everyday Mass

		Balancing Objects
Measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end		
Describe the duration and sequence of events using years, months, weeks, days and hours	Measuring time	Days of the Week
		Days: After and Before
		Tomorrow and Yesterday (without scaffold)
		Weekdays and Weekends
		Tell Time to the Hour
		Hour Times

4 Space

Outcome	Topic	Activity Title
Make, compare and classify familiar shapes; recognise familiar shapes and objects in the environment, identifying the similarities and differences between them	Shape and space	Match the Solid 1
		Collect Simple Shapes
		Count Sides and Corners
		Where is it?
Give and follow directions to move people and objects to different locations within a space		Left or Right?

5 Statistics

Outcome	Topic	Activity Title
Represent collected data for a categorical variable using one-to-one displays and digital tools where appropriate; compare the data using frequencies and discuss the findings	Read, represent & interpret data	Read Graphs
		Picture Graphs: Who has the Goods?
		Picture Graphs: More or Less
		Picture Graphs: Single-Unit Scale
		Making Picture Graphs: With Scale
		Tallies

Year 2 – Skill Quests

1 Number

Outcome	Quests	Content
Recognise, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines	Count to 1000	Counting in ones up to 1000
		Identifying numbers before & after up to 1000
	Count in tens	Counting in tens with 2- & 3-digit numbers
		Finding numbers 10 before & 10 after, up to 1000
	Place value up to 3 digits	Reading & representing 3-digit numbers
		Identifying place value in 3-digit numbers
	Compare & order numbers to 1000	Comparing numbers to 1000
		Ordering numbers to 1000
Partition, rearrange, regroup and rename two- and three-digit numbers using standard and non-standard groupings; recognise the role of a zero digit in place value notation	Hundreds, tens & ones	Counting in hundreds, tens & ones
	Partition 2- & 3-digit numbers	Partitioning 3-digit numbers (standard)
		Partitioning 3-digit numbers (non-standard)
	Round numbers to nearest 100	Rounding numbers up to 1000 to the nearest 100
Recognise and describe one-half as one of 2 equal parts of a whole and connect halves, quarters and eighths through repeated halving	Halves & quarters	Finding half of a set or quantity (no symbols)
		Finding quarters of sets or shapes (no symbols)
		Finding halves & quarters (no symbols)
	Halves, quarters & eighths	Finding eighths of objects or shapes
		Finding halves, quarters & eighths of shapes
Add and subtract one- and two-digit numbers, representing problems using number sentences and solve using part-part-whole reasoning and a variety of calculation strategies	Add & subtract mental strategies to 100	Add & subtract by counting on/back up to 100
		Add & subtract using bridging to 10 up to 100
		Add & subtract using jump strategy
		Adding using place value up to 100
		Using mental strategies to add & subtract (to 100)
	Add & subtract strategies over 100	Adding using place value up to 200
		Adding & subtracting using place value

		Adding using place value (crossing a ten)
		Subtracting using addition
		Adding & subtracting using rounding & compensating
Multiply and divide by one-digit numbers using repeated addition, equal grouping, arrays and partitioning to support a variety of calculation strategies	Arrays & repeated addition	Using repeated addition to multiply
		Exploring arrays (no x symbol)
	Commutative property multiplication	Using the commutative property of multiplication
	Divide by sharing & grouping	Dividing by sharing & grouping
	Divide using repeated subtraction	Using repeated subtraction to divide
Use mathematical modelling to solve practical problems involving additive and multiplicative situations, including money transactions; represent situations and choose calculation strategies; interpret and communicate solutions in terms of the situation	Add & subtract practical problems	Solving word problems with start or change unknown
		Writing simple number sentences
		Solving contextual problems
	Multiply & divide practical problems	Solving simple multiplication problems (2,5,10x)
		Solving contextual problems

