# Mathletics South Australia Australian Curriculum v9

Activities (Courses) and Skill Quests





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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 Topic	Activities Title
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 Topic	Activities Title
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 Topic	Activities Title
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	Reading 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 Topic	Activities Title
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 Topic	Activities Title
Partition & combine	Add and subtract using graphs

AC9MFN06	
represent practical situations that involve equal sharing and grouping with physical and virtual	
materio	als and use counting or subitising strategies
Course Topic	Activities Title
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 Topic	Activities Title
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 c	duration, using direct comparisons and communicating reasoning
Course Topic	Activities Title
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 Topic	Activities Title
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 Topic	Activities Title
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 Topic	Activities Title
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 Topic	Activities Title	
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, number lines and charts		
Skill Quests	Skills	
Count numbers to 120		
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	
Deniel 9 write reveals are to 100	Counting in tens & ones	
Read & write numbers to 100	Reading & writing 2-digit numbers	
Compare & order numbers to 100	Comparing numbers to 100	
Daniel weite 0 and manual are to 200	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	
Course Topic	Activities Title	
Recognise, represent & order	Going Up	
numbers	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	
	Numbers from Words to Digits 2	
	1st to 31st	
	1st to 31st More, Less or the Same to 20	
	1st to 31st More, Less or the Same to 20 Greater or Less to 100	
	1st to 31st More, Less or the Same to 20 Greater or Less to 100 Order Numbers to 20	
	1st to 31st  More, Less or the Same to 20  Greater or Less to 100  Order Numbers to 20  1 to 30	
	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	
	1st to 31st More, Less or the Same to 20 Greater or Less to 100 Order Numbers to 20 1 to 30	

AC9M1N02	
Partition one- and two-digit numbers in different ways using physical and virtual materials,	
including partitioning two-digit numbers into tens and ones	
Skill Quests	Skills
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)
Course Topic	Activities Title
Place value to 2 digits	Making Teen Numbers
	Place Value 1
	Repartition Two-digit Numbers
	Nearest Ten?

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

AC9M1N04	
Add and subtract numbers within 20, using physical and virtual materials, part-part-whole	
knowledge to 10 and a variety of calculation strategies	
Skill Quests	Skills
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
Course Topic	Activities Title
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

#### **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

Skill Quests	Skills
Add & subtract practical problems	Solving addition & subtraction word problems to 20
Course Topic	Activities Title
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

#### **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

Skill Quests	Skills
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
Course Topic	Activities Title
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

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

AC9M1A02  Recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit	
Skill Quests	Skills
Repeating patterns	Exploring repeating numeric patterns
	Recognising repeating patterns
	Manipulating repeating patterns
	Extending repeating patterns
	Describing & creating repeating patterns
	Exploring repeating patterns with objects
Course Topic	Activities Title
Patterns	Simple Patterns
	Missing it!
	Colour Patterns
	Complete the Pattern
	Pattern Error

#### 3 Measurement

AC9M1M01  Compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning	
Skill Quests	Skills
Identify measurable attributes	Introducing the attribute of length
	Introducing the attribute of mass
Compare lengths	Indirect comparisons of lengths
Explore, compare & order	Exploring capacity using informal units
capacity	Comparing & ordering capacity, informal units
Explore, compare & order mass	Comparing & ordering mass, informal units
Course Topic	Activities Title
Measuring & comparing length	Comparing Length
	Comparing Volume
	Measuring length with blocks
	Filling Fast!
	Everyday Length
	Everyday Mass
	Balancing Objects

AC9M1M02  Measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end	
Skill Quests Skills	
Explore & measure length	Exploring informal units of length & distance
Course Topic	Activities Title
Measuring & comparing length	Comparing Length
	Comparing Volume
	Measuring length with blocks
	Filling Fast!
	Everyday Length
	Everyday Mass
	Balancing Objects

AC9M1M03	
Describe the duration and sequence of events using years, months, weeks, days and hours	
Skill Quests	Skills
Duration & sequence of events	Introducing the months of the year
	Working with years & months
	Comparing & sequencing intervals of time
	Describing duration
Course Topic	Activities Title
Course Topic  Measuring time	Activities Title  Days of the Week
	Days of the Week
	Days of the Week Days: After and Before
	Days of the Week Days: After and Before Tomorrow and Yesterday (without scaffold)

## 4 Space

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

AC9M1SP02  Give and follow directions to move people and objects to different locations within a space	
Skill Quests Skills	
Position & direction	Position using left, right & ordinal numbers
	Giving directions to others
Course Topic	Activities Title
Shape and space	Match the Solid 1
	Collect Simple Shapes
	Count Sides and Corners
	Where is it?
	Left or Right?

