

Mathletics Australian v9 Curriculum Activities



Foundation - Year 6
February 2024



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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
Number - whole number F	Count to 5
	Counting Up to 20
	Counting Back Within 20
	Before, After and Between to 20
	Compare Numbers to 20
	Ordinal Numbers
	Matching numbers to 10
	Matching numbers to 20
	Making Teen Numbers
	More, less or the same to 10

AC9MFN02	
Recognise and name the number of objects within a collection up to 5 using subitising	
Course Topic	Activities Title
Number - whole number F	How Many?
	Dot Display
	How Many Dots?

AC9MFN03	
Quantify and compare collections to at least 20 using counting and explain or demonstrate reasoning	
Course Topic	Activities Title
Number - whole number F	Order Numbers to 10
	Order Numbers to 20
	1 to 30 (Ordering)

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
Teacher directed	

AC9MFN05	
Represent practical situations involving addition, subtraction and quantification with physical and virtual materials and use counting or subitising strategies	
Course Topic	Activities Title
Number - add & subtract F	Adding to 5
	Adding to make 5 and 10
	Adding to Ten
	Adding to 10 Word Problems
	Subtracting From 5
	Subtracting from Ten

AC9MFN06	
Represent practical situations that involve equal sharing and grouping with physical and virtual materials and use counting or subitising strategies	
Course Topic	Activities Title
Teacher directed	

2 Algebra

AC9MFA01	
Recognise, copy and continue repeating patterns represented in different ways	
Course Topic	Activities Title
Algebra - patterns F	Simple patterns
	Colour patterns
	Complete the Pattern

3 Measurement

AC9MFM01	
Identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparisons and communicating reasoning	
Course Topic	Activities Title
Measurement - length F	Everyday Length
	Compare Length

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
Teacher directed	

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
Space - shape F	Collect Simple Shapes
	Shapes
	Count Sides and Corners

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
Space - position F	Where is it?
	Left or Right?

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
Statistics F	Read Graphs
	Picture Graphs: Who has the Goods?
	Sort It

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 Topic	Activities Title
Number - whole number Y1	Arranging Numbers
	Number Lines
	Going Up
	Number line order
	Going Down
	Before, After & Between to 100
	Compare Numbers to 50
	Compare Numbers to 100
	1st to 31st
	More, Less or the Same to 20
	Making Numbers Count
	Making Big Numbers Count

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 Topic	Activities Title
Number - whole number Y1	1 More, 2 Less
	Counting Backwards
	Counting Forwards
	Reading Numbers to 30
	Greater or Less to 100
Number - place value Y1	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	
Course Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Number - add & subtract Y1	All about Ten
	Addition Facts
	Balance Numbers to 10
	Add 3 Numbers: Bonds to Multiples of 10
	Commutative Property of Addition
	Add 3 Single Digit Numbers
	Subtracting from 20
	Simple Subtraction
	Problems: Addition and Subtraction
	Doubles and Halves to 10
	All about Twenty
	Related Facts 1
	Balance Numbers to 20
	Adding In Any Order
	Addictive Addition
	Subtraction Facts to 18
	Add and Subtract Problems
Doubles and Halves to 20	
Add 3 Numbers Using Bonds to 10	

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 Topic	Activities Title
Number - multiplication & division Y1	Share the Treasure
	Fill the jars
	Count by 2s, 5s and 10s
	Counting on a 100 grid

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 Topic	Activities Title
Algebra - patterns Y1	Missing it!
	Pattern Error
	Counting by Fives

AC9M1A02	
Recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit	
Course Topic	Activities Title
Teacher directed	

3 Measurement

AC9M1M01	
Compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning	
Course Topic	Activities Title
Measurement - length, capacity & mass Y1	Which Holds More?
	Comparing Volume
	Everyday Mass
	Hot or Cold?
	Balancing Objects
	Comparing Length

AC9M1M02	
Measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end	
Course Topic	Activities Title
Teacher directed	

AC9M1M03	
Describe the duration and sequence of events using years, months, weeks, days and hours	
Course Topic	Activities Title
Measurement - time Y1	Days: After and Before
	Tomorrow and Yesterday (Scaffolded)
	Tomorrow and Yesterday (without scaffold)
	Tell Time to the Hour

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 Topic	Activities Title
Space - shape Y1-2	Collect More Shapes

AC9M1SP02	
Give and follow directions to move people and objects to different locations within a space	
Course Topic	Activities Title
Space - position Y1-4	Following Directions

