Mathletics

Tasmania – Australian Curriculum v9

Activities (Courses) and Skill Quests

Years 3 – 6

May, 2024

Mathletics

Year 3 – Skill Quests

1 Number and Algebra

Outcome	Quests	Content
AC9M3N01 - Recognise, represent and order natural numbers using naming and writing conventions for numerals beyond 10 000	Numbers to 10 000	Identifying & counting numbers to 4 digits
		Reading & representing numbers to 4 digits
		Comparing & ordering numbers to 4 digits
		Place value to 4 digits
		Partitioning numbers to 4 digits
		Rounding numbers to 4 digits
	Numbers to 100 000	Comparing & ordering numbers to 5 digits
		Place value to 5 digits
		Partitioning numbers to 5 digits
		Rounding numbers to 5 digits
	Numbers to 1 000 000	Reading & representing numbers to 6 digits
		Comparing & ordering numbers to 6 digits
		Place value to 6 digits
		Partitioning numbers to 6 digits
		Counting by ones, tens & hundreds
	Numbers of any size	Reading & representing numbers of any size
		Comparing & ordering numbers of any size
		Place value of numbers of any size
		Partitioning numbers of any size
AC9M3N02 - Recognise and represent unit fractions including 1/2, 1/3, 1/4, 1/5, 1/10 and their multiples in different ways; combine fractions with the same denominator to complete the whole	Fraction symbols	Exploring the meaning of fraction symbols
		Introducing terms numerator & denominator
	Find & count in halves & quarters	Finding half of a set or quantity (symbols)
		Finding quarters of sets or shapes (symbols)
		Finding halves & quarters (symbols)
		Counting in halves & quarters to 1

	Introduce eighths	Introducing eighths
		Using fractions: halves, quarters & eighths
	Introduce thirds	Introducing thirds
		Using fractions: halves, thirds & quarters
	Introduce sixths	Introducing sixths
	Introduce fifths	Introducing fifths
	Introduce tenths	Introducing tenths
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	Addition & subtraction using place value	Add & subtract using number facts within 1000
		Add & subtract 2- & 3-digit using jump strategy
		Add & subtract 2- & 3-digit using place value
		Add & subtract 2- & 3-digit using bridging to 10
		Adding & subtracting - bridging with unknowns
		Adding & subtracting 3-digits using partitioning
		Adding & subtracting 3-digits using place value
		Add & subtract 2- & 3-digit using split strategy
		Add & subtract 2-digit rounding & compensation
		Add & subtract 3-digit rounding & compensation
		Adding & subtracting to make 100
		Add & subtract multiples of 100, 1000 & 10 000
		Add & subtract using non-standard partitioning
		Add & subtract: choosing efficient strategies
AC9M3N04 - Multiply and divide one- and two-digit numbers, representing problems using number sentences, diagrams and arrays, and using a variety of calculation strategies	Multiplication & division	Using repeated addition to multiply
		Using repeated subtraction to divide
		Relating multiplication & division
		Interpreting & solving mult/div word problems
		Multiplication strategies: 1-digit numbers
		Multiplying 2-digit numbers by a 1-digit number
AC9M3N05 - Estimate the quantity of objects in collections and make estimates when solving problems to determine the reasonableness of calculations	Estimation strategies	Estimating additions
		Estimating subtractions
		Judging the reasonableness of answers

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	Solve practical problems	Solving addition & subtraction practical problems
		Solve multiplication & division practical problems
		Missing number problems using all four operations
AC9M3N07 - Follow and create algorithms involving a sequence of steps and decisions to investigate numbers; describe any emerging patterns	Create algorithms to investigate numbers	Identifying & creating number patterns
		Working with code to create algorithms
AC9M3A01 - Recognise and explain the connection between addition and subtraction as inverse operations, apply to partition numbers and find unknown values in number sentences	Addition & subtraction relationship	Relationship between addition & subtraction
		Equivalent number sentences
		Word problems for finding unknown quantities
		Representing add & subtract using a bar model
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	Apply knowledge of facts to 20	Finding fact families
		Numbers bonds to 20
		Applying facts to 20 to larger numbers
AC9M3A03 - Recall and demonstrate proficiency with multiplication facts for 3, 4, 5 and 10; extend and apply facts to develop the related division facts	Multiplication & division facts for 2	Recalling multiplication & division facts for 2
	Multiplication & division facts for 10	Exploring multiplication by 10
		Recalling multiplication & division facts for 10
	Multiplication & division facts for 5	Exploring multiplication by 5
		Recalling multiplication & division facts for 5
	Mult/div facts for 2, 5 & 10	Multiplication & division facts for 2, 5, 10
	Multiplication & division facts for 3	Exploring multiplication by 3
		Recalling multiplication & division facts for 3
	Multiplication & division facts for 4	Exploring multiplication by 4
		Recalling multiplication & division facts for 4

