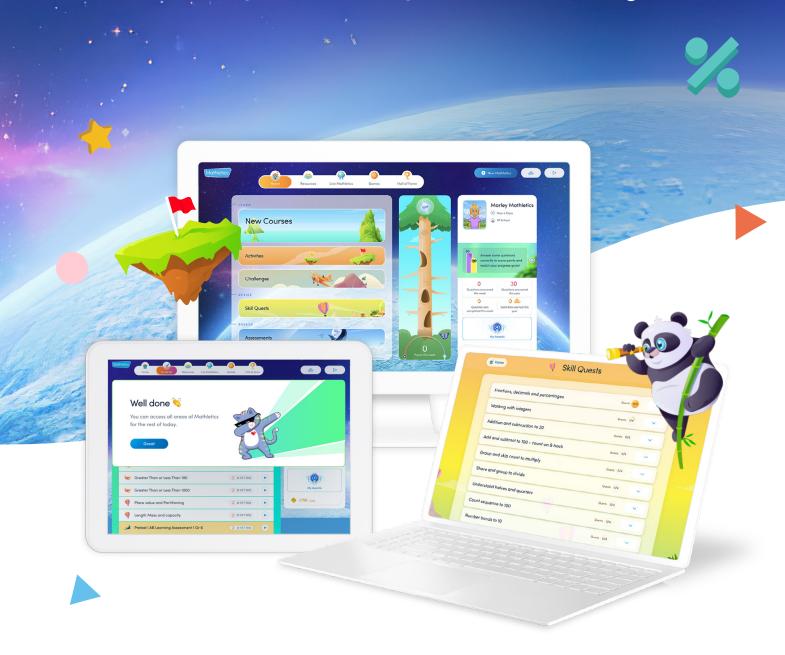
Mathletics New South Wales Curriculum

Activities (Courses) and Skill Quests



Stage 3, Years 5-6

April 2024



Year 5	3
Number and Algebra	3
Additive relations (A)	4
Multiplicative relations (A)	4
Representing quantity fractions (A)	6
Measurement and Space	7
Geometric measure (A)	7
Two-dimensional spatial structure (A)	7
Three-dimensional spatial structure(A)	8
Non spatial structure (A)	9
Statistics and Probability	10
Data (A)	10
Chance (A)	10
Year 6	11
Number and Algebra	11
Represents numbers (B)	11
Additive relations (B)	11
Multiplicative relations (B)	12
Representing quantity fractions (B)	13
Measurement and Space	15
Geometric measure (B)	15
Two-dimensional spatial structure (B)	16
Three-dimensional spatial structure(B)	16
Non spatial structure (B)	17
Statistics and Probability	18
Data (B)	18
Chance (B)	18

Year 5

Number and Algebra

Represents numbers (A)

MA3-RN-01 Applies an understanding of place value and the role of zero to represent the properties of numbers	
Skill Quests	Skills
Represent numbers of any	Representing & ordering numbers of any size
size	Rounding numbers to a specified place
	Partitioning numbers of any size
Course Topic	Activities Title
A. Whole Numbers	Numbers from Words to Digits 2
	Numbers from Words to Digits 3
	Place Value – Millions
	Place Value to Millions
	Place Value to Billions
	Equal, Less or Greater than?
	Comparing Numbers

MA3-RN-02	
	es and orders decimals up to 3 decimal places
Skill Quests	Skills
Compare & order decimals	Recognising decimals up to thousandths
	Partitioning decimals up to thousandths
	Comparing & ordering decimals up to thousandths
Course Topic	Activities Title
A. Decimals	Decimals from Words to Digits 1
	Decimals from Words to Digits 2
	Decimal Place Value
	Comparing Decimals 1
	Comparing Decimals
	Comparing Decimals 2
	Decimal Order
	Decimal Order 2
	Decimals on the Number Line
	Rounding Decimals 1