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 Topic	Activities Title
Statistics Y1	Tallies
	Picture Graphs: More or Less

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 Topic	Activities Title
Statistics Y1	Making Picture Graphs: With Scale
	Picture Graphs: Single-Unit Scale

Year 2

1 Number

AC9M2N01	
Recognise, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines	
Course Topic	Activities Title
Number - whole number Y2	Numbers in Words
	Missing Numbers 1
	1 More, 10 Less
	Put in Order 1
	Ascending Order
	Descending Order
	Greater Than or Less Than 1
	Nearest 100?
	Which is Bigger?
	Which is Smaller?
	Odd or Even
	Concept of Zero

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 Topic	Activities Title
Number - place value Y2	Place Value 2
	Partition and Rename 1
	Place Value Partitioning
	Place Value – Thousands
	Expanding Numbers
	Partition and Rename 2
	Model 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	
Course Topic	Activities Title
Number - fractions Y2	Halves
	Is it Half?

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 Topic	Activities Title
Teacher directed	

AC9M2N05

Multiply and divide by one-digit numbers using repeated addition, equal grouping, arrays and partitioning to support a variety of calculation strategies

Course Topic	Activities Title
Number - add & subtract Y2	Model Addition
	Model Subtraction
	Subtract Tens
	10 More, 10 Less
	Balance Additions to 20
	Complements to 10, 20, 50
	Complements to 50 and 100
	Add 3 Numbers: Bonds to 100
	Doubles and Near Doubles
	Bar Model Problems 1
	Bar Model Problems 2
	How much Change?
	Magic Mental Addition
	Word Problems: Add and Subtract
	Problems: Add and Subtract 1
Number - multiplication & division Y2	Groups
	Counting by Twos
	Counting by Tens
	Grouping in Twos
	Grouping in Fives
	Grouping in Tens
	Count by Fives
	Counting up in 4s
	Multiplication Arrays

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 Topic	Activities Title
Number - multiply & divide problems Y2	Frog Jump Division
	Skip Counting
	Count Forward Patterns
	Count Backward Patterns
	Skip Counting with Coins
	Dividing Twos
	Dividing Fives
	Dividing Tens

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 Topic	Activities Title
Algebra - patterns Y2	Count by Twos
	Count by Tens
	Increasing Patterns
	Decreasing Patterns

AC9M2A02	
Recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts	
Course Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Measurement - length, capacity & mass Y2	Measuring Length with Blocks
	Which Measuring Tool?
	Filling Fast!

AC9M2M02	
Identify common uses and represent halves, quarters and eighths in relation to shapes, objects and events	
Course Topic	Activities Title
Teacher directed	

AC9M2M03	
Identify the date and determine the number of days between events using calendars	
Course Topic	Activities Title
Measurement - time Y2	Months of the Year
	Months After and Before
	Using a Calendar
	Seasons (AU/NZ)

AC9M2M04	
Recognise and read the time represented on an analog clock to the hour, half-hour and quarter-hour	
Course Topic	Activities Title
Measurement - time Y2	Hour Times
	Half Hour Times
	Tell Time to the Half Hour (UK)
	Quarter To and Quarter Past
	Tell Time to the Half Hour

AC9M2M05	
Identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations	
Course Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Space - shape Y1-2	Sides, Angles and Diagonals
	Collect the Polygons
	What Line am I?

AC9M2SP02	
Locate positions in two-dimensional representations of a familiar space; move positions by following directions and pathways	
Course Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Teacher directed	

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 Topic	Activities Title
Statistics Y2	Add and Subtract Using Graphs
	Interpreting Tables

Year 3

1 Number

AC9M3N01	
Recognise, represent and order natural numbers using naming and writing conventions for numerals beyond 10 000	
Course Topic	Activities Title
Number - whole number Y3-5	Numbers from Words to Digits 1
	Numbers from Words to Digits 2
	Equal, Less or Greater than?
	Smallest and largest numbers
	Rounding Numbers
	Nearest 1000?
Number - place value Y3	Place Value 3
	Partition and Rename 3
	Expanded Notation

AC9M3N02	
Recognise and represent unit fractions including $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{10}$ and their multiples in different ways; combine fractions with the same denominator to complete the whole	
Course Topic	Activities Title
Teacher directed	