2 Measurement and Space

Outcome	Quests	Content
AC9M3M01 - Identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates	Identify metric units of measure	Introducing centimetres
		Introducing millimetres
		Selecting appropriate units to measure length
		Introducing litres
		Introducing millilitres
		Selecting appropriate units to measure capacity
		Introducing kilograms
		Introducing grams
		Selecting appropriate units to measure mass
		Identifying correct units of measurement
AC9M3M02 - Measure and compare objects using familiar metric units of length, mass and capacity, and instruments with labelled markings	Length, mass & capacity	Comparing, ordering & measuring length
		Comparing, ordering & measuring capacity
		Comparing, ordering & measuring mass
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	Introduce units of time	Introducing hours
		Introducing minutes
		Introducing seconds
	Duration & units of time	Understanding relationship between units of time
		Understanding duration
AC9M3M04 - Describe the relationship between the hours and minutes on analogue and digital clocks, and read the time to the nearest minute	Tell time	Telling time to five minutes
		Telling time to the minute
AC9M3M05 - Identify angles as measures of turn and compare angles with right angles in everyday situations	Identify & compare angles	Introducing angles
		Introducing right angles
AC9M3M06 - Recognise the relationships between dollars and cents and represent money values in different ways	Money	Recognising Australian notes & coins
		Counting Australian dollars & cents
		Using money to make purchases
AC9M3SP01 - Make, compare and classify objects, identifying key features and explaining why these features make them suited to their uses	3D objects	Exploring prisms & pyramids
		Introducing nets
		Recognising & comparing 3D objects
		Describing & sorting 3D objects
		Comparing 2D shapes & 3D objects

AC9M3SP02 - Interpret and create two-dimensional representations of familiar environments, locating key landmarks and objects relative to each other	Interpret & create maps	Interpreting simple maps

3 Statistics and Probability

Outcome	Quests	Content
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	Collect & record data	Collecting & recording category data
		Using tables
AC9M3ST02 - Create and compare different graphical representations of data sets including using software where appropriate; interpret the data in terms of the context	Create & compare data representations	Representing & interpreting data displays
		Comparing data displays
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	Understand statistical investigations	Introducing the statistical investigation process
		Conducting a statistical investigation
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	Language of chance	Using basic probability language
AC9M3P02 - Conduct repeated chance experiments; identify and describe possible outcomes, record the results, recognise and discuss the variation	Chance experiments	Conducting chance experiments

Year 3 – Activities

1 Number and Algebra

Outcome	Topic	Activity Title
AC9M3N01 - recognise, represent and order natural numbers using naming and writing conventions for numerals beyond 10 000	Numbers beyond 10 000 with 5 digits	Place Value 3
		Place Value - Thousands
		Partition and Rename 2
		Partition and Rename 3
		Ascending Order
		Descending Order
		Smallest and largest numbers
		Numbers from Words to Digits 1
		Rounding Numbers
AC9M3N02 - recognise and represent unit fractions including 1/2, 1/3, 1/4, 1/5, 1/10 and their multiples in different ways; combine fractions with the same denominator to complete the whole	Unit fractions	Shade fractions
		Identifying Fractions on a Number Line
		Fractions of a Collection 1
		Fraction Length Models 1
		Unit Fractions
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	Up to 3 digit add & subtract	Add 3 Numbers: Bonds to 100
AC9M3N05 - estimate the quantity of objects in collections and make estimates when solving problems to determine the reasonableness of calculations		Partition Puzzles 2
		Repartition to Subtract
		Nearest 1000?
		Estimation: Add and Subtract
		Estimate Differences
		Estimate Sums
		Bar Model Problems 1
		Bar Model Problems 2
AC9M3N04 - multiply and divide one- and two-digit numbers, representing problems using number sentences, diagrams and arrays, and using a variety of calculation strategies	Multiply & divide	Related Facts 2
		Frog Jump Multiplication
		Frog Jump Division
		Equivalent Facts: Multiply
		Divide Into Equal Groups
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		

AC9M3N07 - follow and create algorithms involving a sequence of steps and decisions to investigate numbers; describe any emerging patterns	Teacher directed	
AC9M3A01 - recognise and explain the connection between addition and subtraction as inverse operations, apply to partition numbers and find unknown values in number sentences	Patterns & missing numbers	Odd and Even Numbers 1
AC9M3A03 - recall and demonstrate proficiency with multiplication facts for 3, 4, 5 and 10; extend and apply facts to develop the related division facts		Pick the Next Number
		Describing Patterns
		Find the Missing Number 1
		Missing Values
		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
		Grouping in Fours
		Dividing Fours
		Grouping in Threes
		Dividing Threes
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	Skill Quest: Apply knowledge of facts to 20	Finding fact families

