

Mathletics

Australian Capital Territory - Australian Curriculum v9

Activities (Courses) and Skill Quests



Years F - 2
January, 2025

Mathletics

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Activities (Courses) & Skill Quests
January 2025

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Foundation

1 Number

AC9MFN01 name, represent and order numbers including zero to at least 20, using physical and virtual materials and numerals	
Course Topics	Activities
Numbers to 10	Count to 5
	How Many?
	Concept of zero
	Matching numbers to 10
	Ordinal numbers
Numbers to 20	Making teen numbers
	Counting up to 20
	Counting Back Within 20
Numbers to 30	Reading numbers to 30

AC9MFN02 recognise and name the number of objects within a collection up to 5 using subitising	
Course Topics	Activities
Numbers to 10	Dot Display
Numbers to 20	Matching numbers to 20

AC9MFN03 quantify and compare collections to at least 20 using counting and explain or demonstrate reasoning	
Course Topics	Activities
Numbers to 10	Order Numbers to 10
	More, less or the same to 10
Numbers to 20	Before, After and Between to 20
	Order Numbers to 20
	More, less or the same to 20
Numbers to 30	1 to 30
	1st to 31st

AC9MFN04 partition and combine collections up to 10 using part-part-whole relationships and subitising to recognise and name the parts	
Course Topics	Activities
Partition & combine	How many dots?
	Adding to make 5 and 10

AC9MFN05	
represent practical situations involving addition, subtraction and quantification with physical and virtual materials and use counting or subitising strategies	
Course Topics	Activities
Partition & combine	Add and subtract using graphs

AC9MFN06	
represent practical situations that involve equal sharing and grouping with physical and virtual materials and use counting or subitising strategies	
Course Topics	Activities
Equal sharing & grouping	Share the treasure
	Divide into equal groups
	Fill the jars

2 Algebra

AC9MFA01	
recognise, copy and continue repeating patterns represented in different ways	
Course Topics	Activities
Patterns	Simple Patterns
	Missing it!
	Colour Patterns
	Complete the Pattern
	Pattern Error

3 Measurement

AC9MFM01	
identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparisons and communicating reasoning	
Course Topics	Activities
Measurement	Everyday Length
	Comparing Length
	Which Holds More?
	Balancing Act

AC9MFM02	
sequence days of the week and times of the day including morning, lunchtime, afternoon and night time, and connect them to familiar events and actions	
Course Topics	Activities
Time	Days of the Week
	Days: After and Before
	Weekdays and Weekends
	Tomorrow and Yesterday (Scaffolded)

4 Space

AC9MFSP01	
sort, name and create familiar shapes; recognise and describe familiar shapes within objects in the environment, giving reasons	
Course Topics	Activities
Shape & position	Match the Solid 1
	Collect Simple Shapes

AC9MFSP02	
describe the position and location of themselves and objects in relation to other people and objects within a familiar space	
Course Topics	Activities
Shape & position	Where is it?

5 Statistics

AC9MFST01	
collect, sort and compare data represented by objects and images in response to given investigative questions that relate to familiar situations	
Course Topics	Activities
Simple data	Same and Different
	Sort It
	Comparing groups of objects

Year 1

1 Number

AC9M1N01	
Recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts	
Course Topics	Activities
Recognise, represent & order numbers	Going Up
	Going Down
	Counting Forwards
	Counting Backwards
	Before, After & Between to 100
	Arranging Numbers
	Number Lines
	Number Line Order
	Matching Numbers to 10
	Matching Numbers to 20
	Reading Numbers to 30
	1st to 31 st
	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	
Topics	Skill Quests
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 31 st	Identifying ordinal numbers up to 31 st

AC9M1N02	
Partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and ones	
Course Topics	Activities
Place value to 2 digits	Making Teen Numbers
	Place Value 1

	Repartition Two-digit Numbers
	Nearest Ten?
Topics	Skill Quests
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
Partition 2-digit numbers	Partitioning 2-digit numbers (standard)
	Partitioning 2-digit numbers (non-standard)

AC9M1N03	
Quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting	
Course Topics	Activities
Count in groups	Making Numbers Count
	Making Big Numbers Count
Topics	Skill Quests
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

AC9M1N04	
Add and subtract numbers within 20, using physical and virtual materials, part-part-whole knowledge to 10 and a variety of calculation strategies	
Course Topics	Activities
Add & subtract within 20	Model Addition
	Adding to 5
	Adding to Ten
	Adding to Make 5 and 10
	Commutative Property of Addition
	Additive 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	