MA3-RN-03	
Determines percentages of quantities, and finds equivalent fractions and decimals for	
benchmark percentage values	
Skill Quests	Skills
Convert fraction, decimal &	Converting between decimals & fractions
percentage	Converting between fractions & percentages
	Converting between decimals & percentages

	Converting fractions, decimals & percentages
Calculate percentage of an	Calculating a percentage of an amount using 10%
amount	Calculating percentage discounts
Course Topic	Activities Title
Teacher directed	

Additive relations (A)

MA3-AR-01	
Selects and applies appropriate strategies to solve addition and subtraction problems	
Skill Quests	Skills
Add & subtract numbers of	Adding strategies with numbers of any size
any size	Subtracting strategies with numbers of any size
	Selecting efficient strategies to add & subtract
	Using rounding to estimate
	Checking the accuracy of answers
Add & subtract to 1 decimal	Adding decimals to 1 decimal place (models)
place	Adding decimals to 1 decimal place (no models)
	Subtracting decimals to 1 decimal place (models)
	Subtracting to 1 decimal place (no models)
	Adding & subtracting decimals to 1 decimal place
Add & subtract to 2 decimal	Adding decimals to 2 decimal places
places	Subtracting decimals to 2 decimal places
Course Topic	Activities Title
Teacher directed	

Multiplicative relations (A)

MA3-MR-01 Selects and applies appropriate strategies to solve multiplication and division problems	
Skill Quests	Skills
Use products, factors &	Determining products & factors
primes	Primes & composite numbers
Multiply by multiples of 10	Multiplying up to 4 digits by 100 & 1000
Multiply using double &	Using doubling & related facts to multiply by 2
halve strategy	Using doubling & related facts to multiply by 4
	Using doubling & related facts to multiply by 8
	Partitioning & compensating to double & halve
	Using double & halve to multiply
	Using double/halve or triple/third
Multiply up to 4 digits by 1	Multiplying using place value
digit	Multiplying using factorising
	Multiplying using the area model
	Multiplying using the round & compensate strategy
	Multiplying using an expanded algorithm
	Multiplying using a contracted algorithm
Multiply up to 4 digits by 2	Strategies to multiply by a 2-digit number
digits	
Division with remainders	Introducing division with remainders
Divide up to 4 digits by 1	Using known facts to divide by a 1-digit divisor
digit numbers	Partitioning to divide by a 1-digit divisor

	Using area models to divide by a 1-digit divisor
	Extended algorithm to divide 2 digits by 1 digit
	Extended algorithm to divide 3 digits by 1 digit
	Extended algorithm to divide 4 digits by 1 digit
	Contracted algorithm to divide 2 digits by 1 digit
	Contracted algorithm to divide 3 digits by 1 digit
	Contracted algorithm to divide 4 digits by 1 digit
	Solving division problems with 1-digit divisors
	Using estimation/rounding to check answers
Course Topic	Activities Title
A. Multiplication & division	Fact Families: Multiply and Divide
	Multiplication Turnarounds
	Missing Numbers: × and ÷ facts
	Times Tables
	Lowest Common Multiple
	Find the Factor
	Factors
	Highest Common Factor
	Prime or Composite?
	Solve Equations: Multiply, Divide 1
	Bar model × ÷
	Multiply 2 Digits Area Model
	Multiply 3 single-digit numbers
	Multiply Multiples of 10
	Multiply More Multiples of 10
	Multiplying Whole Numbers by 10, 100, and 1000
	Double and Halve to Multiply
	Mental Methods Multiplication 1
	- ·

	MA3-MR-02	
Constructs and completes number sentences involving multiplicative relations, applying the		
order of operations to calculations		
Skill Quests	Skills	
Multiplicative number	Finding unknown quantities - multiply/divide	
sentences	Introducing order of operations	
Course Topic	Activities Title	
B. Multiplication & division	Grid Methods 1	
	Grid Methods 2	
	Grid Methods 3	
	Equivalent Facts: Multiply	
	Division Facts to Twelve	
	Short Division	
	Multiply Decimals and Powers of 10	
	Estimate Quotients	
	Divide by Powers of 10	
	Table of Values	
	Decreasing Patterns	
	Patterns – Decreasing	
	Order of Operations 1 (BIDMAS)/Order of Operations 1 (BEDMAS)	
	Identifying Errors in Applying the Order of Operations	