AC9M3N03	
Add and subtract two- and three-digit numbers using place value to partition, rearrange and regroup numbers to assist in calculations without a calculator	
Course Topic	Activities Title
Number - fractions Y3	Halves and Quarters
	Shade fractions
	Thirds and Sixths
	Unit Fractions
	Fraction Length Models 1

AC9M3N04	
Multiply and divide one- and two-digit numbers, representing problems using number sentences, diagrams and arrays, and using a variety of calculation strategies	
Course Topic	Activities Title
Number - multiplication & division Y3	Grouping in Threes
	Grouping in Fours
	Grouping in Sevens
	Grouping in Eights
	Grouping in Sixes
	Grouping in Nines
	Model multiplication to 5×5
	Arrays 1
Arrays 2	

AC9M3N05	
Estimate the quantity of objects in collections and make estimates when solving problems to determine the reasonableness of calculations	
Course Topic	Activities Title
Number - add & subtract Y3	Adding to 2-digit numbers
	Compensation – Add
	Compensation – Subtract
	Bump Add and Subtract
	Repartition to Subtract
	Split Add and Subtract
	Jump Add and Subtract
	Magic Mental Subtraction/Mental Subtraction (US)
	Pyramid Puzzles 1
	Partition Puzzles 1
	Estimation: Add and Subtract
	Estimate Sums
	Estimate Differences

AC9M3N06	
Use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate problems using number sentences and choose calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation	
Course Topic	Activities Title
Number - multiplication & division Y3	Multiplication Turnarounds
	Multiplication Turn-Abouts
	Multiplying by 10, 100, 1000
	Dividing by 10, 100, 1000
	Frog Jump Multiplication

AC9M3N07	
Name	
Course Topic	Activities Title
Teacher directed	

2 Algebra

AC9M3A01	
Recognise and explain the connection between addition and subtraction as inverse operations, apply to partition numbers and find unknown values in number sentences	
Course Topic	Activities Title
Algebra - patterns & equality Y3	Fact Families: Add and Subtract
	Odd and Even Numbers 1
	Pick the Next Number

AC9M3A02	
Extend and apply knowledge of addition and subtraction facts to 20 to develop efficient mental strategies for computation with larger numbers without a calculator	
Course Topic	Activities Title
Teacher directed	

AC9M3A03	
Recall and demonstrate proficiency with multiplication facts for 3, 4, 5 and 10; extend and apply facts to develop the related division facts	
Course Topic	Activities Title
Teacher directed	

3 Measurement

AC9M3M01	
Identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates	
Course Topic	Activities Title
Measurement - length, capacity & mass Y3	Which Unit of Measurement?
	Ordering Lengths (cm)
	How Full?
	Ordering Volumes (l)
	Ordering Mass (g)
	How many Blocks?

AC9M3M02	
Measure and compare objects using familiar metric units of length, mass and capacity, and instruments with labelled markings	
Course Topic	Activities Title
Measurement - length, capacity & mass Y3	How Long is That?
	Measuring Length
	Using a Litre
	How Heavy?

AC9M3M03	
Recognise and use the relationship between formal units of time including days, hours, minutes and seconds to estimate and compare the duration of events	
Course Topic	Activities Title
Teacher directed	

AC9M3M04	
Describe the relationship between the hours and minutes on analogue and digital clocks, and read the time to the nearest minute	
Course Topic	Activities Title
Measurement - time Y3	Five Minute Times
	What is the Time?

AC9M3M05	
Identify angles as measures of turn and compare angles with right angles in everyday situations	
Course Topic	Activities Title
Teacher directed	

AC9M3M06	
Recognise the relationships between dollars and cents and represent money values in different ways	
Course Topic	Activities Title
Teacher directed	

4 Space

AC9M3SP01	
Make, compare and classify objects, identifying key features and explaining why these features make them suited to their uses	
Course Topic	Activities Title
Space - shape Y3	Same and Different
	Collect the Objects
	Match the Object
	Match the Solid 1
	Match the Solid 2
	Relate Shapes and Solids
	How Many Faces?
	How many Edges?
	Count the Corners
	How many Vertices?
	Faces, Edges and Vertices
	Prisms and Pyramids
	Faces, Edges, and Vertices 1
	Naming 3D Objects
	What Prism Am I?
	What Pyramid Am I?
	Triangle Tasters
Plane Figure Terms	
Collect the Shapes 2	

AC9M3SP02	
Interpret and create two-dimensional representations of familiar environments, locating key landmarks and objects relative to each other	
Course Topic	Activities Title
Teacher directed	