Topics	Skill Quests
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)
Explore equality & inequality	Adding compatible numbers (doubles or bonds to 10)
	Exploring equality & inequality up to 10 & 20

AC9M1N05	
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	
Course Topics	Activities
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
Topics	Skill Quests
Add & subtract practical problems	Solving addition & subtraction word problems to 20

AC9M1N06	
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	
Course Topics	Activities
Multiply & divide by grouping	Share the Treasure
	Divide Into Equal Groups
	Fill the Jars
	Grouping in Twos
	Grouping in Fives
	Grouping in Tens
Topics	Skill Quests
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

AC9M1A01	
Recognise, continue and create pattern sequences, with numbers, symbols, shapes and objects, formed by skip counting, initially by twos, fives and tens	
Course Topics	Activities
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
Topics	Skill Quests
Pattern sequences	Relating number & object patterns
	Exploring number patterns (1, 2, 5, 10)
	Additive & subtractive patterns (within 5)
	Shape patterns

AC9M1A02	
Recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit	
Course Topics	Activities
Patterns	Simple Patterns
	Missing it!
	Colour Patterns
	Complete the Pattern
	Pattern Error
Topics	Skill Quests
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

AC9M1M01	
Compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning	
Course Topics	Activities
Measuring & comparing length	Comparing Length
	Comparing Volume
	Filling Fast!
	Everyday Mass
	Balancing Objects

Topics	Skill Quets
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

AC9M1M02	
Measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end	
Course Topics	Activities
	Measuring length with blocks
	Everyday Length
Topics	Skill Quets
Explore & measure length	Exploring informal units of length & distance

AC9M1M03	
Describe the duration and sequence of events using years, months, weeks, days and hours	
Course Topics	Activities
Measuring time	Days of the Week
	Days: After and Before
	Tomorrow and Yesterday (without scaffold)
	Weekdays and Weekends
	Set Time to the Hour
	Hour Times
Topics	Skill Quets
Duration & sequence of events	Introducing the months of the year
	Working with years & months
	Comparing & sequencing intervals of time
	Describing duration

4 Space

AC9M1SP01	
Make, compare and classify familiar shapes; recognise familiar shapes and objects in the environment, identifying the similarities and differences between them	
Course Topics	Activities
Shape and space	Match the Solid 1
	Collect Simple Shapes
	Count Sides and Corners
	Where is it?
Topics	Skill Quets
Introduction to two-dimensional shapes	Sorting quadrilaterals from other 2D shapes
	Comparing 2D shapes

AC9M1SP02	
Give and follow directions to move people and objects to different locations within a space	
Course Topics	Activities
Shape and space	Left or Right?
	Halves
	Is it Half?
Topics	Skill Quests
Position & direction	Position using left, right & ordinal numbers
	Giving directions to others

5 Statistics

AC9M1ST01	
Acquire and record data for categorical variables in various ways including using digital tools, objects, images, drawings, lists, tally marks and symbols	
Course Topics	Activities
Teacher directed	
Topics	Skill Quests
Gather & record data	Asking suitable questions for data collection
	Completing tally charts
	Gathering, sorting & recording data

AC9M1ST02	
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	
Course Topics	Activities
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
Topics	Skill Quests
Represent & read data	Representing data in a simple display
	Reading simple data displays using objects
	Picture graphs
	Ordering category data

Year 2

1 Number

AC9M2N01	
Recognise, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines	
Course Topics	Activities
Read, write, compare & order numbers	Missing Numbers 1
	Which is Bigger?
	Which is Smaller?
	Greater Than or Less Than?
	Concept of Zero
	Ascending Order
	Descending Order
Number Lines	
Topics	Skill Quests
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

AC9M2N02	
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	
Course Topics	Activities
Place value	Place Value 2
	Place Value to Thousands
	Model Numbers
	Expanding Numbers
	Partition and Rename 1
	Place Value Partitioning
	Repartition Two-digit Numbers
Topics	Skill Quests
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

AC9M2N03	
Recognise and describe one-half as one of 2 equal parts of a whole and connect halves, quarters and eighths through repeated halving	
Course Topics	Activities
Halves & quarters	Halves
	Is it Half?
	Halves and Quarters
	Doubles and Halves to 10
	Doubles and Halves to 20
	Doubles and Near Doubles
Topics	Skill Quests
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