2 Algebra

Outcome	Quests	Content
Recognise, describe and create additive patterns that increase or decrease by a constant amount, using numbers, shapes and objects, and identify missing elements in the pattern	Addition & subtraction sequences	Identify, describe & continue number sequences
		Add or subtract patterns (within 10) up to 100
		Additive visual patterns
Recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts	Addition & subtraction relationship	Finding fact families for addition & subtraction
	Addition & subtraction facts to 20	Adding & subtracting within 20 fluently
		Number bonds to 20
Recall and demonstrate proficiency with multiplication facts for twos; extend and apply facts to develop the related division facts using doubling and halving	Multiplication & division facts for 2	Recalling & using multiplication facts for 2
		Recalling & using division facts for 2
		Multiplying & dividing by 2

3 Measurement

Outcome	Quests	Content
Measure and compare objects based on length, capacity and mass using appropriate uniform informal	Understand & measure length	Comparing & ordering lengths using informal units
	Understand & measure capacity & volume	Estimate & measure capacity using informal units

units and smaller units for accuracy when necessary		Comparing & ordering volume
	Understand & measure mass	Comparing & ordering mass using informal units
Identify common uses and represent halves, quarters and eighths in relation to shapes, objects and events	Understand halves, quarters & eighths	Finding half of a set or quantity
		Finding quarters of a set or quantity
		Finding eighths of a set or quantity
Identify the date and determine the number of days between events using calendars	Months of the year	Months of the year
	Use a calendar	Using a calendar to identify the date
		Using calendars to solve simple problems
Recognise and read the time represented on an analog clock to the hour, half-hour and quarter-hour	Recognise & read time up to quarter hour	Telling time to the hour & half hour (analogue)
		Telling time to the hour & half hour (digital)
		Telling time to the half & quarter hour
Identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations	Turns of shapes	Turns of shapes

4 Space

Outcome	Quests	Content
Recognise, compare and classify shapes, referencing the number of sides and using spatial terms such as “opposite”, “parallel”, “curved” and “straight”	Recognise & classify 2D shapes	Identifying, sorting & naming octagons
		Identifying, sorting & naming pentagons
		Identifying, sorting & naming hexagons
		Identifying & naming simple 2D shapes
		Comparing, describing & sorting simple 2D shapes
		Representing & describing regular polygons
	Identify types of lines	Identifying vertical & horizontal lines
		Identifying parallel lines
	Recognise & classify 3D objects	Exploring surfaces & faces
		Recognising & describing spheres
		Recognising & describing cones
		Recognising & describing cubes
		Recognising & describing cylinders

		Recognising, sorting & naming 3D objects
		Recognising & describing prisms (no formal names)
		Comparing 2D shapes & 3D objects
		Identifying faces, edges & vertices on 3D objects
		Faces, edges, vertices & surfaces of 3D objects
Locate positions in two-dimensional representations of a familiar space; move positions by following directions and pathways	Read maps	Reading simple maps

5 Statistics

Outcome	Quests	Content
Acquire data for categorical variables through surveys, observation, experiment and using digital tools; sort data into relevant categories and display data using lists and tables	Gather data	Answer questions related to simple data displays
Create different graphical representations of data using software where appropriate; compare the different representations, identify and describe common and distinctive features in response to questions	Create displays of data	Reading & interpreting simple picture graphs
		Representing & reading data in tables or lists
		Using a tally chart, table, picture graph