Representing quantity fractions (A)

MA3-RQF-01 Compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10	
Skill Quests	Skills
Compare fractions	Identifying fractions equivalent to 1 whole
	Comparing & ordering common unit fractions
Add/subtract fractions:	Adding/subtracting a fraction to a whole number
same denominator	Adding/subtracting fractions: same denominator
	Adding/subtracting mixed numbers: same denominator
Course Topic	Activities Title
A. Fractions	Compare Fractions 1a
B. More fractions	Compare Fractions 2

MA3-RQF-02		
Determines 1/2, 1/4, 1/5, and 1/10 of measures and quantities		
Skill Quests	Skills	
Teacher directed	Teacher directed	
Course Topic	Activities Title	
Fractions	Add: Common Denominator	
	Subtract: Common Denominator	
	Common Denominator	
B. More fractions	Unit Fractions	
	One Take Fraction	
	Add Subtract Fractions 1	

Measurement and Space

Geometric measure (A)

MA3-GM-01	
Locates and describes points on a coordinate plane	
Skill Quests	Skills
Locate position in the first	Using the first quadrant to locate position
quadrant	Plotting coordinates in the first quadrant
Course Topic	Activities Title
A/B. Coordinate plane	Coordinate Graphs: 1st Quadrant
position	Ordered Pairs
	Horizontal and Vertical Change
	Transformations: Coordinate Plane

MA3-GM-02 Selects and uses the appropriate unit and device to measure lengths and distances including perimeters	
Skill Quests	Skills
Use appropriate measures	Selecting & using appropriate measures for length
for length	Comparing & ordering lengths
Calculate perimeter	Calculating the perimeter of rectangles
Course Topic	Activities Title
A. Length and perimeter	Kilometre Conversions
	Perimeter: Squares and Rectangles
	Perimeter: Triangles 2
	Perimeter Detectives 1

MA3-GM-03 Measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point	
Skill Quests	Skills
Measure & identify angles	Estimating, measuring & comparing angles
	Constructing & classifying angles
Course Topic	Activities Title
A/B Identifying angles	Estimating Angles
	Measuring Angles
	What Type of Angle?
	Classifying Angles

Two-dimensional spatial structure (A)

MA3-2DS-01	
Investigates and classifies two-dimensional shapes, including triangles and quadrilaterals	
based on their properties	
Skill Quests	Skills
Describe properties of 2D	Classifying 2D shapes & describe properties
shapes	

Course Topic	Activities Title
A. Classify Two-	Triangle Tasters
Dimensional shapes	Sides, Angles and Diagonals
	Plane Figure Terms
	Collect the Polygons

MA3-2DS-02 Selects and uses the appropriate unit to calculate areas, including areas of rectangles	
Skill Quests	Skills
Calculate area of rectangles	Using hectares & km² for area
	Calculating area of rectangles
Course Topic	Activities Title
A/B Area of rectangles &	Area: Squares and Rectangles
parallelograms	Calculate Areas of Squares and Rectangles
	Converting Units of Area
	Equal Areas

Three-dimensional spatial structure(A)

MA3-3DS-01 Visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, making connections to two-dimensional representations	
Skill Quests	Skills
Connect 3D with 2D	Naming prisms & pyramids
representations	Connecting prisms with their nets
	Connecting 3D objects with their nets
Course Topic	Activities Title
A. Prisms & pyramids	What Prism Am I?
	What Pyramid Am I?
	Prisms and Pyramids

