

Mathletics

NSW Curriculum 2022

Skill Quests & Activities



Stage 1

February, 2023

Mathletics

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NSW Curriculum – AC Aligned v9 2022

Skill Quests & Activities

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Stage 1 – Skill Quests

1 Number and Algebra

1.1 Representing Whole Numbers (A)

Outcome	Quests	Content
MA1-RWN-01 - applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers	Count by ones to 100	Counting forwards & backwards to 100
		Numbers before & after to 100
		Counting collections 0 to 100
	Count by ones to 200	Finding numbers on number line to 200
	Identify ordinal numbers	Identifying ordinal numbers up to 31st
	Number patterns	Odd & even number patterns to 100
		Counting by 2s to 50
		Counting by 2s to 100
	Compare & order numbers	Comparing & ordering numbers to 100
MA1-RWN-02 - reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values	Count collections by 10	Counting collections by 10
	Place value of 2-digit numbers	Identifying place value up to 2 digits
		Solving problems using place value up to 2 digits
		Model, read, write & count 2-digit numbers
	Partition 2-digit numbers	Partitioning 2-digit numbers
		Partitioning 2-digit numbers (non-standard)
	Round to nearest 10	Rounding to the nearest 10

1.2 Representing whole numbers (B)

Outcome	Quests	Content
MA1-RWN-01 - applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers	Read & write 3-digit numbers	Reading & representing 3-digit numbers
	Place value of 3-digit numbers	Identifying digit values in 3-digit numbers
	Compare & order numbers to 1000	Comparing & ordering numbers to 1000
	Whole numbers to 1000 counting in ones	Counting in ones to 1000
		Identifying numbers before & after up to 1000
	Count in tens to 1000	Counting in tens with 2- & 3-digit numbers
		Finding numbers 10 before & 10 after up to 1000

MA1-RWN-02 - reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values	Partition 3-digit numbers	Partitioning 3-digit numbers
		Partitioning 3-digit numbers (non-standard)
	Count in 100s, 10s & 1s	Counting in hundreds, tens & ones
	Round to the nearest 100	Rounding numbers up to 1000 to the nearest 100
	Whole number – money	Counting & ordering Australian notes & coins

1.3 Combine and separate quantities (A)

Outcome	Quests	Content
MA1-CSQ-01 - uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning	Count by one to add & subtract	Finding the difference between 2 numbers (to 20)
		Counting on & back to 20
		Counting on & back to 100
		Recording & solving number sentences to 20
	Addition & subtraction to 10	Modelling & recording combinations that make 5 – 9
		Recognising & recalling bonds to 10
	Use strategies to add & subtract	Doubles to 20
		Add & subtract near doubles or doubles
		Adding compatible numbers (doubles or bonds to 10)
		Add & subtract using bridging to 10 up to 100
	Explore equality & inequality to 20	Exploring equality & inequality to 10
		Exploring equality & inequality to 20
		Finding fact families for addition & subtraction
		Introducing the commutative property of addition

1.4 Combine and separate quantities (B)

Outcome	Quests	Content
MA1-CSQ-01 - uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning	Additive relations	Model & record combinations that make 11 – 20
		Adding zero to a number (up to 20)
		Finding fact families for addition & subtraction
		Commutative property for addition

	Add & subtract 2-digit numbers	Using the bar model within 20
		Adding 2-digit & 1-digit numbers
		Using mental strategies to add & subtract (to 100)
		Adding & subtracting tens from a 2-digit number
		Introducing place value to add & subtract (to 200)
		Using place value to add & subtract (to 200)
		Using place value (no models) to add & subtract
		Using place value to add (crossing a 10)
		Subtracting using addition
		Solving word problems with start or change unknown
	Use equality to solve problems	Determining a missing number
		Recognising equality to 18

