Mathletics

NZ Curriculum Mathematics and Statistics (2025)

Activities (Courses) and Skill Quests

Phase 1, Years 0-3

February, 2025

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Year 0

1 Number

1.1 Number structure

Subitise (recognise without counting) the number of objects in a collection of up to 5	
Course Topics	**Activities**
Number structure: Numbers to 20	Count to 5
	How Many?

Count forwards or backwards from any whole number between 1 and 10, and then between 1 and 20	
Course Topics	**Activities**
Number structure: Numbers to 20	Counting Up to 20
	Counting Back Within 20

Identify, read, and write whole numbers up to at least 10	
Course Topics	**Activities**
Number structure: Numbers to 20	Matching Numbers to 10
	Matching Numbers to 20

Compare and order whole numbers up to at least 10 and ordinal numbers (1st, 2nd, 3rd), using words	
Course Topics	**Activities**
Number structure: Numbers to 20	More, Less or the Same to 10
	More, Less or the Same to 20
	Order Numbers to 10
	Order Numbers to 20

Partition up to 5 objects, and then up to 10 objects, using a systematic approach and noticing patterns in the sequence	
Course Topics	**Activities**
Operations: Add & subtract to 10	Adding to Make 5 and 10

1.2 Operations

Join and separate groups of up to a total of 10 objects by grouping and counting	
Course Topics	**Activities**
Operations: Add & subtract to 10	Adding to 5
	Adding to Ten
	Subtracting From 5
	Subtracting from Ten
	Model Subtraction
	Doubles and Halves to 10
Operations: Grouping & sharing	Groups
	Share the Treasure

2 Algebra

2.1 Equations and relationships

Copy, continue, create, and describe a repeating pattern with two elements	
Course Topics	**Activities**
Patterns & measurement	Complete the pattern

3 Measurement

3.1 Measuring

Directly compare two objects by an attribute (e.g., length, mass (weight), capacity)	
Course Topics	**Activities**
Patterns & measurement	Everyday Length
	Compare Length 1
	Which Holds More?
	Hot or Cold?
	Balancing Act

Connect days of the week to familiar events and daily routines (e.g., the class timetable)	
Course Topics	**Activities**
Patterns & measurement	Days of the week

4 Geometry

4.1 Shape

Identify, sort by one feature, and describe familiar 2D shapes	
Course Topics	**Activities**
Shape, space & pathways	Same and Different
	Sort It
	Collect the Shapes

4.2 Spatial reasoning

Compose by trial and error a target shape using smaller shapes, and decompose a shape into smaller shapes	
Course Topics	**Activities**
Teacher directed	

4.3 Pathways

Follow instructions to move to a familiar location or locate an object	
Course Topics	**Activities**
Shape, space & pathways	Where is it?

Year 1

1 Number

1.1 Number structure

Subitise (recognise without counting) the number of objects in a collection of up to 10, including by combining two patterns of 1–5 objects	
Course Topics	**Activities**
Number structure: Count, compare & order	How Many?
	Count to 5
	Doubles and Halves to 10

Count forwards or backwards in 1s, 2s, and 10s from any whole number between 1 and 20, and then between 1 and 100	
Course Topics	**Activities**
Number structure: Count, compare & order	Counting Forwards
	Counting Backwards
	The Number Line
	Counting Back Within 20
	Concept of zero
	Before, After and Between to 20

Identify, read, and write whole numbers up to at least 20, and represent them using the ten-and-ones structure of teen (11-19) and -ty (multiples of 10) numbers (e.g. 17 = 10 + 7, 20 = 2 × 10)	
Course Topics	**Activities**
Number structure: Count, compare & order	Making teen numbers
	Matching Numbers to 20
	Reading Numbers to 30

Compare and order whole numbers up to at least 20 and ordinal numbers (1st, 2nd, 3rd), using words or numerals with suffixes	
Course Topics	**Activities**
Number structure: Count, compare & order	More, less or the same to 20
	More, Less or the Same to 10
	Order Numbers to 10
	Order Numbers to 20
	1 to 30
	Ordinal Numbers

Partition and regroup up to 20 objects in different ways, using a systematic approach and noticing patterns	
Course Topics	**Activities**
Operations: Addition & subtraction to 20	Adding to Make 5 and 10
	Adding to 5
	Doubles and Halves to 20

1.2 Operations

Use estimation to predict and to check the reasonableness of calculations	
Course Topics	**Activities**
Teacher directed	

Join and separate groups of up to a total of 20 objects, and find the difference between groups by grouping and counting (e.g., 9 + 6; 7 + _ = 11)	
Course Topics	**Activities**
Operations: Addition & subtraction to 20	Subtracting From 5
	Adding to Ten
	Subtracting from Ten
	Model Subtraction
	Addictive Addition
	Subtraction Facts to 18
	Doubles and Halves to 20
	Adding In Any Order