2 Measurement and Space

Outcome	Topic	Activity Title
AC9M3M01 - identify which metric units are used to measure everyday items; use measurements of familiar items and known units to make estimates	Measurements	Which Unit of Measurement?
AC9M3M02 - measure and compare objects using familiar metric units of length, mass and capacity, and instruments with labelled markings		
AC9M3M04 - describe the relationship between the hours and minutes on analog and digital clocks, and read the time to the nearest minute		Which Measuring Tool?
		Using a Litre
		How Long is That?
		Measure to the Nearest Half Centimetre
		How Heavy?
		Ordering Mass (g)
		Five Minute Times
		What is the Time?
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	Skill quest: Introduce units of time	Introducing hours
		Introducing minutes
		Introducing seconds
	Skill quest: Duration and units of time	Understanding relationship between units of time
		Understanding duration
AC9M3M06 - recognise the relationships between dollars and cents and represent money values in different ways	Money, dollars & cents	Money
		Who's got the Money?
		How much Change?
AC9M3SP01 - make, compare and classify objects, identifying key features and explaining why these features make them suited to their uses	Shape & space	How Many Faces?
AC9M3SP02 - interpret and create two-dimensional representations of familiar environments, locating key landmarks and objects relative to each other		How many Edges?
AC9M3M05 - identify angles as measures of turn and compare angles with right angles in everyday situations		Count the Corners
		Relate Shapes and Solids
		Collect the Objects
		Comparing Angles
		Equal Angles
		Following Directions
		Coordinate Meeting Place
		Map Coordinates
		Where is it?
		Symmetry

3 Statistics and Probability

Outcome	Topic	Activity Title
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	Record, sort, read & interpret data	Tallies
AC9M3ST02 - create and compare different graphical representations of data sets including using software where appropriate; interpret the data in terms of the context		Sorting Data
		Pictographs
		Interpreting Tables
		Reading from a Column Graph
		Column Graphs
		Add and Subtract Using Graphs
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	Teacher directed	
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	Probability and chance	Will it Happen?
AC9M3P02 - conduct repeated chance experiments; identify and describe possible outcomes, record the results, recognise and discuss the variation		Most Likely and Least Likely
		Introductory probability
		What are the Chances?
		How many Combinations?

Year 4 – Skill Quests

1 Number and Algebra

Outcome	Quests	Content
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	Place value to hundredths	Introducing decimal notation
		Understanding decimal tenths
		Understanding decimal hundredths
		Partitioning decimal hundredths
	Connect decimals & fraction	Connecting fractions & decimal notation
	Round decimal tenths & hundredths	Rounding decimal tenths & hundredths
	Decimals used in money	Understanding decimals used in money
AC9M4N02 - Explain and use the properties of odd and even numbers	Odd & even numbers	Odd & even number patterns (up to 20)
		Identifying odd & even numbers & patterns
		Properties of odd & even numbers
AC9M4N03 - Find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation	Equivalent fractions	Investigating equivalent fractions less than 1
		Investigating equivalent fractions greater than 1
		Patterns in equivalent fractions
		Using multiplication to find equivalent fractions
AC9M4N04 - Count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines	Count by fractions & mixed numerals	Counting in halves & quarters
		Counting in halves, quarters & eighths
		Counting in thirds
		Counting in tenths
		Counting in simple fractions on a number line
	Convert fraction types using models	Converting mixed numerals to improper fractions
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	Mult/div by multiples of 10, 100 & 1000	Using place value to multiply by 10
		Multiplying by multiples of 100
		Multiplying by 1000
		Dividing by multiples of 10
		Dividing by multiples of 100
		Dividing by 1000
AC9M4N06 - Develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction,	Addition & subtraction using algorithms	Addition algorithms (without regrouping)
		Addition algorithms (with regrouping)

and multiplication and division where there is no remainder	14	Addition algorithms (with & without regrouping)
		Subtraction algorithms (without decomposing)
		Subtraction algorithms (with decomposing)
	Addition & subtraction strategies	Add & subtract using efficient strategies
		Add & subtract using a bar model
		Add & subtract using place value partitioning
		Add & subtract using jump strategies
		Add & subtract using split strategies
		Add & subtract using round & compensate strategies
	Mult & div strategies, no remainder	Multiplication strategies: 1-digit numbers
		Using the conventions of multiplication
		Inverse facts: multiplication & division
		Practising multiplication strategies
		Multiplying 2-digit numbers by a 1-digit number
		Multiplying 2-digit numbers using doubling
		Multiplying 2-digit numbers using factorising
		Selecting effective multiplication strategies
		Selecting effective division strategies
		Comparisons using the language of multiplication
		Dividing a 2-digit number by a 1-digit number
AC9M4N07 - Choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions	Use estimation & rounding	Rounding & estimating with addition
		Rounding & estimating with subtraction
		Checking accuracy of addition & subtraction
		Estimating with multiplication & division
		Using estimating with money
AC9M4N08 - Use mathematical modelling to solve practical problems that involve additive and multiplicative situations including	Addition & subtraction word problems	Addition & subtraction word problems
		Posing addition & subtraction problems

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		Expressing word problems as equations
	Multiplication & division word problems	Expressing equations as word problems
		Solving multiplication & division word problems.
	Addition & subtraction money problems	Solving addition & subtraction money problems
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	Sequences & patterns	Investigating sequences with multiples
		Exploring number patterns
		Finding & generating shape patterns from a rule
		Generating add/sub patterns from a rule
		Generating multiplication patterns from a rule
		Using a function machine to apply rules to numbers
		Working with code to create algorithms
AC9M4A01 - Find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations	Addition & subtraction number sentences	Using inverse operations for add/sub equations
		Relationship between addition & subtraction
		Equivalent number sentences
		Word problems for finding unknown quantities
AC9M4A02 - Recall and demonstrate proficiency with multiplication facts up to 10 x 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator	Multiplication & division facts	Multiplication & division facts up to 5
		Multiplying & dividing by 6 up to 60
		Multiplying & dividing by 7 up to 70
		Multiplying & dividing by 8 up to 80
		Multiplying & dividing by 9 up to 90
		Multiplying & dividing to 10 x 10