1.5 Forming groups (A)

Outcome	Quests	Content
MA1-FG-01 - uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems	Count in multiples of 2, 3, 5, 10	Skip count by 2s
		Skip count by 3s
		Skip count by 5s
		Skip count by 10s
		Skip count by 2s, 5s & 10s
	Use equal grouping to multiply	Using groups & skip counting to solve problems
		Using "groups of" to represent multiplication
		Exploring "groups of" in arrays (no x symbol)
	Recognise & represent division	Sharing objects to divide
		Grouping objects to divide
	Explore halves	Finding half of a set or quantity (no symbols)
		Finding half of a set or quantity (symbols)
	Explore leftovers	Fair shares with/without remainders

1.6 Forming groups (B)

Outcome	Quests	Content
MA1-FG-01 - uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems	Multiplication as equal groups	Adding to multiply
		Using the commutative property of multiplication
	Halves, quarters & eighths	Exploring the meaning of fraction symbols

		Finding quarters of sets or shapes (no symbols)
		Finding quarters of sets or shapes (symbols)
		Finding halves & quarters (no symbols)
		Finding halves & quarters (symbols)
		Finding eighths of objects or shapes
		Finding halves, quarters & eighths of shapes
	Multiply & divide using equal groups	Dividing by sharing & grouping
		Using repeated subtraction to divide
		Solving simple multiplication problems (2, 5, 10x)

2 Measurement and space

2.1 Geometric measure (A) (Position)

Outcome	Quests	Content
MA1-GM-01 - represents and describes the positions of objects in familiar locations	Position & direction	Position using left & right
		Following directions
		Describing a path

2.2 Geometric measure (A) (Length)

Outcome	Quests	Content
MA1-GM-02 - measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres	Length using informal units	Measuring with informal units
MA1-GM-03 - creates and recognises halves, quarters and eighths as part measures of a whole length	Subdivision to find halves & quarters	Finding halves & quarters

2.3 Geometric measure (B) (Position)

Outcome	Quests	Content
MA1-GM-01 - represents and describes the positions of objects in familiar locations	Position with maps	Reading simple maps
		Following a path

2.4 Geometric measure (B) (Length)

Outcome	Quests	Content
MA1-GM-02 - measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres cords, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres	Compare lengths - informal units	Comparing & ordering lengths using informal units
	Measure using formal units	Introducing formal units for length (m)
		Measuring using formal units for length (cm)
MA1-GM-03 - creates and recognises halves, quarters and eighths as part measures of a whole length	Halves, quarters & eighths	Relating eighths to repeated halving

2.5 Two-dimensional spatial structure (A)

Outcome	Quests	Content
MA1-2DS-01 - recognises, describes and represents shapes including quadrilaterals and other common polygons	Two-dimensional shapes	Regular & irregular triangles
		Sorting quadrilaterals from other 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
		Patterns with shapes
MA1-2DS-02 - measures and compares areas using uniform informal units in rows and columns	Slides, flips & reflections	Translations of shapes
		Recognising line symmetry
		Comparing & measuring area using informal units

2.6 Two-dimensional spatial structure (B)

Outcome	Quests	Content
MA1-2DS-01 - recognises, describes and represents shapes including quadrilaterals and other common polygons	Turns (rotations)	Introducing turns
MA1-2DS-02 - measures and compares areas using uniform informal units in rows and columns	Measure area	Measuring & estimating area using square units

2.7 Three-dimensional spatial structure (A) (3D objects)

Outcome	Quests	Content
MA1-3DS-01 - recognises, describes and represents familiar three-dimensional objects	Recognise three-dimensional objects	Recognising & describing spheres
		Recognising & describing cubes
		Recognising & describing cylinders
		Recognising & describing prisms (no formal names)
	Explore three-dimensional objects	Exploring surfaces & faces

2.8 Three-dimensional spatial structure (A) (Volume)

Outcome	Quests	Content
MA1-3DS-02 - measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units	Volume & capacity	Exploring volume & capacity using informal units
		Measuring volume & capacity (informal units)
		Compare & order volume/capacity (informal units)

2.9 Three-dimensional spatial structure (B) (3D objects)

Outcome	Quests	Content
MA1-3DS-01 - recognises, describes and represents familiar three-dimensional objects	3D objects	Comparing 2D shapes & 3D objects
		Identifying faces, edges & vertices on 3D objects
		Describing & sorting 3D objects