MA3-3DS-02 Selects and uses the appropriate unit to estimate, measure and calculate volumes and		
	capacities	
Skill Quests	Skills	
Use appropriate units for	Using displacement for volume of irregular solids	
capacity	Using appropriate units for capacity (L & mL)	
Investigate volume using	Investigating volume using blocks	
blocks		
Course Topic	Activities Title	
A/B. Volume	Millilitres and Litres	
	Volume of Solids and Prisms - 1cm³ blocks	
	Volume: Rectangular Prisms 1	

Non spatial structure (A)

MA3-NSM-01 Selects and uses the appropriate unit and device to measure the masses of objects	
Skill Quests	Skills
Use appropriate units for	Choosing appropriate units for mass
mass	Decimal representations to metric system
Course Topic	Activities Title
A/B. Mass	Kilogram Conversions
	Grams and Kilograms
	Converting Units of Mass
	Mass Word Problems

MA3-NSM-02	
Measures and compares duration, using 12- and 24-hour time and am and pm notation	
Skill Quests	Skills
Use 12 & 24 hour time	Converting between 12 & 24 hour time
	Using timetables
Course Topic	Activities Title
A. Time	24 Hour Time
	Using Timetables
	Time Conversions: Whole Numbers 1
	Time Conversions: Whole Numbers 2
	Time Conversions: Simple Fractions

Statistics and Probability

Data (A)

MA3-DATA-01 Constructs graphs using many-to-one scales	
Skill Quests	Skills
Collect & display discrete	Collecting discrete data
data	Choosing & using appropriate tables/graphs
Course Topic	Activities Title
A. Displaying numerical	Tallies
data	Sorting Data
	Column Graphs

MA3-DATA-02 Interprets data displays, including timelines and line graphs	
Skill Quests	Skills
Interpret discrete data	Interpreting discrete data using various displays Interpreting line graphs
Course Topic	Activities Title
A. Interpret data	Interpreting Tables
	Reading from a Column Graph
	Line Graphs: Interpretation

Chance (A)

MA3-CHAN-01 Conducts chance experiments and quantifies the probability	
Skill Quests	Skills
List outcomes of probability experiments	Listing outcomes of equally likely experiments
Course Topic	Activities Title
A. Chance	How many Combinations?
	Counting Techniques 1
	What are the Chances?
	Introductory probability

Year 6

Number and Algebra

Represents numbers (B)

MA3-RN-01 Applies an understanding of place value and the role of zero to represent the properties of numbers	
Skill Quests	Skills
Represent numbers of any size	Representing & ordering numbers of any size
Represent integers	Locating & representing integers on a number line Interpreting integers in context
Course Topic	Activities Title
B. Locate Whole Numbers	Directed Numbers

MA3-RN-02	
Compares and orders decimals up to 3 decimal places	
Skill Quests	Skills
Compare & order decimals	Comparing & ordering decimals up to thousandths
Course Topic	Activities Title
Teacher directed	

MA3-RN-03 Determines percentages of quantities, and finds equivalent fractions and decimals for benchmark percentage values	
Skill Quests	Skills
Convert fraction, decimal & percentage	Converting fractions, decimals & percentages
Calculate percentage of an	Calculating a percentage of an amount using 10%
amount	Calculating percentage discounts
Course Topic	Activities Title
B. Decimals & Percentages	Modelling Percentages
	Percents and Decimals
	Calculating Percentages (Mental)
	Match Decimals and Percentages
	Complementary Percentages
	Percentage of an amount using Fractions (<100%)

Additive relations (B)

MA3-AR-01	
Selects and applies appropriate strategies to solve addition and subtraction problems	
Skill Quests	Skills
Solve problems with	Adding & subtracting to solve problems
numbers of any size	