Explore addition facts up to 10 and their corresponding subtraction facts (families of facts), including doubles and halves	
Course Topics	**Activities**
Number structure: Count, compare & order	Doubles and Halves to 10
Operations: Addition & subtraction to 20	Adding to Make 5 and 10
	Adding to 5
	Subtracting From 5
	Adding to Ten
	Subtracting from Ten

Multiply and divide by making equal groups and using grouping or counting	
Course Topics	**Activities**
Operations: Grouping & sharing	Groups
	Share the Treasure

1.3 Rational numbers

Identify and represent halves and quarters as fractions of sets and regions, using equal parts of the whole	
Course Topics	**Activities**
Rational numbers: Halves & quarters	Halves
	Is it Half?
	Halves and Quarters

Find a half or quarter of a set using equal sharing and grouping	
Course Topics	**Activities**
Rational numbers: Halves & quarters	Halves
	Is it Half?

2 Algebra

2.1 Equations and relationships

Solve true or false number sentences and open number sentences involving addition and subtraction of one-digit numbers, using an understanding of the equal sign (e.g., 9 – 6 = 8 – _ ; 7 – 5 = 6 – 4 (T or F?)	
Course Topics	**Activities**
Teacher directed	

Copy, continue, create, and describe a repeating pattern with three elements, and identify missing elements in a pattern	
Course Topics	**Activities**
Number structure: Count, compare & order	Concept of zero
Equations & relationships	Simple Patterns
	Missing it!
	Complete the pattern

2.2 Algorithmic thinking

Follow step-by-step instructions to complete a simple task.	
Course Topics	**Activities**
Equations & relationships	Sort It

3 Measurement

3.1 Measuring

Compare the length, mass (weight), temperature, volume, and capacity of objects indirectly (e.g., by comparing each of them with another object and using the object repeatedly)	
Course Topics	**Activities**
Measuring & time	Everyday Length
	Compare Length
	Which Holds More?
	Hot or Cold?
	Balancing Objects

- Identify how the passing of time is measured in years, months, weeks, days, hours - Name and order the days of the week, and sequence events in a day using everyday language of time	
Course Topics	**Activities**
Measuring & time	Days of the Week

Tell the time to the hour using the language of 'o'clock'	
Course Topics	**Activities**
Measuring & time	Set Time to the Hour

4 Geometry

4.1 Shape

Identify, describe, and classify familiar 2D and 3D shapes presented in different orientations, including triangles, circles, rectangles (including squares), cubes, cylinders, and spheres	
Course Topics	**Activities**
Shape, space & pathways	Collect the Shapes
	Match the Object

4.2 Spatial reasoning

Anticipate which smaller shapes might be used to compose a target shape, and then check by making the shape	
Course Topics	**Activities**
Teacher directed	

Flip, slide, and turn 2D shapes to make a pattern	
Course Topics	**Activities**
Shape, space & pathways	Flip, slide, turn

4.3 Pathways

Follow and give instructions to move to a familiar location or locate an object	
Course Topics	**Activities**
Shape, space & pathways	Where is it?
	Left or Right?

Use pictures, diagrams, or stories to describe the positions of objects and places	
Course Topics	**Activities**
Shape, space & pathways	Where is it?
	Left or Right?

5 Statistics

5.1 Problem

Pose a summary investigative question about a group for which the data will have categorical variables (e.g., colour, brand), and anticipate what the data might show	
Course Topics	**Activities**
Teacher directed	

5.2 Plan

Plan to collect data by making observations or questioning others, and discuss how the data-gathering process might affect people	
Course Topics	**Activities**
Teacher directed	

5.3 Data

Collect categorical data for one variable	
Course Topics	**Activities**
Statistics & probability	Picture Graphs: Single-Unit Scale

5.4 Analysis

Create and make statements about data visualisations (e.g., pictures, graphs, dot plots) for the categorical data, giving the frequency for each category	
Course Topics	**Activities**
Statistics & probability	Picture Graphs: Single-Unit Scale
	Pictograms: Who has the goods?
	Read Graphs
	Sorting Data

5.5 Conclusion

Choose from given options the statements that best answer the investigative question	
Course Topics	**Activities**
Teacher directed	

5.6 Statistical literacy

Agree or disagree with others' statements about simple data visualisations (e.g., pictographs, physical dot plots)	
Course Topics	**Activities**
Statistics & probability	Sorting Data

6 Probability

6.1 Probability investigations

Engage in stories or games that involve chance-based situations and: – decide if something will happen, won't happen, or might happen – identify possible and impossible outcomes (e.g., what might happen next)	
Course Topics	**Activities**
Statistics & probability	Will it Happen?
	Most Likely and Least Likely

Year 2

1 Number

1.1 Number structure

Group objects in a collection of at least 10, subitise the number of objects in each part, and find the total number in the collection using the parts	
Course Topics	**Activities**
Number structure: Numbers up to 100	Adding to Make 5 and 10
	How Many Dots?
	Doubles and Halves to 10
Topics	**Skill Quests**
Number bonds to 10	Using number bonds to 10
Count collections	Counting collections to 20
	Counting collections in 1s, 2s, 5s, 10s to 50
	Counting collections in 1s, 2s, 5s, 10s to 100