5 Statistics

AC9M3ST01	
Acquire data for categorical and discrete numerical variables to address a question of interest or purpose by observing, collecting and accessing data sets; record the data using appropriate methods including frequency tables and spreadsheets	
Course Topic	Activities Title
Teacher directed	

AC9M3ST02	
Create and compare different graphical representations of data sets including using software where appropriate; interpret the data in terms of the context	
Course Topic	Activities Title
Statistics Y3	Column Graphs
	Reading from a Column Graph

AC9M3ST03	
Conduct guided statistical investigations involving the collection, representation and interpretation of data for categorical and discrete numerical variables with respect to questions of interest	
Course Topic	Activities Title
Teacher directed	

6 Probability

AC9M3P01	
Identify practical activities and everyday events that involve chance; describe possible outcomes and events as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' explaining reasoning	
Course Topic	Activities Title
Probability Y3	Will it Happen?
	Most Likely and Least Likely

AC9M3P02	
Conduct repeated chance experiments; identify and describe possible outcomes, record the results, recognise and discuss the variation	
Course Topic	Activities Title
Teacher directed	

Year 4

1 Number

AC9M4N01	
Recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals	
Course Topic	Activities Title
Number - whole number Y3-5	Numbers from Words to Digits 3
Number - decimals Y4	Who's got the Money?
	Money
	Decimals from Words to Digits 1
	Decimal Place Value
	Decimal Order 1

AC9M4N02	
Explain and use the properties of odd and even numbers	
Course Topic	Activities Title
Teacher directed	

AC9M4N03	
Find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation	
Course Topic	Activities Title
Number - fractions Y4	Identifying Fractions on a Number Line
	What Fraction is Shaded?
	What fraction is Shaded 1
	Simplifying Fractions

AC9M4N04	
Count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines	
Course Topic	Activities Title
Teacher directed	

AC9M4N05	
Solve problems involving multiplying or dividing natural numbers by multiples and powers of 10 without a calculator, using the multiplicative relationship between the place value of digits	
Course Topic	Activities Title
Number - add & subtract Y4	Strategies for Column Addition
	Columns that Add
	Add Two 2-Digit Numbers
	Column Addition 1
	Add Three 2-Digit Numbers: Regroup
	Add 3-Digit Numbers

	Add 3-Digit Numbers: Regroup
	Column Subtraction
	2-Digit Differences: Regroup
	3-Digit Differences
	3-Digit Differences: 1 Regrouping
	3-Digit Differences: 2 Regroupings
	3-Digit Differences with Zeros
	Adding Colossal Columns
	Add Multi-Digit Numbers 1
	Pyramid Puzzles 2
	Partition Puzzles 2
	Magic Symbols 1
	Magic Symbols 2
	Subtracting Colossal Columns
Number - multiplication & division Y4	Multiplying Whole Numbers by 10, 100, and 1000
	Multiply Multiples of 10
	Multiply More Multiples of 10
	Double and Halve to Multiply
	Dividing Fours
	Dividing Sixes
	Dividing Nines
	Dividing Sevens
	Dividing Eights
	Times Tables

AC9M4N06

Develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder

Course Topic	Activities Title
Number - multiplication & division Y4	Halve it!
	Bar model $\times \div$
	Problems: Times and Divide
	Equivalent Facts: Multiply
	Multiply 3 single-digit numbers

AC9M4N07

Choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions

Course Topic	Activities Title
Teacher directed	

AC9M4N08

Use mathematical modelling to solve practical problems that involve additive and multiplicative situations including financial contexts; formulate the problems using number sentences and choose efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation

Course Topic	Activities Title
Teacher directed	

AC9M4N09	
Follow and create algorithms involving a sequence of steps and decisions that use addition or multiplication to generate sets of numbers; identify and describe any emerging patterns	
Course Topic	Activities Title
Teacher directed	

2 Algebra

AC9M4A01	
Find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations	
Course Topic	Activities Title
Algebra - patterns & equality Y4	Find the Missing Number 1
	Describing Patterns
	Missing Values
	Missing Numbers 2
	Missing Numbers

AC9M4A02	
Recall and demonstrate proficiency with multiplication facts up to 10×10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator	
Course Topic	Activities Title
Teacher directed	

3 Measurement

AC9M4M01	
Interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units	
Course Topic	Activities Title
Teacher directed	

AC9M4M02	
Recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units	
Course Topic	Activities Title
Measurement - length, capacity, mass & area Y4	Perimeter of Shapes
	Perimeter: Squares and Rectangles
	Perimeter: Triangles 2
	Perimeter: Triangles
	Volume of Solids and Prisms - 1 cm ³ blocks
	Equal Areas
	Area of Shapes

AC9M4M03	
Solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time	
Course Topic	Activities Title
Measurement - time Y4	Time Conversions: Whole Numbers 1
	Elapsed Time
	Time Mentals
	What Time Will It Be?