2 Measurement and Space

Outcome	Quests	Content
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	Length, mass, capacity & temperature	Metric units of length
		Length & 3D objects
		Measuring temperature
		Measuring capacity in millilitres
		Measuring mass in grams & kilograms
		Reading scales with metric units
AC9M4M02 - Recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units	Measure perimeter	Introducing perimeter
		Measuring perimeter
	Measure area	Measuring & estimating area using square units
		Introducing area using formal units
		Measuring & comparing regular & irregular shapes
		Measuring area using formal units
AC9M4M03 - Solve problems involving the duration of time including situations involving "am" and "pm" and conversions between units of time	Convert units of time	Converting units of time
	Solve duration of time problems	Understanding am & pm notation
		Solving duration of time problems
AC9M4M04 - Estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle	Classify angles	Classifying angles
AC9M4SP01 - Represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects	Identify composite shapes & objects	Composing & decomposing 2D shapes
AC9M4SP02 - Create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	Create & interpret grid references	Working with grid reference systems
AC9M4SP03 - Recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate	Line & rotational symmetry	Recognising & drawing line symmetry
		Rotational symmetry
	Symmetrical patterns, pictures & shapes	Creating & drawing symmetrical designs
		Recognising tessellations

3 Statistics and Probability

Outcome	Quests	Content
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	Represent data with many-to-one graphs	Column graphs using many-to-one correspondence
		Picture graphs with many-to-one correspondence
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	Evaluate & compare data displays	Evaluating & comparing data displays
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	Methods of data collection	Surveys & sorting data
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	Chance events	Describing the chance of events occurring
	Non-simultaneous everyday events	Exploring non-simultaneous everyday events
	Independent & dependent events	Independent & dependent events
AC9M4P02 - Conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results	Conduct chance experiments	Conducting chance experiments
		Investigating equally likely outcomes of chance

Year 4 – Activities

1 Number and Algebra

Outcome	Topic	Activity Title
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	Introducing decimals	Decimals from Words to Digits 1
		Decimals on the Number Line
		Decimal Place Value
		Who's got the Money?
		Money
		Grams and Kilograms
		Millilitres and Litres
		Centimetres and Metres
AC9M4N03 - find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation	Fractions & equivalents	What Fraction is Shaded?
AC9M4N04 - count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines		What fraction is Shaded 1
		What Mixed Number Is Shaded?
		Equivalent Fraction Wall 1
		Equivalent Fraction Wall 2
		Simplifying Fractions
		Improper to Mixed
		Mixed to Improper
		Converting Mixed and Improper
		Identifying Fractions on a Number Line
		Identifying Fractions Beyond 1
		Counting with Fractions on a Number Line
		Mixed and Improper Fractions on a Number Line
		Thirds and Sixths
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	Multiplication & division	Grouping in Threes
		Grouping in Fours
		Grouping in Sixes
		Grouping in Sevens
		Grouping in Eights
		Grouping in Nines
		Dividing Threes
		Dividing Fours
		Dividing Sixes
		Dividing Sevens
		Dividing Eights
		Dividing Nines
		Multiplication Turnarounds

		Missing Numbers: × and ÷ facts
	19	Times Tables
		Multiply 3 single-digit numbers
		Multiplying by 10, 100, 1000
		Dividing by 10, 100, 1000
AC9M4A02 - recall and demonstrate proficiency with multiplication facts up to 10 x 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator		
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	Efficient strategies with operations	Bump Add and Subtract
AC9M4N07 - choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions		Jump Add and Subtract
		Complements to 10, 20, 50
		Split Add and Subtract
		Compensation - Add
		Column Addition 1
		Columns that Subtract
		Subtract Numbers
		Estimate Sums
		Estimate Differences
		Magic Symbols 1
		Double and Halve to Multiply
		Fact Families: Multiply and Divide
		Multiplication Arrays
		Arrays 1
		Arrays 2
		Related Facts 2
		Model multiplication to 5×5
		Grid Methods 1
		Problems: Times and Divide
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	Problem solving with models	Bar Model Problems 1
		Bar Model Problems 2
		Fractions of a Collection 1
		Fractions of a Collection 2
AC9M4A01 - find unknown values in numerical equations involving addition and subtraction, using the	Patterns & missing numbers	Describing Patterns
		Missing Values

properties of numbers and operations	20	
AC9M4N02 - explain and use the properties of odd and even numbers		I am Thinking of a Number!
		Balance Numbers to 20
		Odd and Even Numbers 1
AC9M4A02 - explain and use the properties of odd and even numbers	Multiplication & division	Grouping in Threes
		Grouping in Fours
		Grouping in Sixes
		Grouping in Sevens
		Grouping in Eights
		Grouping in Nines
		Dividing Threes
		Dividing Fours
		Dividing Sixes
		Dividing Sevens
		Dividing Eights
		Dividing Nines
		Multiplication Turnarounds
		Missing Numbers: × and ÷ facts
		Times Tables
		Multiply 3 single-digit numbers
		Multiply 3 single-digit numbers
		Dividing by 10, 100, 1000
AC9M4N05 - recall and demonstrate proficiency with multiplication facts up to 10 x 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator		