Count forwards or backwards in 1s, 2s, 5s, and 10s from any whole number between 1 and 100	
Course Topics	**Activities**
Number structure: Numbers up to 100	Number Lines
	1 More, 2 Less
	Going Up
Topics	**Skill Quests**
Count collections	Counting collections to 20
	Counting collections in 1s, 2s, 5s, 10s to 50
	Counting collections in 1s, 2s, 5s, 10s to 100
Counting strategies	Counting by 1s to 100
	Counting in tens & ones
	Count in tens with 2-digit numbers on the decade
	Count in tens with 2-digit numbers off the decade

Identify, read, and write whole numbers up to at least 100, and represent them using base 10 structure	
Course Topics	**Activities**
Number structure: Numbers up to 100	Making Teen Numbers
	Making Numbers Count
	Making Big Numbers Count
	Model Numbers
Topics	**Skill Quests**
Place value of 2-digit numbers	Reading, writing & representing 2-digit numbers
	Identifying place value of 2-digit numbers
	Identifying numbers before & after up to 100

Compare and order whole numbers up to at least 100	
Course Topics	**Activities**
Number structure: Numbers up to 100	Compare Numbers to 50
	Compare Numbers to 100
	Arranging Numbers
	Before, After & Between to 100
	Greater or Less to 100
	Ordinal Numbers
	Which is Bigger?
	Which is Smaller?
Topics	**Skill Quests**
Compare and order to at least 100	Comparing & ordering sets up to 50
	Comparing & ordering numbers to at least 100

Partition and regroup whole numbers up to at least 100, using a systematic approach and noticing patterns (e.g., 10 + _ = 70, 20 + _ = 70, 30 + _ = 70)	
Course Topics	**Activities**
Number structure: Numbers up to 100	Making Numbers Count
	Making Big Numbers Count
	Model Numbers
Topics	**Skill Quests**
Partition numbers to at least 100	Partitioning 2-digit numbers
	Partitioning 3-digit numbers

1.2 Operations

Use estimation to predict and to check the reasonableness of calculations	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

Identify the nearest tens to any whole number up to 100	
Course Topics	**Activities**
Operations: Addition & subtraction	Nearest 10?
Topics	**Skill Quests**
Round to nearest 10	Rounding numbers to the nearest 10

Add and subtract numbers up to 100 without renaming (e.g., 53 + 21, 55 – 32)	
Course Topics	**Activities**
Operations: Addition & subtraction	Adding to 10 Word Problems
	Addictive Addition
	Subtracting from Ten

	All about Twenty
	Subtraction Facts to 18
	Simple Subtraction
	Doubles and Halves to 20
	Doubles and Near Doubles
	Adding In Any Order
	Add Three 1-Digit Numbers
	Add 3 Numbers Using Bonds to 10
	Adding to 2-digit numbers
Topics	**Skill Quests**
Addition & subtraction to 20	Adding & subtracting to 20
	Adding & subtracting zero within 20
	Adding/subtracting using counting on & back to 20
Add & subtract to 100	Using count on & back to add & subtract to 100
	Bridging to ten using models
	Adding & subtracting using jump strategy
	Adding using place value up to 100

Recall addition facts up to 10, and explore addition facts up to 20 and their corresponding subtraction facts (families of facts), including doubles and halves	
Course Topics	**Activities**
Number structure: Numbers up to 100	Doubles and Halves to 10
Operations: Addition & subtraction	Addictive Addition
	Subtracting from Ten
	All about Twenty
	Subtraction Facts to 18
	Simple Subtraction
	Doubles and Halves to 20
	Doubles and Near Doubles
Topics	**Skill Quests**
Addition & subtraction to 20	Adding & subtracting to 20
	Adding & subtracting zero within 20
	Adding/subtracting using counting on & back to 20
Addition facts up to 20	Addition & subtraction facts to 20
	Adding doubles up to 20
	Introducing the commutative property of addition

Identify the relationship between skip counting and multiplication facts for 2s, 5s, and 10s	
Course Topics	**Activities**
Operations: Multiplication & division	Counting by Twos
	Counting by Fives
	Grouping in Tens
	Count by 2s, 5s and 10s
Topics	**Skill Quests**
Skip counting	Skip counting by 2s up to 50
	Skip counting by 5s up to 50
	Skip counting by 10s to 100

	Skip counting by 2s, 5s & 10s up to 50
Group & skip count to multiply	Grouping & skip counting to multiply
	Multiplying by 1 or 0

Multiply and divide using equal grouping or skip counting (e.g. in 2s, 5s, and 10s)	
Course Topics	**Activities**
Operations: Multiplication & division	Counting by Twos
	Counting by Fives
	Grouping in Tens
	Count by 2s, 5s and 10s
	Groups
	Share the Treasure
Topics	**Skill Quests**
Skip counting	Skip counting by 2s up to 50
	Skip counting by 5s up to 50
	Skip counting by 10s to 100
	Skip counting by 2s, 5s & 10s up to 50
Group & skip count to multiply	Grouping & skip counting to multiply
	Multiplying by 1 or 0
Share & group to divide	Sharing to divide up to 20
	Grouping to divide