Year 2 – Activities

1 Number

Outcome	Topic	Activity Title
Recognise, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines	Read, write, compare & order numbers	Missing Numbers 1
		Numbers in Words
		Which is Bigger?
		Which is Smaller?
		Greater Than or Less Than?
		Concept of Zero
		Ascending Order
		Descending Order
		Number Lines
Partition, rearrange, regroup and rename two- and three-digit numbers using standard and non-standard groupings; recognise the role of a zero digit in place value notation	Place value	Place Value 2
		Place Value - Thousands
		Model Numbers
		Expanding Numbers
		Partition and Rename 1
		Place Value Partitioning
		Repartition Two-digit Numbers
Recognise and describe one-half as one of 2 equal parts of a whole and connect halves, quarters and eighths through repeated halving	Halves & quarters	Halves
		Is it Half? Halves and Quarters
		Doubles and Halves to 10
		Doubles and Halves to 20
		Doubles and Near Doubles
Add and subtract one- and two-digit numbers, representing problems using number sentences and solve using part-part-whole reasoning and a variety of calculation strategies	Add & Subtract	Model Addition
		Model Subtraction
		Adding to 2-digit Numbers
		Complements to 10, 20, 50
		Complements to 50 and 100
		Add 3 Numbers: Bonds to Multiples of 10
		Magic Mental Addition
		Subtract Tens
		Related Facts 1
		Partition Puzzles 1
Multiply and divide by one-digit numbers using repeated addition, equal grouping, arrays and partitioning to support a variety of calculation strategies	Multiplication & Division	Arrays 1
		Arrays 2
		Model Multiplication to 5 × 5
		Counting by Twos
		Counting by Fives
		Counting by Tens
		Count by 2s, 5s and 10s
		Dividing Twos
		Dividing Fives
		Dividing Tens
		Skip Counting with Coins

Use mathematical modelling to solve practical problems involving additive and multiplicative situations, including money transactions; represent situations and choose calculation strategies; interpret and communicate solutions in terms of the situation	Problems with four operations	Word Problems: Add and Subtract
		Problems: Add and Subtract 1
		Problems: Times and Divide
		How much Change?

2 Algebra

Outcome	Topic	Activity Title
Recognise, describe and create additive patterns that increase or decrease by a constant amount, using numbers, shapes and objects, and identify missing elements in the pattern	Algebra-Patterns & missing numbers	Increasing Patterns
		Decreasing Patterns
		Odd or Even
		Pattern Error
		Missing Numbers
		Fact Families: Add and Subtract
Recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts		Balance Additions to 20
Recall and demonstrate proficiency with multiplication facts for twos; extend and apply facts to develop the related division facts using doubling and halving	Halves & quarters	Halves
		Is it Half?
		Halves and Quarters
		Doubles and Halves to 10
		Doubles and Halves to 20
		Doubles and Near Doubles

3 Measurement

Outcome	Topic	Activity Title
Measure and compare objects based on length, capacity and mass using appropriate uniform informal units and smaller units for accuracy when necessary	Measure informally	Measuring Length with Blocks
		Compare length
		Balancing Act
		Comparing Volume
		How Full?
		Halve it!
Identify the date and determine the number of days between events using calendars	Days, weeks, months & calendars	Months of the Year
		Months After and Before
		Seasons (AU/NZ)
		Using a Calendar
		Tomorrow and Yesterday (without scaffold)
		Weekdays and Weekends

Recognise and read the time represented on an analogue clock to the hour, half-hour and quarter-hour	Time to Half & Quarter hour	Tell Time to the Half Hour
		Tell Time to the Half Hour (UK)
		Quarter To and Quarter Past
Identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations	Shape space & measure	What Line am I?
		Sides, Angles and Diagonals
		Collect the Polygons
		Collect the Objects
		Map Coordinates
		Where is it?
		Left or Right?

4 Space

Outcome	Topic	Activity Title
Recognise, compare and classify shapes, referencing the number of sides and using spatial terms such as “opposite”, “parallel”, “curved” and “straight”	Shape, space & measure	What Line am I?
		Sides, Angles and Diagonals
		Collect the Polygons
		Collect the Objects
		Map Coordinates
		Where is it?
		Left or Right?
Locate positions in two-dimensional representations of a familiar space; move positions by following directions and pathways		

5 Statistics

Outcome	Topic	Activity Title
Acquire data for categorical variables through surveys, observation, experiment and using digital tools; sort data into relevant categories and display data using lists and tables	Tables & Lists	Sorting Data
		Sort It
		Interpreting Tables
		Read Graphs
		Picture Graphs: Who has the Goods?
		Picture Graphs: More or Less
		Making Picture Graphs: With Scale
		Tallies
Create different graphical representations of data using software where appropriate; compare the different representations, identify and describe common and distinctive features in response to questions		

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