2 Measurement and Space

Outcome	Topic	Activity Title
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	Measuring, converting & comparing	How Heavy?
AC9M4M02 - recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units		How Long is That?
AC9M4M03 - solve problems involving the duration of time including situations involving "am" and "pm" and conversions between units of time		Measuring Length
		Measure to the Nearest Half Centimetre
		How many Blocks?
		Comparing Volume
		Volume of Solids and Prisms - 1 cm^3 blocks
		What is the Time?
		What's the Temperature (Celsius)?
		Biggest Shape
		Equal Areas
		Area of Shapes
		Perimeter of Shapes
		Time Conversions: Whole Numbers 1
		Time Conversions: Whole Numbers 2
		Time Conversions: Simple Fractions
		Time Conversions: Simple Decimals
AC9M4M04 - estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle	Space, shape & angle	Equal Angles
		Comparing Angles
		Right Angle Relation
		What Type of Angle?
		Relate Shapes and Solids
		Collect the Objects 2
		Coordinate Meeting Place
		Map Coordinates
		Using a key
		What Direction was That?
		More Directions!
		Symmetry
		Symmetry or Not?
		Rotational Symmetry

AC9M4SP02 - create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways	22	
AC9M4SP03 - estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle		

3 Statistics and Probability

Outcome	Topic	Activity Title
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	Graphs with scales &/or axis	Picture Graphs: with scale & half symbols
		Making Picture Graphs: With Scale
		Column Graphs
		Reading from a Column Graph
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	Teacher directed	
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	Teacher directed	
AC9M4SP01 - represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects	Chance	Chance Gauge
		What are the Chances?
		Counting Techniques 1
AC9M4P02 - conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results	Teacher directed	

Year 5 – Skill Quests

1 Number and Algebra

Outcome	Quests	Content
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	Understand decimals to thousandths	Introducing decimal thousandths
		Partitioning decimals of any size
		Comparing & ordering decimals
		Interpreting zeros at end of decimals
		Decimal & fraction equivalences
		Connecting decimals to the metric system
AC9M5N02 - Express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another	Multiples & factors	Finding multiples
		Finding factors
		Solving problems using factors & multiples
	Divisibility tests	Divisibility tests for 2, 5 & 10
		Divisibility tests for 3, 4, 6, 8 & 9
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	Compare & order fractions	Comparing & ordering fractions
		Comparing & ordering fractions & mixed numbers
		Using common factors to simplify proper fractions
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	Fractions, decimals & percentages	Introducing percentages
		Connecting percentages & decimals
		Connecting percentages & fractions
		Relationship - percentages, decimals & fractions
AC9M5N05 - Solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies	Add & subtract fractions	Add & subtract proper fractions - same denominator
		Add & subtract mixed numerals - same denominator
		Add & subtract fractions - related denominators
		Add & subtract mixed num - related denominators
AC9M5N06 - Solve problems involving multiplication of larger numbers by one- or two-digit numbers, choosing efficient	Strategies to multiply by 1- or 2-digits	Multiplication using multiples of 10
		Multiplying: rounding, compensating & partitioning

calculation strategies and using digital tools where appropriate; check the reasonableness of answers	25	Multiplying: doubling, halving & thirding
		Multiplying using the split method
		Multiplying using an area model
		Multiplying by factorising
		Multiplying using expanded algorithm
		Multiplying using contracted algorithm
		Multiplying using extended form of algorithm
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	Division strategies incl. remainders	Dividing by a 1-digit number using partitioning
		Dividing by a 2-digit number using partitioning
		Dividing by a 1-digit number using factorising
		Dividing by a 2-digit number using factorising
		Extended division - no remainders or zeros
		Extended division with remainders
		Extended division with & without remainders
		Contracted division - no remainders or zeros
		Contracted division- no remainders
		Contracted division - with & without remainders
		Dividing by 2-digit numbers - formal algorithms
AC9M5N08 - Check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context	Estimation & rounding	Rounding to estimate addition & subtraction
		Rounding to estimate multiplication & division
		Estimating with money
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	Add & subtract practical problems	Addition & subtraction word problems
		Expressing word problems as equations add/sub
		Solving add & subtract money problems
	Multiply & divide practical problems	Multiplication & division word problems
		Expressing word problems as equations mult/div
		Solving mult-step mult/div word problems

		Solving mult & div money problems
	All operations practical problems	Express equations as word problems all operations
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	Create & use algorithms	Manipulating numbers using a given rule
		Designing flowcharts to solve add/sub of fractions
		Factors & multiples
AC9M5A01 - Recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts	Connect multiplication & division	Inverse relationship - multiplication & division
AC9M5A02 - Find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations	Find unknown values in mult & div	Finding unknown values - multiplication & division