2.10 Three-dimensional spatial structure (B) (Volume)

Outcome	Quests	Content
MA1-3DS-02 - measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units.	Measure volume & capacity	Measuring volume & capacity (informal units)
	Compare & order volume & capacity	Compare & order volume/capacity (informal units)
		Comparing & ordering volume using blocks
		Comparing & ordering volume using displacement

2.11 Non-spatial measure (A) (Mass)

Outcome	Quests	Content
MA1-NSM-01 - measures, records, compares and estimates the masses of objects using uniform informal units	Mass	Investigating mass with equal-arm balance

2.12 Non-spatial measure (A) (Time)

Outcome	Quests	Content
MA1-NSM-02 - describes, compares and orders durations of events, and reads half- and quarter-hour time	Time - calendars	Months of the year
		Know the seasons
		Using a calendar to identify the date

	Tell the time - half hours	Telling time to the hour & half hour (analogue)
		Telling time to the hour & half hour (digital)

2.13 Non-spatial measure B (Mass)

Outcome	Quests	Content
MA1-NSM-01 - measures, records, compares and estimates the masses of objects using uniform informal units	Compare & order mass	Comparing & ordering mass using informal units

2.14 Non-spatial measure B (Time)

Outcome	Quests	Content
MA1-NSM-02 - describes, compares and orders durations of events, and reads half- and quarter-hour time	Time – calendars	Using calendars to solve simple problems
	Time – formal units	Choosing appropriate units of time
		Using hours to measure time
		Using hours to measure time
		Using seconds to measure time
		Comparing hours, minutes & seconds
	Tell time - half & quarter hours	Telling time to the half & quarter hour

3 Statistics and Probability

3.1 Data (A)

Outcome	Quests	Content
MA1-DATA-01 - gathers and organises data, displays data in lists, tables and picture graphs	Ask questions to gather data	Asking suitable questions for data collection
	Track gathered data	Completing tally charts
MA1-DATA-02 - reasons about representations of data to describe and interpret the results	Represent data	Representing data in a simple display
		Ordering category data
	Describe data displays	Reading simple data displays using objects
		Answer questions related to simple data displays
		Reading & interpreting simple picture graphs

3.2 Data (B)

Outcome	Quests	Content
MA1-DATA-01 - gathers and organises data, displays data in lists, tables and picture graphs	Use tables & lists	Representing & reading data in tables or lists
MA1-DATA-02 - reasons about representations of data to describe and interpret the results	Create & interpret data displays	Using a tally chart, table or picture graph

3.3 Chance (A)

Outcome	Quests	Content
MA1-CHAN-01 - recognises and describes the element of chance in everyday events	Chance - possible outcomes	Using the everyday language of chance

3.4 Chance (B)

Outcome	Quests	Content
MA1-CHAN-01 - recognises and describes the element of chance in everyday events	Chance - basic language	Using basic probability language

Stage 1 – Activities

1 Number and Algebra

1.1 Representing whole numbers (A)

Outcome	Topic	Activity Title
MA1-RWN-01 - applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers	Match, name, arrange & order numbers	Concept of Zero
		Matching Numbers to 10
		Matching Numbers to 20
		Arranging Numbers
		Number Lines
		Going Up
		Going Down
		Before, After and Between to 20
		Before, After & Between to 100
		Ordinal Numbers
		Odd or Even
		Which is Bigger?
		Which is Smaller?
MA1-RWN-02 - reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values.	Place value to tens & teens	Making Teen Numbers
		Making Numbers Count
		Making Big Numbers Count
		Place Value 1
		Repartition Two-digit Numbers
		1 More, 2 Less
		Model Numbers

1.2 Representing whole numbers (B)

Outcome	Topic	Activity Title
MA1-RWN-01 - applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers	Ones, tens & hundreds	Count by Tens
		Nearest 10?
		Nearest 100?
		Place Value 2
		Partition and Rename 1
		Place Value Partitioning
		Smallest and largest numbers
MA1-RWN-02 - reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values.	Ones, tens & hundreds	Count by Tens
		Nearest 10?
		Nearest 100?
		Place Value 2
		Partition and Rename 1
		Place Value Partitioning
		Smallest and largest numbers
		1 More, 10 Less