1.3 Rational numbers

Identify, read, write (using symbols and words), and represent halves, quarters and eighths as fractions of sets and regions, using equal parts of the whole	
Course Topics	**Activities**
Rational numbers: Simple fractions	Halves
	Halves and Quarters
Topics	**Skill Quests**
Halves, quarters & eighths	Finding halves, quarters & eighths

Directly compare two fractions involving halves, quarters and eighths	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Compare halves and quarters	Order & compare halves and quarters beyond 1 whole
Find halves and quarters of sets	Finding halves and quarters of sets

Find a half and quarter of a set by identifying groups and patterns (rather than sharing by ones), and identify the whole set or shape when given a half or quarter	
Course Topics	**Activities**
Rational numbers: Simple fractions	Halves
	Halves and Quarters
Topics	**Skill Quests**
Find halves and quarters of sets	Finding halves and quarters of sets

1.4 Financial maths

Recognise and order NZ denominations up to $20 according to their value, make groups of 'like' denominations, and calculate their value	
Course Topics	**Activities**
Operations: Addition & subtraction	Recognise Everyday Money (NZD)
Topics	**Skill Quests**
Teacher directed	

2 Algebra

2.1 Equations and relationships

Solve true or false number sentences and open number sentences involving addition and subtraction of one- and two-digit numbers, using an understanding of the equal sign (e.g., 18 + __ = 17 + 6; 17 = 25 (T or F?))	
Course Topics	**Activities**
Equality & relationships	Balance Numbers to 10
	Problems: Add and Subtract
	Word Problems: Add and Subtract
Topics	**Skill Quests**
Equality & number properties	Exploring equality in addition & subtraction

Recognise and describe the unit of repeat in a repeating pattern, and use it to predict further elements using the ordinal position	
Course Topics	**Activities**
Equality & relationships	Pattern Error
	Simple Patterns
	Odd or even
	Missing it!
Topics	**Skill Quests**
Repeating patterns	Recognising repeating patterns
	Reproducing repeating patterns

	Manipulating repeating patterns
	Describing & creating repeating patterns
	Extending repeating patterns
	Translating repeating patterns

2.2 Algorithmic thinking

Follow and give step-by-step instructions for a simple task, identifying and correcting errors as the instructions are followed	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Sorting instructions & following rules	Sorting instructions

3 Measurement

3.1 Measuring

Estimate and use a standard informal unit repeatedly to measure the length, mass (weight), volume, or capacity of an object	
Course Topics	**Activities**
Measuring, time & area	Which Measuring Tool?
	Comparing Length
	Measuring Length with Blocks
	Filling Fast!
	How Full?
	Everyday Mass
	Comparing Volume
Topics	**Skill Quests**
Informal units of length	Exploring length
Informal units of volume & capacity	Exploring volume & capacity
Informal units of mass	Exploring mass

Compare and order several objects using informal units of length, mass (weight), volume, or capacity	
Course Topics	**Activities**
Measuring, time & area	Comparing Length
	Filling Fast!
	Comparing Volume
Topics	**Skill Quests**
Compare & order lengths	Comparing and ordering lengths

Informal units of volume & capacity	Exploring volume & capacity
Compare & order volume & capacity	Comparing & ordering volume & capacity
Informal units of mass	Exploring mass

Turn, and describe how far an object or person has turned, using full, half and quarter turns as benchmarks	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Half & quarter turns	Half & quarter turns

Name and order the months and seasons, and describe the duration of familiar events using months, weeks, days, and hours	
Course Topics	**Activities**
Measuring, time & area	Tomorrow and Yesterday (without scaffold)
	Months of the Year
	Months before and after
	Seasons (AU/NZ)
Topics	**Skill Quests**
Months, seasons, calendars & duration	Months of the year
	Seasons
	Calendars
	Recalling days of the week

Tell the time to the hour and half-hour, using the language of ‘past’ and 'o'clock'	
Course Topics	**Activities**
Measuring, time & area	Set Time to the Hour
	Set Time to the Half Hour
Topics	**Skill Quests**
Tell time to hour & half hour	Telling the time to the hour & half hour

3.2 Perimeter, area and volume

Visualise, estimate, and measure the perimeter and area of 2D shapes, using informal units	
Course Topics	**Activities**
Measuring, time & area	Equal Areas
Topics	**Skill Quests**
Explore area with informal units	Exploring area using informal units