2 Measurement and Space

Outcome	Quests	Content
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	Choose appropriate metric units	Introducing kilometres
		Comparing & ordering units of length
		Selecting appropriate units - length
		Comparing & ordering units of mass
		Selecting appropriate units - mass
		Selecting appropriate units - capacity
		Recognising suitable metric units - all
AC9M5M02 - Solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units	Perimeter & area - practical problems	Calculating perimeter practical problems
		Calculating area practical problems
AC9M5M03 - Compare 12- and 24-hour time systems and solve practical problems involving the conversion between them	Use 24-hour time	Using 24-hour notation
		Using 24-hour time in timetables
AC9M5M04 - Estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names	Estimate, construct & measure angles	Identifying, estimating & measuring angles
		Classifying & constructing angles
AC9M5SP01 - Connect objects to their nets and build objects from their nets using spatial and geometric reasoning	Connect objects to nets	Connecting prisms & pyramids with their nets
		Connecting 3D objects with their nets
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	Use coordinates in a grid system	Working with grid referenced maps
		Using Cartesian coordinate system - first quadrant
		Using landmarks & directional language
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	Identify & describe transformations	Identifying & describing transformations

3 Statistics and Probability

Outcome	Quests	Content
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	Acquire, validate & represent data	Conducting surveys or statistical investigations
	Understand data distributions	Understanding & calculating the mode
		Introducing the shape of data distribution
AC9M5ST02 - Interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made	Interpret line graphs	Interpreting line 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	Teacher directed	
AC9M5P01 - List the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely	Outcomes of chance experiments	Investigating equally likely outcomes
		Exploring fair & unfair chance experiments

Year 5 – Activities

1 Number and Algebra

Outcome	Topic	Activity Title
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	REVIEW Whole Numbers & Place Value	Place Value to Millions
		Numbers from Words to Digits 1
		Numbers from Words to Digits 2
		Greater Than or Less Than?
		Partition and Rename 3/Understanding Place Value 3 (CAN)
		Expanded Notation
		Rounding Numbers
		Decimals from Words to Digits 1
		Decimals on the Number Line
		Decimal Place Value
		Nearest Whole Number
AC9M5N02 - express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another	Factors & Multiples	Multiples
		Lowest Common Multiple
		Factors
		Highest Common Factor
		Find the Factor
		Divisibility Tests (2, 5, 10)
		Divisibility Tests (3, 4, 9)
		Tests of Divisibility 1
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	Compare & order fractions	Shading Equivalent Fractions
		Equivalent Fraction Wall 1
		Equivalent Fractions on a Number Line 1
		Equivalent Fractions
		Compare Fractions 1a
		Compare Fractions 1b
		Identifying Fractions Beyond 1
		Improper to Mixed
		Mixed to Improper
		Converting Mixed and Improper
		Identifying Fractions on a Number Line
		Mixed and Improper Fractions on a Number Line
AC9M5N04 - recognise that 100% represents the complete whole and use percentages to describe, represent and compare relative size; connect familiar percentages	Fractions decimals & percentages	Modelling Percentages
		Fractions to Decimals
		Percents and Decimals
		Common Fractions as Percentages (AU)

		Decimal Order
to their decimal and fraction equivalents	30	Comparing Decimals
		Grams and Kilograms
		Millilitres and Litres
		Centimetres and Metres
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		
AC9M5N05 - solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies	Add & subtract related fractions	Add: Common Denominator
		Subtract: Common Denominator
		Common Denominator
		Add Like Mixed Numbers
		Subtract Like Mixed Numbers
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	More multiplication & division	Multiply Multiples of 10
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		Multiply More Multiples of 10
		Multiply 2 Digits Area Model
		Grid Methods 1
		Double and Halve to Multiply
		Mental Methods Multiplication 1
		Dividing by 10, 100, 1000
		Division Facts 1
		Remainders by Arrays
		Mental Methods Division 1
		Mental Methods Division
AC9M5N08 - check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context	Rounding & estimating	Rounding Numbers
		Rounding Numbers 1
		Estimate Sums
		Estimate Differences
		Estimate Products
		Estimate Quotients
		Estimation: Multiply and Divide
		Estimate Decimal Sums 2
		Estimate Decimal Operations
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	Solve problems	Columns that Add
		Add Two 2-Digit Numbers
		Add 3-Digit Numbers
		Columns that Subtract
		Subtract Numbers
		Multiply: 1-Digit Number
		Multiply: 2-Digit by 1-Digit
		Divide: 1-Digit Divisor 1

appropriate; interpret and communicate solutions in terms of the situation	31	Bar model × ÷
		Problems: Times and Divide
AC9M5A01 - recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts	Fact families mult/div	Fact Families: Multiply and Divide
		Multiplication Turnarounds
		Missing Numbers: × and ÷ facts
		Times Tables
		Multiply 3 single-digit numbers
AC9M5A02 - find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations	Missing values	Equivalent Facts: Multiply
		Missing Values
		Missing Numbers: Variables
		Solve Equations: Multiply, Divide 1
		I am Thinking of a Number!
		Fit the Conditions 1