AC9M4M04	
Estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle	
Course Topic	Activities Title
Measurement - angles Y4	Equal Angles
	Comparing Angles
	Right Angle Relation
	What Type of Angle?
	Classifying Angles

4 Space

AC9M4SP01	
Represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects	
Course Topic	Activities Title
Space - shape Y4	Collect the Objects 2
	Biggest Shape

AC9M4SP02	
Create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	
Course Topic	Activities Title
Space - position Y1-4	Coordinate Meeting Place
	Map Coordinates
	Using a key

AC9M4SP03	
Recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate	
Course Topic	Activities Title
Space - transformations & symmetry Y4	Symmetry
	Symmetry or Not?
	Rotational Symmetry of Shapes

5 Statistics

AC9M4ST01	
Acquire data for categorical and discrete numerical variables to address a question of interest or purpose using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created	
Course Topic	Activities Title
Statistics Y4	Pictographs
	Picture Graphs: with scale & half symbols
	Line Graphs: Explanation
	Sorting Data

AC9M4ST02	
Analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data	
Course Topic	Activities Title
Statistics Y4	Pictographs
	Picture Graphs: with scale & half symbols
	Line Graphs: Explanation
	Sorting Data

AC9M4ST03	
Conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results	
Course Topic	Activities Title
Teacher directed	

6 Probability

AC9M4P01	
Describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events	
Course Topic	Activities Title
Probability Y4	Chance Gauge
	How many Combinations?
	Fair Games

AC9M4P02	
Conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results	
Course Topic	Activities Title
Probability Y4	Chance Gauge
	How many Combinations?
	Fair Games

Year 5

1 Number

AC9M5N01	
Interpret, compare and order numbers with more than 2 decimal places, including numbers greater than one, using place value understanding; represent these on a number line	
Course Topic	Activities Title
Number - whole number Y3-5	Comparing Numbers
Number - place value Y5	Place Value – Millions
	Place Value to Millions
	Place Value to Billions
Number - decimals Y5	Decimals from Words to Digits 2
	Decimals on the Number Line
	Nearest Whole Number
	Rounding Decimals 1
	Comparing Decimals 1
	Comparing Decimals
	Comparing Decimals 2
	Decimal Order
	Decimal Order 2

AC9M5N02	
Express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another	
Course Topic	Activities Title
Teacher directed	

AC9M5N03	
Compare and order fractions with the same and related denominators including mixed numerals, applying knowledge of factors and multiples; represent these fractions on a number line	
Course Topic	Activities Title
Number - fractions Y5	Compare Fractions 1a
	Comparing Fractions 1
	Compare Fractions 2
	Shading Equivalent Fractions
	Selecting Equivalent Fractions
	Equivalent Fractions on a Number Line 1
	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

AC9M5N04

Recognise that 100% represents the complete whole and use percentages to describe, represent and compare relative size; connect familiar percentages to their decimal and fraction equivalents

Course Topic	Activities Title
Number - fractions, decimals & percentages Y5	Modelling Percentages
	Percents and Decimals
	Match Decimals and Percentages
	Complementary Percentages
	Common Fractions as Percentages (AU)
	Fractions to Decimals
	Decimals to percentages

AC9M5N05

Solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies

Course Topic	Activities Title
Number - add & subtract fractions Y5	Add: Common Denominator
	Subtract: Common Denominator
	Common Denominator
	One Take Fraction
	Add Subtract Fractions 1
	Addition Properties

AC9M5N06

Solve problems involving multiplication of larger numbers by one- or two-digit numbers, choosing efficient calculation strategies and using digital tools where appropriate; check the reasonableness of answers

Course Topic	Activities Title
Number - multiplication & division Y5	Grid Methods 1
	Multiply 2 Digits Area Model
	Mental Methods Multiplication 1
	Mental Methods Division
	Multiply: 1-Digit Number
	Multiply: 2-Digit Number, Regroup