4 Geometry

4.1 Shape

Identify, describe, and classify the properties of 2D and 3D shapes including ovals, semicircles, polygons (e.g., hexagons, pentagons), rectangular prisms (cuboids), pyramids, hemispheres, and cones, using the attributes of shapes	
Course Topics	**Activities**
Shape, space & pathways	Count Sides and Corners
	Collect the Shapes 1
	Collect More Shapes
	Collect the Objects
	Select the Objects
	How Many Faces?
	How Many Edges?
	How Many Vertices?
Topics	**Skill Quests**
Introduce 2D shapes	Introducing quadrilaterals
	Introducing octagons
	Introducing pentagons
	Introducing hexagons
	Comparing 2D shapes
	Sorting 2D shapes
Introduce 3D objects	Introducing spheres
	Introducing cones
	Introducing cubes
	Introducing cylinders
	Identifying and comparing 3D objects
	Sorting 3D shapes

4.2 Spatial reasoning

Anticipate which smaller shapes might be used to compose and decompose a target shape, and then check by making the shape	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Composite 2D shapes & 3D objects	Identifying composite 2D shapes
	Identifying composite 3D objects
	Comparing 2D shapes to parts of 3D objects

Recognise lines of symmetry in patterns or pictures, and create or complete symmetrical pictures or patterns	
Course Topics	**Activities**
Shape, space & pathways	Symmetry
	Left or Right?

Topics	Skill Quests
Line symmetry	Understanding line symmetry

4.3 Pathways

Follow and give instructions to move people or objects to a different location, using direction, distances (e.g., number of steps), and half and quarter turns	
Course Topics	**Activities**
Shape, space & pathways	Following Directions
Topics	**Skill Quests**
Understand directions	Understanding left & right from opposite direction
Follow & give directions	Following & giving directions
	Describing position

Interpret diagrams to describe the positions of objects and places in relation to other objects and places	
Course Topics	**Activities**
Shape, space & pathways	Following Directions
Topics	**Skill Quests**
Follow & give directions	Following & giving directions
	Describing position

5 Statistics

5.1 Problem

Pose a summary investigative question about a group for which the data will have categorical variables, and anticipate what the data might show (e.g., which outcomes might be more frequent than others)	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Conduct investigations	Asking questions & conducting investigations

5.2 Plan

Plan survey and data-collection questions for collecting data, identify who and what the data will measure, and discuss how the data-gathering process might affect people	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Conduct investigations	Asking questions & conducting investigations

5.3 Data

Collect categorical data for more than one variable	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Conduct investigations	Asking questions & conducting investigations

5.4 Analysis

Create and make statements about data visualisations (e.g., picture graphs, dot plots) for categorical data, comparing the frequencies of categories	
Course Topics	**Activities**
Statistics & probability	Sorting Data / Analyzing Data (US)
	Picture Graphs: Single-Unit Scale
Topics	**Skill Quests**
Read & understand data	Reading & understanding data

5.5 Conclusion

Choose statements that best answer the investigative question	
Course Topics	**Activities**
Statistics & probability	Sorting Data / Analyzing Data (US)
	Picture Graphs: Single-Unit Scale
Topics	**Skill Quests**
Read & understand data	Reading & understanding data

5.6 Statistical literacy

Match statements made by others with features in simple data visualisations, and agree or disagree with the statements.	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Read & understand data	Reading & understanding data

6 Probability

6.1 Probability investigations

Engage in chance-based investigations about games and everyday situations to: anticipate and then identify possible outcomes collect and record data create data visualisations for frequencies of possible outcomes (e.g., lists, pictures, graphs) describe what these visualisations show answer the investigative question notice variations in outcomes (e.g., how often each of the numbers on a dice come up)	
Course Topics	**Activities**
Statistics & probability	Fair Games
	Will it Happen?
	Most Likely and Least Likely
Topics	**Skill Quests**
The language of probability	Using the language of probability
	Exploring possible outcomes

6.2 Critical thinking in probability

Agree or disagree with the statements made by others about chance situations	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

Year 3

1 Number

1.1 Number structure

Estimate the number of objects in a collection of less than 100, using patterns and groupings	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Count collections within 100	Counting collections to 100

Count forwards or backwards in 2s, 3s, 5s, and 10s from any whole number between 1 and 1,000	
Course Topics	**Activities**
Number structure: Whole number & place value	Ascending Order
	Descending Order
	1 More, 10 Less
Topics	**Skill Quests**
Count within 1000	Counting forwards & backwards within 1000
	Counting in tens with 2- and 3-digit numbers
	Counting in hundreds, tens & ones up to 1000
Numbers before & after up to 1000	Numbers before & after within 1000

Identify, read, and write whole numbers up to at least 1,000, and represent them using base 10 structure	
Course Topics	**Activities**
Number structure: Whole number & place value	Place Value 2
	Place Value – Thousands
	1 More, 10 Less
Topics	**Skill Quests**
Place value of 3-digit numbers	Using place value with 3-digit numbers
	Find numbers 10 or 100 before & after up to 1000
	Finding the number of tens
	Solving place value problems
Read & write 3-digit numbers	Reading & writing 3-digit numbers
Read & write 4-digit numbers	Reading & writing 4-digit numbers