1.3 Combining and separating quantities (A)

Outcome	Topic	Activity Title
MA1-CSQ-01 - uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning.	Addition & subtraction within 10	Model Addition
		Adding to Make 5 and 10
		Adding to 5
		Adding to Ten
		All about Ten
		Addition Facts
		Balance Numbers to 10
		Model Subtraction
		Subtracting From 5
		Subtracting from Ten
		Adding to 10 Word Problems
		Doubles and Halves to 10
		More, Less or the Same to 10

1.4 Combining and separating quantities (B)

Outcome	Topic	Activity Title
MA1-CSQ-01 - uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning.	Moving on with addition & subtraction	All about Twenty
		Related Facts 1
		Balance Numbers to 20
		Adding In Any Order
		Additive Addition
		Subtraction Facts to 18
		Subtract Tens
		10 More, 10 Less
		Doubles and Halves to 20
		Fact Families: Add and Subtract
		Add and Subtract Problems
		More, Less or the Same to 20

1.5 Forming groups (A)

Outcome	Topic	Activity Title
MA1-FG-01 - uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems.	Grouping & sharing patterns	Counting by Twos
		Counting by Fives
		Counting by Tens
		Share the Treasure
		Groups
		Fill the Jars
		Grouping in Twos
		Grouping in Fives
		Grouping in Tens
		Count by 2s, 5s and 10s
		Counting on a 100 grid
		Grouping in Threes

		Grouping in Fours
		Divide Into Equal Groups

1.6 Forming groups (B)

Outcome	Topic	Activity Title
MA1-FG-01 - uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems.	More grouping & sharing	Model multiplication to 5×5
		Multiplication Arrays
		Arrays 1
		Multiplication Turnarounds
		Dividing Twos
		Dividing Fives
		Dividing Tens
		Dividing Threes
		Dividing Fours

2 Measurement and Space

2.1 Geometric measure (A) (Position)

Outcome	Topic	Activity Title
MA1-GM-01 - represents and describes the positions of objects in familiar locations	Position	Where is it?

2.2 Geometric measure (A) (Length)

Outcome	Topic	Activity Title
MA1-GM-02 - measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres	Informal & formal length	Measuring Length

2.3 Geometric measure (B) (Length)

Outcome	Topic	Activity Title
MA1-GM-02 - measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres	Informal & formal length	Measuring Length

2.4 Two-dimensional spatial structure (A)

Outcome	Topic	Activity Title
MA1-2DS-01 - recognises, describes and represents shapes including quadrilaterals and other common polygons	Quadrilaterals & polygons	Simple Patterns
		Complete the Pattern
		Flip, Slide, Turn
		Shapes
		Symmetry
		Area of Shapes
MA1-2DS-02 - measures and compares areas using uniform informal units in rows and columns.	Quadrilaterals & polygons	Simple Patterns
		Complete the Pattern
		Flip, Slide, Turn
		Shapes
		Symmetry
		Area of Shapes

2.5 Two-dimensional spatial structure (B)

Outcome	Topic	Activity Title
MA1-2DS-01 - recognises, describes and represents shapes including quadrilaterals and other common polygons	Quadrilaterals & polygons	Simple Patterns
		Complete the Pattern
		Flip, Slide, Turn
		Shapes
		Symmetry
		Area of Shapes
MA1-2DS-02 - measures and compares areas using uniform informal units in rows and columns.	Quadrilaterals & polygons	Simple Patterns
		Complete the Pattern
		Flip, Slide, Turn
		Shapes
		Symmetry
		Area of Shapes

2.6 Three-dimensional spatial structure (A)(3D objects)

Outcome	Topic	Activity Title
MA1-2DS-01 - recognises, describes and represents shapes including quadrilaterals and other common polygons	3D objects	Match the Solid 1
		Match the Solid 2
		Relate Shapes and Solids
		How Many Faces?