## **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	
Skill Quests	Skills
Gather & record data	Asking suitable questions for data collection
	Completing tally charts
Gathering, sorting & recording data	
Course Topic	Activities Title
Teacher directed	

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

## 1 Number

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

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	
Skill Quests	Skills
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
	5
Course Topic	Activities Title
Course Topic Place value	-
	Activities Title
	Activities Title Place Value 2
	Activities Title Place Value 2 Place Value - Thousands
	Activities Title  Place Value 2  Place Value - Thousands  Model Numbers
	Activities Title  Place Value 2  Place Value - Thousands  Model Numbers  Expanding Numbers

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

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	
Skill Quests	Skills
Add & subtract mental strategies to	Add & subtract by counting on/back up to 100
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
Course Topic	Activities Title
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

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

#### 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

strategies; interpret and communicate solutions in terms of the situation	
Skill Quests	Skills
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
Course Topic	Activities Title
Problems with four operations	Word Problems: Add and Subtract
	Problems: Add and Subtract 1
	Problems: Times and Divide
	How much Change?

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

AC9M2A02  Recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts	
Skill Quests	Skills
Addition & subtraction relationship	Finding fact families for addition & subtraction
Addition & subtraction facts to 20	Adding & subtracting within 20 fluently
	Number bonds to 20
Course Topic	Activities Title
Algebra-Patterns & missing numbers	Increasing Patterns
	Decreasing Patterns
	Odd or Even
	Pattern Error
	Missing Numbers
	Fact Families: Add and Subtract
	Balance Additions 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	
Skill Quests	Skills
Multiplication & division facts for 2	Recalling & using multiplication facts for 2
	Recalling & using division facts for 2
	Multiplying & dividing by 2
Course Topic	Activities Title
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

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

AC9M2M02  Identify common uses and represent halves, quarters and eighths in relation to shapes, objects	
Skill Quests Skills	
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
	, ,
Course Topic	Activities Title
Course Topic  Measure informally	Activities Title  Measuring Length with Blocks
	Measuring Length with Blocks
	Measuring Length with Blocks Compare length
	Measuring Length with Blocks Compare length Balancing Act

AC9M2M03	
Identify the date and determine the number of days between events using calendars	
Skill Quests	Skills
Months of the year	Months of the year
Use a calendar	Using a calendar to identify the date
	Using calendars to solve simple problems
Course Topic	Activities Title
Days, weeks, months &	Months of the Year
calendars	Months After and Before
	Seasons (AU/NZ)
	Using a Calendar
	Tomorrow and Yesterday (without scaffold)
	Weekdays and Weekends

AC9M2M04  Recognise and read the time represented on an analog clock to the hour, half-hour and quarter-hour	
Skill Quests	Skills
Recognise & read time up to	Telling time to the hour & half hour (analogue)
quarter hour	Telling time to the hour & half hour (digital)
	Telling time to the half & quarter hour
Course Topic	Activities Title
Time to Half & Quarter hour	Tell Time to the Half Hour
	Tell Time to the Half Hour (UK)
	Quarter To and Quarter Past

AC9M2M05 Identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations	
Skill Quests	Skills
Turns of shapes	Turns of shapes
Course Topic	Activities Title
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

#### AC9M2SP01 Recognise, compare and classify shapes, referencing the number of sides and using spatial terms such as "opposite", "parallel", "curved" and "straight" **Skill Quests** Skills 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 **Activities Title Course Topic** What Line am I? Shape space & measure Sides, Angles and Diagonals Collect the Polygons Collect the Objects **Map Coordinates** Where is it? Left or Right?

AC9M2SP02  Locate positions in two-dimensional representations of a familiar space; move positions by following directions and pathways	
Skill Quests	Skills
Read maps	Reading simple maps
Course Topic	Activities Title
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?

## **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	
Skill Quests	Skills
Gather data	Answer questions related to simple data displays
Course Topic	Activities Title
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

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	
Skill Quests	Skills
Create displays of data	Reading & interpreting simple picture graphs Representing & reading data in tables or lists Using a tally chart, table, picture graph
Course Topic	Activities Title
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



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