Compare and order whole numbers up to at least 1,000	
Course Topics	**Activities**
Number structure: Whole number & place value	Greater Than or Less Than 1
	Smallest and largest numbers
Topics	**Skill Quests**
Compare & order numbers to at least 1000	Comparing & ordering numbers to at least 1000

Partition and regroup whole numbers up to at least 1,000, using a systematic approach and noticing patterns (e.g., 400 + 300 = _, 350 + _ = 500)	
Course Topics	**Activities**
Number structure: Whole number & place value	Place Value 2
	Repartition Two-digit Numbers
Topics	**Skill Quests**
Partition numbers to at least 1000	Partitioning 3- & 4-digit numbers

1.2 Operations

Use estimation to predict and to check the reasonableness of calculations	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Solve addition & subtraction problems	Solving addition & subtraction problems

Round whole numbers up to 1,000 to the nearest hundreds and tens	
Course Topics	**Activities**
Operations: Addition & subtraction	Nearest 10?
	Nearest 100?
Topics	**Skill Quests**
Round numbers	Rounding numbers to nearest 10 (up to 1000)
	Rounding numbers to nearest 100 (up to 1000)

Add and subtract numbers up to at least 100 (e.g., 43 – 28, 37 + 18)	
Course Topics	**Activities**
Operations: Addition & subtraction	Doubles and Halves to 20
	Doubles and Near Doubles
	Commutative Property of Addition
	Add 3 Numbers Using Bonds to 10
	Subtract Tens
	Columns that Add
	Add Two 3-Digit Numbers
	Complements to 50 and 100

Topics	Skill Quests
Addition & subtraction strategies	Adding doubles or near doubles
	Adding using bonds to 10
	Adding using mental strategies up to 100
	Adjusting addends to add
Add & subtract multiples of 10 & 100	Adding & subtracting multiples of 10
	Adding & subtracting multiples of 100
Add & subtract using the number line	Adding & subtracting with number line (2-digits)
Add & subtract using place value	Adding & subtracting tens and ones
	Adding & subtracting 2- & 3-digit numbers
Add & subtract vertically	Adding using the vertical method (no renaming)
	Subtracting using vertical method (no renaming)
Solve addition & subtraction problems	Solving addition & subtraction problems
Properties of addition & subtraction	Identity property of addition & subtraction
	Commutative property of addition & subtraction

Recall addition facts up to 20 and their corresponding subtraction facts (families of facts), including doubles and halves	
Course Topics	**Activities**
Operations: Addition & subtraction	Doubles and Halves to 20
	Doubles and Near Doubles
	All about Twenty
	Simple Subtraction
	Fact Families: Add and Subtract
	Related Facts 1
Topics	**Skill Quests**
Addition & subtraction facts to 20	Addition & subtraction facts

Recall multiplication and corresponding division facts for 2s, 3s, 5s, and 10s	
Course Topics	**Activities**
Operations: Multiplication & division	Grouping in Twos
	Grouping in Fives
	Groups of Ten
	Grouping in Threes
	Grouping in Fours
	Model Multiplication to 5 × 5
	Dividing Twos
	Dividing Fives
	Dividing Tens
	Dividing Threes
	Dividing Fours
Topics	**Skill Quests**
Mult div facts for 2, 5, 10 & 3	Exploring multiplication & division by 2
	Exploring multiplication & division by 10
	Exploring multiplication & division by 5
	Exploring multiplication & division by 3
	Multiplication & division problems (2,5,10)

Recall mult div facts for 2, 5, 10, 3	Recalling multiplication and division facts for 2
	Recalling multiplication and division facts for 10
	Recalling multiplication and division facts for 5
	Recalling multiplication and division facts for 3

Multiply a one- or two-digit number by a one-digit number, using skip counting or known facts (e.g., 4 × 6; 2 × 23)	
Course Topics	**Activities**
Operations: Multiplication & division	Arrays 1
	Multiplication Arrays
	Grouping in Twos
	Grouping in Fives
	Groups of Ten
	Grouping in Threes
	Grouping in Fours
	Model Multiplication to 5 × 5
	Frog Jump Multiplication
Topics	**Skill Quests**
Multiply with arrays & repeated addition	Introducing arrays & repeated addition
Properties of multiplication	Properties of multiplication
Mult div facts for 2, 5, 10 & 3	Exploring multiplication & division by 2
	Exploring multiplication & division by 10
	Exploring multiplication & division by 5
	Exploring multiplication & division by 3
	Multiplication & division problems (2,5,10)

Divide whole numbers by a one-digit divisor with no remainders, using grouping (e.g. 24 ÷ 3, 32 ÷ 4)	
Course Topics	**Activities**
Operations: Multiplication & division	Divide into Equal Groups
	Dividing Twos
	Dividing Fives
	Dividing Tens
	Dividing Threes
	Dividing Fours
	Fill the Jars
Topics	**Skill Quests**
Division by sharing & grouping	Dividing by sharing & grouping (up to 50)
	Using repeated subtraction to divide
Mult div facts for 2, 5, 10 & 3	Exploring multiplication & division by 2
	Exploring multiplication & division by 10
	Exploring multiplication & division by 5
	Exploring multiplication & division by 3
	Multiplication & division problems (2,5,10)