2 Measurement and Space

Outcome	Topic	Activity Title
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	Measurement	Kilometre Conversions
AC9M5M02 - solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units		Metres and Kilometres
		Millilitres and Litres
		Litre Conversions
		Kilogram Conversions
		Grams and Kilograms
		Perimeter: Squares and Rectangles
		Area of Shapes
		Biggest Shape/Bigger or smaller shape
		Equal Areas
		Area: Squares and Rectangles
		Classifying Angles
		Measuring Angles
		Estimating Angles
AC9M5M04 - estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names		
AC9M5M03 - compare 12- and 24-hour time systems and solve practical problems involving the conversion between them	Time conversions & problems	Time Conversions: Simple Fractions
		Time Conversions: Simple Decimals
		What Time Will it Be?
		Time Mentals
		Elapsed Time
		24 Hour Time
		Using Timetables
AC9M5SP01 - connect objects to their nets and build objects from their nets using spatial and geometric reasoning	Space & shape	What Pyramid am I?
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		What Prism am I?
AC9M5SP03 - describe and perform translations, reflections and rotations of shapes, using dynamic geometric software where		Prisms and Pyramids
		Map Coordinates
		Coordinate Graphs: 1st Quadrant

appropriate; recognise what changes and what remains the same, and identify any symmetries	33	More Directions!
		Flip, Slide, Turn
		Transformations
		Rotational Symmetry

3 Statistics and Probability

Outcome	Topic	Activity Title
AC9M5ST02 - interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made	Statistics	Line Graphs: Interpretation
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		Travel Graphs
		Stem and Leaf Plots: Concept
		Dot Plots
		Divided Bar Graphs
		Tally Charts
		Sector Graphs
		Mode
		Mode from Stem and Leaf Plot
		Mode from Frequency Table
		Grouping data and modal class
AC9M5P01 - list the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely	Chance & probability	What are the Chances?
		Chance Gauge
		Introductory probability
		Fair Games
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	Teacher directed	

Year 6 – Skill Quests

1 Number and Algebra

Outcome	Quests	Content
AC9M6N01 - Recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	Understand integers	Recognising situations that use integers
		Locating & representing integers on a number line
		Introducing the Cartesian plane
AC9M6N02 - Identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations	Prime, composite & square numbers	Introducing prime & composite numbers
		Introducing square numbers
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	Compare & order common fractions	Recognise, compare & represent common fractions
		Comparing common fractions on a number line
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	Add/sub decimals - mental strategies	Adding decimals using mental strategies
		Subtracting decimals using mental strategies
	Add/sub decimals - digital technologies	Adding decimals using digital technologies
		Subtracting decimals using digital technologies
	Add/sub decimals - written method	Adding decimals using written method
		Subtracting decimals using written method
	Add/sub decimals - estimating	Estimating sums & differences of decimals
AC9M6N05 - Solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions	Add & subtract proper fractions	Adding fractions with related denominators
		Subtracting fractions with related denominators
		Add & subtract fractions - related denominators
	Add & subtract mixed numerals	Adding fractions & mixed numerals
		Subtracting fractions & mixed numerals
AC9M6N06 - Multiply and divide decimals by multiples of powers of 10 without a calculator, applying knowledge of place value and proficiency with multiplication facts,	Multiply/divide decimals by powers of 10	Multiplying decimals by powers of 10
		Dividing decimals by powers of 10
		Using estimation

using estimation and rounding to check the reasonableness of answers		
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	Find a fraction of a quantity	Finding a fraction of a quantity
	Calculate percentages	Calculating percentages
AC9M6N08 - Approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies	Rational numbers & percentages	Estimating solutions
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	Solve practical percentage problems	Solving practical percentage problems
AC9M6A01 - Recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	Recognise & use rules for patterns	Continuing & creating number sequences
AC9M6A02 - Find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations	Understand order of operations	Order of operations with no grouping symbols
		Order of operations using grouping symbols
		Order of operations practical situations
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	Design flowcharts to solve problems	Designing flowcharts to solve problems
	Use rules & algorithms	Manipulating numbers using a given rule
		Creating algorithms for sets

2 Measurement and Space

Outcome	Quests	Content
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	Connect decimals to the metric system	Decimal notation & the metric system
		Decimal representation in capacity
		Decimal representation in mass
	Convert metric units of measurement	Converting metric units of length
		Converting metric units of capacity
		Converting metric units of mass
AC9M6M02 - Establish the formula for the area of a rectangle and use it to solve practical problems	Use formula for area of a rectangle	Using a formula to calculate area of a rectangle
AC9M6M03 - Interpret and use timetables and itineraries to plan activities and determine the duration of events and journeys	Interpret & use timetables	Interpreting & using timetables
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	Understand angle properties	Understanding adjacent angles
		Exploring vertically opposite angles
		Calculating angles that total 360˚
		Investigating supplementary & complementary angles
AC9M6SP01 - Compare the parallel cross-sections of objects and recognise their relationships to right prisms	Investigate cross-sections	Investigating cross-sections
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	Points on the Cartesian plane	Locating points on the Cartesian plane
AC9M6SP03 - Recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate	Use combinations of transformations	Recognising tessellations
		Identifying a sequence of 2 transformations
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	Interpret, compare & describe data sets	Two-way tables
		Side-by-side column graphs
		Comparing & selecting bivariate data displays
		Describing & interpreting data sets
	Compare mode, range & shape	Understanding mode, range & shape of distributions