AC9M5N07

Solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction

Course Topic	Activities Title
Number - multiplication & division Y5	Estimation: Multiply and Divide
	Remainders by Arrays
	Division Facts 1
	Remainders by Tables
	Mental Methods Division 1
	Estimate Products
	Long Multiplication
	Mental Methods Division 2
	Mental Methods Division 3

	Multiply: 2-Digit by 1-Digit
	Divide: 1-Digit Divisor 1

AC9M5N08	
Check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context	
Course Topic	Activities Title
Number - multiplication & division Y5	Rounding Numbers 1
	Division Facts to Twelve
	Estimate Quotients

AC9M5N09	
Use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate the problems, choosing operations and efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation	
Course Topic	Activities Title
Teacher directed	

AC9M5N10	
Create and use algorithms involving a sequence of steps and decisions and digital tools to experiment with factors, multiples and divisibility; identify, interpret and describe emerging patterns	
Course Topic	Activities Title
Number - multiples & factors Y5	Find the Factor
	Factors
	Highest Common Factor
	Lowest Common Multiple
	Multiples of
	Divisibility Tests (2, 5, 10)
	Divisibility Tests (3, 4, 9)
	Tests of Divisibility 1

2 Algebra

AC9M5A01	
Recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts	
Course Topic	Activities Title
Algebra - patterns & equality Y5	Related Facts 2
	Fact Families: Multiply and Divide
	Patterns – Decreasing
	Missing Numbers: \times and \div facts

AC9M5A02	
Find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations	
Course Topic	Activities Title
Algebra - patterns & equality Y5	Table of Values
	Missing Numbers: Variables

3 Measurement

AC9M5M01	
Choose appropriate metric units when measuring the length, mass and capacity of objects; use smaller units or a combination of units to obtain a more accurate measure	
Course Topic	Activities Title
Measurement - length, capacity, mass & area Y5	What's the Temperature (Celsius)?

AC9M5M02	
Solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units	
Course Topic	Activities Title
Measurement - length, capacity, mass & area Y5	Perimeter Detectives 1
	Area: Squares and Rectangles
	Mass Word Problems

AC9M5M03	
Compare 12- and 24-hour time systems and solve practical problems involving the conversion between them	
Course Topic	Activities Title
Measurement - time Y5	24 Hour Time
	Time Conversions: Whole Numbers 2
	Time Conversions: Simple Fractions

AC9M5M04	
Estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names	
Course Topic	Activities Title
Measurement - angles Y5	Estimating Angles
	Measuring Angles

4 Space

AC9M5SP01	
Connect objects to their nets and build objects from their nets using spatial and geometric reasoning	
Course Topic	Activities Title
Teacher directed	

AC9M5SP02	
Construct a grid coordinate system that uses coordinates to locate positions within a space; use coordinates and directional language to describe position and movement	
Course Topic	Activities Title
Space - position Y5	What Direction was That?
	Coordinate Graphs: 1st Quadrant

AC9M5SP03	
Describe and perform translations, reflections and rotations of shapes, using dynamic geometric software where appropriate; recognise what changes and what remains the same, and identify any symmetries	
Course Topic	Activities Title
Space - transformations & symmetry Y5	Transformations
	Rotational Symmetry
	Flip, Slide, Turn

5 Statistics

AC9M5ST01	
Acquire, validate and represent data for nominal and ordinal categorical and discrete numerical variables to address a question of interest or purpose using software including spreadsheets; discuss and report on data distributions in terms of highest frequency (mode) and shape, in the context of the data	
Course Topic	Activities Title
Statistics Y5	Line Graphs: Interpretation
	Mode
	Tally Charts
	Mode from Frequency Table
	Travel Graphs
	Stem and Leaf Plots: Concept
	Mode from Stem and Leaf Plot
	Sector Graphs
	Grouping data and modal class
	Divided Bar Graphs

AC9M5ST02	
Interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made	
Course Topic	Activities Title
Statistics Y5	Line Graphs: Interpretation
	Mode
	Tally Charts
	Mode from Frequency Table
	Travel Graphs
	Stem and Leaf Plots: Concept
	Mode from Stem and Leaf Plot
	Sector Graphs
	Grouping data and modal class
	Divided Bar Graphs