2.7 Three-dimensional spatial structure (A)(Volume)

Outcome	Topic	Activity Title
MA1-3DS-02 - measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units.	Volume	How many blocks?
		Comparing Volume
		How Full?
		Which Holds More?
		Filling Fast!

2.8 Three-dimensional spatial structure (B) (3D objects)

Outcome	Topic	Activity Title
MA1-3DS-01 - recognises, describes and represents familiar three-dimensional objects	Faces, edges & vertices	How many Edges?
		How many Vertices?
		Faces, Edges and Vertices
		Faces, Edges, and Vertices 1

2.9 Three-dimensional spatial structure (B) (Volume)

Outcome	Topic	Activity Title
MA1-3DS-02 - measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units.	Volume	How many Blocks?
		Comparing Volume
		How Full?
		Which Holds More?
		Filling Fast!

2.10 Non-spatial measure (A) (Mass)

Outcome	Topic	Activity Title
MA1-NSM-01 - measures, records, compares and estimates the masses of objects using uniform informal units	Mass	Balancing Act
		Everyday Mass

2.11 Non-spatial measure (B) (Mass)

Outcome	Topic	Activity Title
MA1-NSM-01 - measures, records, compares and estimates the masses of objects using uniform informal units	Mass	Balancing Act
		Everyday Mass

2.12 Non-spatial measure (A) (Time)

Outcome	Topic	Activity Title
MA1-NSM-02 - describes, compares and orders durations of events, and reads half- and quarter-hour time.	Duration	Months of the Year
		Months After and Before
		Using a Calendar
		Seasons (AU/NZ)
		Hour Times
		Half Hour Times
		Tell Time to the Hour (UK)
		Tell Time to the Half Hour (UK)
		Quarter To and Quarter Past

2.13 Non-spatial measure (B) (Time)

Outcome	Topic	Activity Title
MA1-NSM-02 - describes, compares and orders durations of events, and reads half- and quarter-hour time.	Duration	Months of the Year
		Months After and Before
		Using a Calendar
		Seasons (AU/NZ)
		Hour Times
		Half Hour Times
		Tell Time to the Hour (UK)
		Tell Time to the Half Hour (UK)
		Quarter To and Quarter Past

3 Statistics and Probability

3.1 Data (A)

Outcome	Topic	Activity Title
MA1-DATA-01 - gathers and organises data, displays data in lists, tables and picture graphs	Gather, organise & interpret data	Tallies
		Read Graphs
		Picture Graphs: Who has the Goods?
		Making Picture Graphs: With Scale
		Picture Graphs: More or Less
		Picture Graphs: Single-Unit Scale
MA1-DATA-02 - reasons about representations of data to describe and interpret the results.	Gather, organise & interpret data	Tallies
		Read Graphs
		Picture Graphs: Who has the Goods?
		Making Picture Graphs: With Scale
		Picture Graphs: More or Less
		Picture Graphs: Single-Unit Scale

3.2 Data (B)

Outcome	Topic	Activity Title
MA1-DATA-01 - gathers and organises data, displays data in lists, tables and picture graphs	Gather, organise & interpret data	Tallies
		Read Graphs
		Picture Graphs: Who has the Goods?
		Making Picture Graphs: With Scale
		Picture Graphs: More or Less
		Picture Graphs: Single-Unit Scale
MA1-DATA-02 - reasons about representations of data to describe and interpret the results.	Gather, organise & interpret data	Tallies
		Read Graphs
		Picture Graphs: Who has the Goods?
		Making Picture Graphs: With Scale
		Picture Graphs: More or Less
		Picture Graphs: Single-Unit Scale

3.3 Chance (A)

Outcome	Topic	Activity Title
MA1-CHAN-01 - recognises and describes the element of chance in everyday events.	Probability	Will it Happen?
		Most Likely and Least Likely

3.4 Chance (B)

Outcome	Topic	Activity Title
MA1-CHAN-01 - recognises and describes the element of chance in everyday events.	Probability	Will it Happen?
		Most Likely and Least Likely