AC9M2N04	
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	
Course Topics	Activities
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
Topics	Skill Quests
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

AC9M2N05	
Multiply and divide by one-digit numbers using repeated addition, equal grouping, arrays and partitioning to support a variety of calculation strategies	
Course Topics	Activities
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
Topics	Skill Quests
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

AC9M2N06	
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	
Course Topics	Activities
Problems with four operations	Word Problems: Add and Subtract
	Problems: Add and Subtract
	How much Change?
Topics	Skill Quests
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

AC9M2A01	
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	
Course Topics	Activities
Algebra-Patterns & missing numbers	Increasing Patterns
	Decreasing Patterns
	Odd or Even
	Pattern Error
Topics	Skill Quests
Addition & subtraction sequences	Identify, describe & continue number sequences
	Add or subtract patterns (within 10) up to 100
	Additive visual patterns

AC9M2A02	
Recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts	
Course Topics	Activities
Algebra-Patterns & missing numbers	Missing Numbers
	Fact Families: Add and Subtract
	Balance Additions to 20
Topics	Skill Quests
Addition & subtraction relationship	Finding fact families for addition & subtraction
Addition & subtraction facts to 20	Adding & subtracting within 20 fluently
	Number bonds to 20

AC9M2A03	
Recall and demonstrate proficiency with multiplication facts for twos; extend and apply facts to develop the related division facts using doubling and halving	
Course Topics	Activities
Halves & quarters	Counting by Twos
	Doubles and Halves to 10
	Doubles and Halves to 20
	Doubles and Near Doubles
Multiplication & division	Counting by Twos
Topics	Skill Quests
Multiplication & division facts for 2	Recalling & using multiplication facts for 2
	Recalling & using division facts for 2
	Multiplying & dividing by 2

3 Measurement

AC9M2M01	
Measure and compare objects based on length, capacity and mass using appropriate uniform informal units and smaller units for accuracy when necessary	
Course Topics	Activities
Measure informally	Measuring Length with Blocks
	Compare length
	Balancing Act
	Comparing Volume
Topics	Skill Quests
Understand & measure length	Comparing & ordering lengths using informal units
Understand & measure capacity & volume	Estimate & measure capacity using informal units
	Comparing & ordering volume
Understand & measure mass	Comparing & ordering mass using informal units

AC9M2M02	
Identify common uses and represent halves, quarters and eighths in relation to shapes, objects and events	
Course Topics	Activities
Measure informally	How Full?
	Halve it!
Topics	Skill Quests
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
	Practical situations

AC9M2M03	
Identify the date and determine the number of days between events using calendars	
Course Topics	Activities
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
Topics	Skill Quests
Months of the year	Months of the year
Use a calendar	Using a calendar to identify the date
	Using calendars to solve simple problems

AC9M2M04	
Recognise and read the time represented on an analog clock to the hour, half-hour and quarter-hour	
Course Topics	Activities
Time to Half & Quarter hour	Tell Time to the Half Hour
	Set Time to the Half Hour
	Quarter To and Quarter Past
Topics	Skill Quests
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

AC9M2M05	
Identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations	
Course Topics	Activities
Shape space & measure	Sides, Angles and Diagonals
Topics	Skill Quests
Turns of shapes	Turns of shapes

4 Space

AC9M2SP01	
Recognise, compare and classify shapes, referencing the number of sides and using spatial terms such as “opposite”, “parallel”, “curved” and “straight”	
Course Topics	Activities
Shape space & measure	Collect the Polygons
	Collect the Objects
Topics	Skill Quests
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

AC9M2SP02	
Locate positions in two-dimensional representations of a familiar space; move positions by following directions and pathways	
Course Topics	Activities
Shape space & measure	Map Coordinates
	Where is it?
	Left or Right?
Topics	Skill Quests
Read maps	Reading simple maps

5 Statistics

AC9M2ST01	
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	
Course Topics	Activities
Tables & Lists	Sorting Data
	Sort It
	Interpreting Tables
	Read Graphs

Topics	Skill Quests
Gather data	Answer questions related to simple data displays

AC9M2ST02	
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	
Course Topics	Activities
Tables & Lists	Picture Graphs: Who has the Goods?
	Picture Graphs: More or Less
	Making Picture Graphs: With Scale
	Tallies
Topics	Skill Quests
Create displays of data	Reading & interpreting simple picture graphs
	Representing & reading data in tables or lists
	Using a tally chart, table, picture graph



For more information about Mathletics,
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