1.3 Rational numbers

Identify, read, write and represent halves, thirds, quarters, fifths, sixths, and eighths as fractions of sets and regions, using equal parts of the whole and by positioning on a number line	
Course Topics	**Activities**
Rational numbers: Simple fractions	Halves and Quarters
	Thirds and Sixths
Topics	**Skill Quests**
Work with halves, quarters & eighths	Introducing eighths
	Finding halves, quarters & eighths
	Equivalence with halves, quarters & eighths
Work with thirds, fifths, sixths	Introducing thirds
	Introducing sixths
	Introducing fifths

Compare and order fractions involving halves, quarters, and eighths and identify when two fractions are equivalent	
Course Topics	**Activities**
Rational numbers: Simple fractions	Compare fractions 1a
	Shade Fractions
Topics	**Skill Quests**
Compare and order fractions	Ordering & comparing halves, quarters & eighths

Find a unit fraction of a whole number (e.g., 1/3 of 15) and identify the whole set or amount when given a unit fraction (e.g "1/4 of the set is 3, what is the whole set?")	
Course Topics	**Activities**
Rational numbers: Simple fractions	Unit Fractions
Topics	**Skill Quests**
Find unit fractions of sets	Finding unit fractions of sets
Identify whole from a fraction	Finding the whole from the part

Add and subtract unit fractions with the same denominator (e.g., 1/8 + 1/8 + 1/8 = 3/8)	
Course Topics	**Activities**
Rational numbers: Simple fractions	Add Subtract Fractions 1
Topics	**Skill Quests**
Add fractions - same denominator	Add & subtract fractions with same denominators

1.4 Financial maths

Make amounts of money using one- and two-dollar coins and 5-, 10-, 20-, 50-, and 100-dollar notes	
Course Topics	**Activities**
Number structure: Whole number & place value	Recognise Everyday Money (NZD)
Topics	**Skill Quests**
Use NZ notes & coins	Identifying & using NZ notes & coins

2 Algebra

2.1 Equations and relationships

Solve true and false number sentences and open number sentences involving addition and subtraction, using an understanding of the equal sign	
Course Topics	**Activities**
Equations & relationships	Problems: Add and Subtract
	Word Problems: Add and Subtract
Topics	**Skill Quests**
Equality concepts	Partitioning numbers to explore equality
	Using equality to write & solve number sentences

Recognise, continue, and create growing patterns, and describe a rule to explain a pattern	
Course Topics	**Activities**
Equations & relationships	Pattern Error
	Count Forward Patterns
	Colour Patterns
	Count by Twos
	Count by Fives
	Counting on a 100 grid
Topics	**Skill Quests**
Explore simple growing patterns	Exploring simple growing patterns

2.2 Algorithmic thinking

Create and use a set of precise, step-by-step instructions for carrying out a familiar routine or task	
Course Topics	**Activities**
Teacher directed	

Topics	Skill Quests
Follow & create simple sequences	Following & creating simple sequences

3 Measurement

3.1 Measuring

Estimate and then reliably measure length, capacity, and mass (weight), using whole-number metric units (e.g., from tools with labelled markings)	
Course Topics	**Activities**
Measuring, perimeter, area & time	How Long is That?
	How Heavy is it?
	How Full?
Topics	**Skill Quests**
Formal units of length (cm & m)	Introducing formal units (cm)
	Introducing formal units (m)
Formal units of mass (kg)	Introducing formal units (kg)
Units of volume & capacity (l)	Introducing formal units (l)

Compare and order objects using metric units of length, mass (weight) or capacity	
Course Topics	**Activities**
Measuring, perimeter, area & time	Ordering Lengths (cm)
	Ordering Mass (g)
	Ordering Volumes (l)
Topics	**Skill Quests**
Compare & order lengths	Comparing & ordering m & cm
	Selecting appropriate length units
Formal units of mass (kg)	Introducing formal units (kg)
Units of volume & capacity (l)	Introducing formal units (l)

Turn, and describe how far an object or person has turned, using full, half, quarter, and three-quarter turns as benchmarks	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Describe the measure of turn	Describing half, quarter & three-quarter turns

Identify the duration of events using years, months, weeks, days, hours, minutes, and seconds	
Course Topics	**Activities**
Measuring, perimeter, area & time	Months of the Year
	Days: After and Before
	Seasons (AU/NZ)
	Using a Calendar
	1st to 31st
Topics	**Skill Quests**
Use a calendar	Using a calendar

Tell the time to the hour, half hour, and quarter past and quarter to the hour	
Course Topics	**Activities**
Measuring, perimeter, area & time	Set Time to the Hour
	Set Time to the Half Hour
	Quarter To and Quarter Past
Topics	**Skill Quests**
Tell time to the quarter hour	Review: Telling time to the hour & half hour
	Telling time to the quarter hour