AC9M5ST03	
Plan and conduct statistical investigations by posing questions or identifying a problem and collecting relevant data; choose appropriate displays and interpret the data; communicate findings within the context of the investigation	
Course Topic	Activities Title
Statistics Y5	Line Graphs: Interpretation
	Mode
	Tally Charts
	Mode from Frequency Table
	Travel Graphs
	Stem and Leaf Plots: Concept
	Mode from Stem and Leaf Plot
	Sector Graphs
	Grouping data and modal class
	Divided Bar Graphs

6 Probability

AC9M5P01	
List the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely	
Course Topic	Activities Title
Probability Y5	What are the Chances?
	Counting Techniques 1
	Introductory probability

AC9M5P02	
Conduct repeated chance experiments including those with and without equally likely outcomes, observe and record the results; use frequency to compare outcomes and estimate their likelihoods	
Course Topic	Activities Title
Probability Y5	What are the Chances?
	Counting Techniques 1
	Introductory probability

Year 6

1 Number

AC9M6N01	
Recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	
Course Topic	Activities Title
Number - integers Y6	Integers on a number line
	Ordering Integers
	Fit the conditions
	Prime or Composite
	Comparing Integers (<, =, >)
Number - add & subtract decimals Y6	Adding Decimals
	Adding Decimals 2
	Decimal Complements
	Subtracting Decimals
	Subtract Decimals 2
	Adding and Subtracting Decimals
	Subtract Decimals 1
	Estimate Decimal Differences 1
	Estimate Decimal Sums 1
	Estimate Decimal Sums 2
Estimate Decimal Differences 2	

AC9M6N02	
Identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations	
Course Topic	Activities Title
Teacher directed	

AC9M6N03	
Apply knowledge of equivalence to compare, order and represent common fractions including halves, thirds and quarters on the same number line and justify their order	
Course Topic	Activities Title
Number - fractions Y6	Improper Fraction to Mixed Numeral
	Mixed to Improper Fractions
	Equivalent Fraction Wall 1
	Compare Fractions 1b
	Equivalent Fraction Wall 2
	The Equivalent Fraction
	Equivalent Fractions on a Number Line 2
	Arranging Fractions
	Fraction Word Problems
	Fraction Wall Labelling 2
	Model Fractions to Multiply
Estimate Products with Fractions	

AC9M6N04	
Apply knowledge of place value to add and subtract decimals, using digital tools where appropriate; use estimation and rounding to check the reasonableness of answers	
Course Topic	Activities Title
Teacher directed	

AC9M6N05	
Solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions	
Course Topic	Activities Title
Number - add & subtract fractions Y6	Add: No Common Denominator
	Subtract: No Common Denominator
	Add Like Mixed Numbers
	Add unlike Mixed Numbers

AC9M6N06	
Multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts, using estimation and rounding to check the reasonableness of answers	
Course Topic	Activities Title
Number - multiplication & division Y6	Multiply Decimals: 10, 100, 1000
	Divide Decimals: 10, 100, 1000
	Multiply Decimals and Powers of 10
	Divide by Powers of 10
	Short Division

AC9M6N07	
Solve problems that require finding a familiar fraction, decimal or percentage of a quantity, including percentage discounts, choosing efficient calculation strategies and using digital tools where appropriate	
Course Topic	Activities Title
Number - fractions, decimals & percentages Y6	Percentages to Decimals
	Convert Decimals to Fractions 2
	Decimals to Fractions 1
	Percentage to Fraction
	Fractions to Percentages (Non-Calculator)
	Percentage of an amount using Fractions (<100%)
	Percentage Word Problems
	Money Problems: Four Operations

AC9M6N08	
Approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies	
Course Topic	Activities Title
Number - fractions, decimals & percentages Y6	Calculating Percentages (Mental)

AC9M6N09	
Use mathematical modelling to solve practical problems, involving rational numbers and percentages, including in financial contexts; formulate the problems, choosing operations and efficient calculation strategies, and using digital tools where appropriate; interpret and communicate solutions in terms of the situation, justifying the choices made	
Course Topic	Activities Title
Teacher directed	

2 Algebra

AC9M6A01	
Recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	
Course Topic	Activities Title
Algebra - patterns & equality Y6	Number Sequences Up to 1 Million
	Missing Values: Decimals

AC9M6A02	
Find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations	
Course Topic	Activities Title
Algebra - patterns & equality Y6	Simple Substitution
	Simple Substitution 2
	Writing Algebraic Expressions
	Solve Equations: Add, Subtract 1
	Order of Operations 1 (BIDMAS)
	Identifying Errors in Applying the Order of Operations
	Find the Pattern Rule
	Pattern Rules and Tables