Add & subtract to 2 decimal	Adding decimals to 2 decimal places
places	Subtracting decimals to 2 decimal places
	Adding & subtracting decimals to 2 decimal places
Add & subtract to 3 decimal	Adding & subtracting a whole & a decimal
places	Adding decimals to 3 decimal places (models)
	Adding decimals to 3 decimal places (no models)
	Subtracting decimals to 3 decimal places (models)
	Subtracting to 3 decimal places (no models)
Course Topic	Activities Title
A. Addition & subtraction	Magic Mental Addition/Mental Addition (US)
mentally & estimation	Magic Mental Subtraction/Mental Subtraction (US)
	Split Add and Subtract
	Pyramid Puzzles 1
	Pyramid Puzzles 2
	Partition Puzzles 1
	Partition Puzzles 1
	Addition Properties
	Estimation: Add and Subtract
	Estimate Sums
	Estimate Differences

Multiplicative relations (B)

MA3-MR-01	
Selects and applies appropriate strategies to solve multiplication and division problems	
Skill Quests	Skills
Multiply/divide to 4 digits by	Multiplying 4-digit numbers by up to 2 digits
2 digits	Dividing up to 4-digit numbers by 2 digits
2 digits	Selecting efficient strategies to multiply/divide
	Solving multiplication & division word problems
Multiply & divide decimals	Multiplying decimals by powers of 10
wattiply & divide decimals	Dividing decimals by powers of 10
Course Tonis	
Course Topic	Activities Title
B. Multiplication & division	Grid Methods 1
	Grid Methods 2
	Grid Methods 3
	Equivalent Facts: Multiply
	Division Facts to Twelve
	Short Division
	Multiply Decimals and Powers of 10
	Estimate Quotients
	Divide by Powers of 10
	Table of Values
	Decreasing Patterns
	Patterns – Decreasing
	Order of Operations 1 (BIDMAS)/Order of Operations 1
	(BEDMAS)
	Identifying Errors in Applying the Order of Operations

MA3-MR-02		
Constructs and completes i	Constructs and completes number sentences involving multiplicative relations, applying the	
р	order of operations to calculations	
Skill Quests	Skills	
Multiplicative number	Finding unknown quantities - multiply/divide	
sentences	Applying order of operations & grouping symbols	
Course Topic	Activities Title	
B. Multiplication & division	Grid Methods 1	
	Grid Methods 2	
	Grid Methods 3	
	Equivalent Facts: Multiply	
	Division Facts to Twelve	
	Short Division	
	Multiply Decimals and Powers of 10	
	Estimate Quotients	
	Divide by Powers of 10	
	Table of Values	
	Decreasing Patterns	
	Patterns – Decreasing	
	Order of Operations 1 (BIDMAS)/Order of Operations 1 (BEDMAS)	
	Identifying Errors in Applying the Order of Operations	

Representing quantity fractions (B)

MA3-RQF-01	
Compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10	
Skill Quests	Skills
Compare fractions: related	Recognising a fraction as division
denominators	Finding equivalent fractions & simplifying
	Comparing fractions with related denominators
	Building up to the whole from a fractional part
Add/sub fractions: related	Adding/subtracting fractions: related denominators
denominators	Adding/subtracting simple fractions: related
	Adding/subtracting mixed numbers: related
Course Topic	Activities Title
Teacher directed	

MA3-RQF-02	
Determines 1	1/2, 1/4, 1/5, and 1/10 of measures and quantities
Skill Quests	Skills
Calculate fraction of an	Calculating a fraction of a whole
amount	Solving word problems: fraction of an amount
Course Topic	Activities Title
More fractions	Compare Fractions 2
	Shading Equivalent Fractions
	Selecting Equivalent Fractions
	The Equivalent Fraction
	Equivalent Fraction Wall 1
	Equivalent Fraction Wall 2

	Equivalent Fractions on a Number Line 1
	Equivalent Fractions on a Number Line 2
	Counting with Fractions on a Number Line
	What Mixed Number Is Shaded?
	Fractions of a Collection 1
	Fractions of a Collection 2
	Fraction Fruit Sets 1
	Fraction Fruit Sets 2
	Fractions of a Collection

Measurement and Space

Geometric measure (B)