		Comparing modes in sets of data
	38	

3 Statistics and Probability

Outcome	Quests	Content
AC9M6ST02 - Identify statistically informed arguments presented in traditional and digital media; discuss and critique methods, data representations and conclusions	Interpret & evaluate secondary data	Interpreting & evaluating secondary data
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	Teacher directed	
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	Assign probabilities	Probability as a fraction, decimal or percent
		Probabilities from 0 to 1
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	Conduct chance experiments	Conducting chance experiments

Year 6 – Activities

1 Number and Algebra

Outcome	Topic	Activity Title
AC9M6N01 - recognise situations, including financial contexts, that use integers; locate and represent integers on a number line and as coordinates on the Cartesian plane	Introducing Integers	Integers on a Number Line
		Ordering Integers (Number Line)
		Comparing Integers (<, =, >)
		What's the Temperature (Celsius)?
AC9M6N02 - identify and describe the properties of prime, composite and square numbers and use these properties to solve problems and simplify calculations	Multiples, factors, primes & composites	Multiples
		Multiples of
		Highest Common Factor
		Lowest Common Multiple
		Prime or Composite?
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	Equivalent fractions	Equivalent fractions
		Equivalent Fraction Wall 2
		Shading Equivalent Fractions
		Identifying Fractions on a Number Line
		Mixed and Improper Fractions on a Number Line
		Equivalent Fractions
		Comparing Fractions 1
		Compare Fractions 1a
		Compare Fractions 1b
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	Add/subtract decimal and fractions	Decimal Complements
AC9M6N05 - solve problems involving addition and subtraction of fractions using knowledge of equivalent fractions		Adding Decimals
AC9M6N08 - approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies		Subtract Decimals 1
		Estimate Decimal Sums 1
		Estimate Decimal Differences 1
		Add Subtract Fractions 1
		Common Denominator
		Add: Common Denominator
		Subtract: Common Denominator
		One Take Fraction
		Add Like Mixed Numbers
		Subtract Like Mixed Numbers
		Estimate Decimal Sums 2

		Estimate Decimal Differences 2
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	Fractions, decimals & percentages	Fraction Wall Labelling 2
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		Fractions to Decimals
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		Decimals to Fractions 1
AC9M6N08 - approximate numerical solutions to problems involving rational numbers and percentages, including financial contexts, using appropriate estimation strategies		Percentage to Fraction
		Decimals to percentages
		Common Fractions as Percentages (AU)
		Fractions to Percentages (Non-Calculator)
		Percents and Decimals
		Match Decimals and Percentages
		Calculating Percentages (Mental)
		Money Problems: Four Operations
		Time Conversions: Simple Fractions
		Time Conversions: Simple Decimals
		Fraction Word Problems
		Percentage Word Problems
		Model Fractions to Multiply
		Multiply Decimals: 10, 100, 1000
		Divide Decimals: 10, 100, 1000
		Estimate Decimal Operations

		Estimate Products with Fractions
AC9M6A01 - recognise and use rules that generate visually growing patterns and number patterns involving rational numbers	Algebra patterns equations & rules	Increasing Patterns
AC9M6A02 - find unknown values in numerical equations involving brackets and combinations of arithmetic operations, using the properties of numbers and operations		Describing Patterns
		Find the Pattern Rule
		Table of Values
		Pattern Rules and Tables
		Number Sequences Up to 1 Million
		Order of Operations 1 (BIDMAS)
		Writing Algebraic Expressions
		Missing Numbers: Variables
		Simple Substitution
		Solve Equations: Add, Subtract 1
		Solve Equations: Multiply, Divide 1

2 Measurement and Space

Outcome	Topic	Activity Title
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	Converting metric units	Grams and Kilograms 1
		Grams and Kilograms
		Grams and Milligrams
		Grams and Milligrams
		Centimetres and Metres
		Metres and Kilometres
		Millilitres and Litres
		Converting Volume
AC9M6M02 - establish the formula for the area of a rectangle and use it to solve practical problems	Area and angle	Area of Shapes
		Area: Squares and Rectangles
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		Measuring Angles
		Estimating Angles
		Angle Sum of a Triangle
		Quadrilaterals: Angle Sum with Equations
		Exterior Angles of a Triangle
		Angles of revolution: Unknown Values
		Vertically Opposite Angles: Unknown Values
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	Shape and space	Ordered Pairs
AC9M6SP03 - recognise and use combinations of transformations to create tessellations and other geometric patterns, using dynamic geometric software where appropriate		Number Plane
		Graphing from a Table of Values
		Reading Values from a Line
		Transformations: Coordinate Plane
		Rotations: Coordinate Plane

3 Statistics and Probability

Outcome	Topic	Activity Title
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	Mode & range	Mode
		Mode from Stem and Leaf Plot
		Mode from Frequency Table
		Data Extremes and Range
		Stem and Leaf Plots with Range
		Double Stem and Leaf Plots
		Line Graphs: Interpretation
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	Probability	Simple Probability
		Probability Scale
		Complementary Events
		Dice and Coins

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