AC9M6A03	
Create and use algorithms involving a sequence of steps and decisions that use rules to generate sets of numbers; identify, interpret and explain emerging patterns	
Course Topic	Activities Title
Algebra - patterns & equality Y6	Solve Equations: Multiply, Divide 1

3 Measurement

AC9M6M01	
Convert between common metric units of length, mass and capacity; choose and use decimal representations of metric measurements relevant to the context of a problem	
Course Topic	Activities Title
Measurement - length, capacity, mass & area Y6	Converting cm and mm
	Centimetres and Metres
	Kilometre Conversions

	Converting Units of Length
	Metres and Kilometres
	Calculate Areas of Squares and Rectangles
	Converting Units of Area
	Litre Conversions
	Millilitres and Litres
	Kilogram Conversions
	Grams and Kilograms
	Converting Units of Mass
	Grams and Kilograms 1
	Grams and Milligrams
	Volume: Rectangular Prisms 1
	Converting Volume

AC9M6M02	
Establish the formula for the area of a rectangle and use it to solve practical problems	
Course Topic	Activities Title
Measurement - length, capacity, mass & area Y6	Perimeter Detectives 2
	Operations with Length

AC9M6M03	
Interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	
Course Topic	Activities Title
Measurement - time Y6	Using Timetables
	Time Conversions: Simple Decimals
	Australian Time Zones
	Time Zones

AC9M6M04	
Identify the relationships between angles on a straight line, angles at a point and vertically opposite angles; use these to determine unknown angles, communicating reasoning	
Course Topic	Activities Title
Measurement - angles Y6	Angles in a Revolution
	Vertically Opposite Angles: Unknown Values
	Angle Sum of a Triangle
	Quadrilaterals: Angle Sum with Equations
	Exterior Angles of a Triangle
	Angles of revolution: Unknown Values

4 Space

AC9M6SP01	
Compare the parallel cross-sections of objects and recognise their relationships to right prisms	
Course Topic	Activities Title
Teacher directed	

AC9M6SP02	
Locate points in the 4 quadrants of a Cartesian plane; describe changes to the coordinates when a point is moved to a different position in the plane	
Course Topic	Activities Title
Space - position Y6	Ordered Pairs
	Horizontal and Vertical Change

AC9M6SP03	
Recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate	
Course Topic	Activities Title
Space - transformations & coordinates Y6	Rotations: Coordinate Plane
	Transformations: Coordinate Plane
	Number Plane
	Graphing from a Table of Values
	Reading Values from a Line

5 Statistics

AC9M6ST01	
Interpret and compare data sets for ordinal and nominal categorical, discrete and continuous numerical variables using comparative displays or visualisations and digital tools; compare distributions in terms of mode, range and shape	
Course Topic	Activities Title
Statistics Y6	Data Extremes and Range
	Frequency Histograms
	Dot Plots
	Step Graphs
	Stem and Leaf Plots with Range
	Double Stem and Leaf Plots

AC9M6ST02	
Identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions	
Course Topic	Activities Title
Statistics Y6	Data Extremes and Range
	Frequency Histograms
	Dot Plots
	Step Graphs
	Stem and Leaf Plots with Range
	Double Stem and Leaf Plots

AC9M6ST03

Plan and conduct statistical investigations by posing and refining questions or identifying a problem and collecting relevant data; analyse and interpret the data and communicate findings within the context of the investigation

Course Topic	Activities Title
Statistics Y6	Data Extremes and Range
	Frequency Histograms
	Dot Plots
	Step Graphs
	Stem and Leaf Plots with Range
	Double Stem and Leaf Plots

6 Probability**AC9M6P01**

Recognise that probabilities lie on numerical scales of 0 – 1 or 0% – 100% and use estimation to assign probabilities that events occur in a given context, using common fractions, percentages and decimals

Course Topic	Activities Title
Probability Y6	Complementary Events
	Find the Probability
	Simple Probability
	Probability Scale
	Dice and Coins

AC9M6P02

Conduct repeated chance experiments and run simulations with an increasing number of trials using digital tools; compare observations with expected results and discuss the effect on variation of increasing the number of trials

Course Topic	Activities Title
Probability Y6	Complementary Events
	Find the Probability
	Simple Probability
	Probability Scale
	Dice and Coins



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