MA3-GM-01	
Locates and describes points on a coordinate plane	
Skill Quests	Skills
Locate position in the four	Using the four quadrants to locate position
quadrants	
Course Topic	Activities Title
A/B. Coordinate plane	Coordinate Graphs: 1st Quadrant
position	Ordered Pairs
	Horizontal and Vertical Change
	Transformations: Coordinate Plane

MA3-GM-02 Selects and uses the appropriate unit and device to measure lengths and distances including perimeters	
Skill Quests	Skills
Understand the metric	Using decimal representations for length
system for length	Converting between metric units for length
	Solving problems involving length
Course Topic	Activities Title
B. Application of	Converting Units of Length
measurement/length	Metres and Kilometres
	Perimeter: Triangles
	Perimeter Detectives 2
	Operations with Length

MA3-GM-03 Measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point	
Skill Quests	Skills
Identify angle relationships	Adjacent, complementary & supplementary angles
	Exploring angle relationships
Course Topic	Activities Title
A/B Identifying angles	Estimating Angles
	Measuring Angles
	What Type of Angle?
	Classifying Angles

Two-dimensional spatial structure (B)

MA3-2DS-01 Investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties	
Skill Quests	Skills
Transform 2-dimensional	Translating points on the Cartesian plane
shapes	Reflecting points on the Cartesian plane
	Rotating shapes & find the order of symmetry
	Creating patterns using transformations
	Combinations of transformations
Course Topic	Activities Title
B. Translation, reflection	Flip, Side, Turn
and rotation of 2D shapes	Transformations
	Rotational Symmetry
	Rotational Symmetry of Shapes

MA3-2DS-03	
Combines, splits and rearranges shapes to determine the area of parallelograms and triangles	
Skill Quests	Skills
Calculate area of shapes	Calculating area of composite shapes
	Calculating area of parallelograms
	Calculating area of triangles
Course Topic	Activities Title
A/B Area of rectangles &	Area: Parallelograms (Metric)
parallelograms	

Three-dimensional spatial structure(B)

MA3-3DS-01	
Visualises, sketches and constructs three-dimensional objects, including prisms and pyramids,	
making connections to two-dimensional representations	
Skill Quests	Skills
Prisms & pyramids	Connecting 3D objects with their nets
Course Topic	Activities Title
Teacher directed	

MA3-3DS-02	
Selects and uses the appropriate unit to estimate, measure and calculate volumes and	
capacities	
Skill Quests	Skills
Calculate volume in m³ &	Calculating volume of cubes (m³ & cm³)
cm ³	Calculating volume rectangular prisms (cm³ & m³)
Course Topic	Activities Title
A/B. Volume	Millilitres and Litres
	Volume of Solids and Prisms - 1cm³ blocks
	Volume: Rectangular Prisms 1

Non spatial structure (B)

MA3-NSM-01 Selects and uses the appropriate unit and device to measure the masses of objects	
Skill Quests	Skills
Convert between units of mass	Converting between metric units of mass
Course Topic	A stivition Title
Course ropic	Activities Title
A/B. Mass	Kilogram Conversions
	Kilogram Conversions

MA3-NSM-02	
Measures and compares duration, using 12- and 24-hour time and am and pm notation	
Skill Quests	Skills
Solve duration problems	Solving problems with duration using 12 & 24 hours
Course Topic	Activities Title
B. Solving problems	Time Mentals
involving time	

Statistics and Probability

Data (B)

MA3-DATA-02 Interprets data displays, including timelines and line graphs	
Skill Quests	Skills
Interpret data displays	Interpreting & comparing data in various displays
	Calculating & interpreting the range
	Calculating & interpreting the mode
	Interpreting data presented in digital media
Course Topic	Activities Title
B. Mode and Range	Mode
	Data Extremes and Range

Chance (B)

MA3-CHAN-01 Conducts chance experiments and quantifies the probability	
Skill Quests	Skills
Compare observed with	Comparing observed frequency with expected results
expected results	Describing probability of single events
Course Topic	Activities Title
B. Probability	Fair Games



For more information about Mathletics, contact our friendly team.

www.mathletics.com/contact