3.2 Perimeter, area and volume

Visualise, estimate, and measure: – the perimeter of polygons using metric units – the area of 2D shapes covered with squares of identical size – the volume of rectangular prisms (cuboids) by filling them with identical units	
Course Topics	**Activities**
Measuring, perimeter, area & time	Perimeter of Shapes
	Equal Areas
Topics	**Skill Quests**
Perimeter with metric units	Measuring perimeter in metric units
Explore area with square units	Measuring area of rectangles (square units)
Compare & order volume (blocks)	Comparing & ordering volume (blocks)

4 Geometry

4.1 Shape

Visualise, identify, compare, and sort 2D and 3D shapes, using the attributes of shapes	
Course Topics	**Activities**
Shape, space & pathways	Collect the Shapes 2
	Match the Object
	Count Sides and Corners

	Symmetry
Topics	**Skill Quests**
Identify line symmetry	Identifying line symmetry
Identify & compare 2D shapes	Describing & comparing 2D shapes
Properties of 3D shapes	Introducing faces, edges, vertices
Introduction to pyramids	Introducing pyramids
Sort & compare 3D objects	Sorting 3D shapes

Identify right angles in shapes and objects	
Course Topics	**Activities**
Shape, space & pathways	Right Angle Relation
Topics	**Skill Quests**
Identify right angles in shapes/objects	Identifying right angles in shapes & objects

4.2 Spatial reasoning

Compose and decompose 2D shapes using the attributes of shapes (e.g., lines of symmetry), other shapes, side lengths, and angles	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Identify line symmetry	Identifying line symmetry

Predict the result of a one-step transformation (reflection, translation, or rotation) on 2D shapes	
Course Topics	**Activities**
Shape, space & pathways	Flip, Slide, Turn
Topics	**Skill Quests**
Flips, slides & turns	Introducing slides, flips & turns

4.3 Pathways

Follow and create a sequence of step-by-step instructions (an algorithm) for moving people or objects to a different location	
Course Topics	**Activities**
Shape, space & pathways	Following Directions
Topics	**Skill Quests**
Create & use simple maps	Creating & using simple maps

Interpret, draw, and use simple maps to locate objects and places relative to other objects and places	
Course Topics	**Activities**
Shape, space & pathways	Map Coordinates
Topics	**Skill Quests**
Create & use simple maps	Creating & using simple maps

5 Statistics

5.1 Problem

Pose a summary investigative question about an everyday situation, using categorical data and discrete numerical (whole number) data, including about identifying the variable and the group of interest, and anticipate what the data might show	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Introduce statistical investigations	Introducing statistical investigation

5.2 Plan

Plan survey and data-collection questions for collecting data, identify who and what the data will measure, and discuss how the data-gathering process might affect people	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Introduce statistical investigations	Introducing statistical investigation

5.3 Data

Collect, record, and sort data or use secondary data sources provided by someone else	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Introduce statistical investigations	Introducing statistical investigation

5.4 Analysis

Create and make statements about data visualisations (e.g., picture graphs, dot plots, bar graphs) for categorical and discrete numerical data	
Course Topics	**Activities**
Statistics & probability	Tallies
	Picture Graphs: Single-Unit Scale
	Making Picture Graphs: With Scale
	Reading from a Bar Chart
Topics	**Skill Quests**
Create & interpret data visualisations	Data in tables or lists
	Data in pictographs
	Data in bar graphs
	Data in basic dot plots
	Interpreting simple data displays

5.5 Conclusion

Choose statements that best answer the investigative question, reflect on findings, and compare them with anticipated outcomes	
Course Topics	**Activities**
Statistics & probability	Tallies
	Picture Graphs: Single-Unit Scale
	Making Picture Graphs: With Scale
	Reading from a Bar Chart
Topics	**Skill Quests**
Create & interpret data visualisations	Data in tables or lists
	Data in pictographs
	Data in bar graphs
	Data in basic dot plots
	Interpreting simple data displays

5.6 Statistical literacy

Identify relevant features in others' data visualisations, connect these to descriptive statements, agree or disagree with the statements, and suggest improvements	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Create & interpret data visualisations	Data in tables or lists
	Data in pictographs
	Data in bar graphs
	Data in basic dot plots
	Interpreting simple data displays

6 Probability

6.1 Probability investigations

Engage in chance-based investigations about games and everyday situations to: anticipate and then identify possible outcomes collect and record data create data visualisations for frequencies of possible outcomes (e.g., lists, pictures, graphs) describe what these visualisations show answer the investigative question notice variations in outcomes (e.g., how often each of the numbers on a dice come up)"	
Course Topics	**Activities**
Statistics & probability	Fair Games
	Will it Happen?
	Most Likely and Least Likely
Topics	**Skill Quests**
Use the language of probability	Using the language of probability
Explore & describe chance experiments	Exploring & describing chance experiments

6.2 Critical thinking in probability

Explain and question statements about chance-based situations, with reference to data	
Course Topics	**Activities**
Teacher directed	
Topics	**Skill Quests**
Teacher directed	

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