2024 Curriculum Phase 1 Years 0 and 1 with Numicon FF

Abbreviations: Numicon (N) Firm Foundations FF

Year 0	Year 1	Firm Foundations
Number **Mātauranga tau | Number structure** subitise (recognise instantly) the number of objects in a group of up to 5	subitise (recognise instantly) the number of objects in a group of up to 10 objects, including combining two patterns of 1–5 objects	**FF Everyday Counting,** **Cards 3, 4, 5, 6, 8**
count to 10 and beyond to 20, forwards and backwards, from any number	count to 20 and beyond to 100, forwards and backwards in 1s, 2s, and 10s, from any number	**FF Everyday Counting,** **Cards 1 – 7**
	recognise and represent the ten-and-ones structure of the 'teen' numbers 11–19	**FF Cards 7- 18**
identify, read, and write whole numbers up to at least 10	identify, read, and write whole numbers up to at least 20	**FF Everyday Counting,** **Cards 3, 4, 5, 6, 8**
compare and order whole numbers up to at least 10 and ordinal numbers (1st, 2nd, 3rd), using words	compare and order whole numbers up to at least 10 and ordinal numbers (1st, 2nd, 3rd), using words or numerals with suffixes	**FF Everyday Counting,** **Cards 3, 4, 5, 6, 8**
partition up to 5 objects, and then up to 10 objects, using a systematic approach and noticing patterns in the sequence	partition up to 20 objects, and regroup in different ways, using a systematic approach and noticing patterns in the sequence	**FF Cards 7- 10**
use the mathematical processes to: – generalise patterns and structures to quantify groups without counting – investigate different ways numbers can be partitioned – explain and justify using vocabulary that identifies quantities when ordering and comparing numbers and patterns (e.g., more than, same as, less than, between)		**The processes are included in the learning activities above and throughout the year**
Operations	use estimation to predict and to check the reasonableness of calculations	
join and separate groups of up to a total of 10 objects, and find the result by grouping and counting	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)	**FF Cards 1 - 9**

	multiply and divide by making equal groups and using grouping or counting	**Firm Foundations Everyday Counting, 10 - 13** Doubling and halving Counting in steps of 2 and 10 To notice the pattern of counting in aloud in fives. **FF 18** Exploring the 2's sequence
use the mathematical processes to: – connect and use addition and subtraction in a range of situations – generalise the key ideas of counting when quantifying and when finding the total, difference, fair share, and comparisons – investigate word problems and the language used to describe an operation – explain and justify ways of quantifying, including counting, subitising, groupings, and sharing		
Rational Numbers	identify and represent halves and quarters as fractions of sets and regions, using equal parts of the whole	**FF** Creating equal sets of the whole Parts being different sizes or the same of a whole. Two equal parts being halves, one part being a 'half'. Halving and sharing collections. Finding half of even Numicon shapes. Finding identical number rods that are equal to a 'whole'. A 'whole' is larger than its parts. A whole is made up of parts – either the same or different
	find a half or quarter of a set using equal sharing and grouping	
use the mathematical processes to: – connect fractions in measurement and geometry situations – investigate practical situations involving sharing, partitioning and identifying fractions – explain and justify ways to equal share		
Financial Maths		**FF 9, 14** Using money in role-play in exchange situations – Two 1c 'coins' for One 2c 'coin' and two 10c coins for One 20c coin. Recognise coins and sort them different ways
Taurangi | Algebra	**Generalising Number Properties** identify addition facts up to 10 and their corresponding subtraction facts (families of facts), including doubles and halves	**FF Cards 2, 4, 6, 10** **FF 3 - 18** Finding identical number rods that are equal to a 'whole'. A 'whole' is larger than its parts. A whole is made up of parts – either the same or different.

		To recognise that numbers can be represented in many different ways. Language of addition and subtraction. Equality in rational numbers. To notice equivalences. To show an understanding of equivalence in solving problems.
	explore adding 0 to or subtracting 0 from a number	**FF 9, 10, 12, 16** Difference of 0. Counting with 0 Describing zero Finding zero when subtracting
	explore the commutative property of addition (e.g., 5 + 4 = 4 + 5)	**FF 15, 17** Adding in any order Inverse relationship
	use the mathematical processes to investigate the relationship between addition and subtraction	**FF 11 - 18**
	Equations and Relationships solve true or false number sentences and open number sentences involving addition and subtraction of 1-digit numbers, using an understanding of the equal sign (e.g., 9 – 6 = 8 – _ ; 7 – 5 = 6 – 4 (T or F?)	**FF 18** Equals Equivalence Equal length
Equations and Relationships copy, continue, create, and describe a repeating pattern with two elements	copy, continue, create, and describe a repeating pattern with three elements, and identify missing elements in a pattern	**FF 1, 2, 4, 6, 7, 10**
use the mathematical processes to: – generalise when noticing that repeated patterns constructed in different ways are the same pattern (e.g., 'red, blue, red, blue' and 'hop, jump, hop, jump' are both ABAB patterns) – investigate repeating patterns in a range of contexts – explain and justify how a pattern is repeating		
Algorithmic thinking	sort objects into two groups, following a simple rule	**FF 9** Sorting To work systematically in a pattern. Similarities and differences in groups, objects Numerical differences
	use the mathematical processes to investigate appropriate situations.	

Measurement **Measuring** directly compare two objects by an attribute (e.g., length, mass (weight), capacity)	compare the length, mass (weight), temperature, volume, and capacity of objects directly and indirectly (e.g., by comparing each of them with another object and using the object repeatedly)	**1, 2, 4, 5, 6, 7, 8, 9, 15, 17** Length - comparisons Weight is not related to size. Sand, water play, outdoor maths Make collections of different-sized objects that are lighter than other different -sized objects. Compare lengths using non-standard measures. To use comparative language effectively.
	Perimeter, Area, and Volume	**FF 4, 13** Volume and capacity Sand, water play Empty, full, more, less Full and half full
use the mathematical processes to: – investigate ways to directly and indirectly compare – explain and justify, using the language of comparison (more, less, longer, shorter, heavier, lighter)		
Time connect days of the week to familiar events and daily routines (e.g., the class timetable)	identify how the passing of time is measured in years, months, weeks, days, hours, minutes, and seconds name and order the days of the week, and sequence events in a day using everyday language of time	**2, 8,**
	tell the time to the hour using the language of 'o'clock'	**2, 8,**
use the mathematical processes to: –connect daily routines and familiar events to days of the week and months of the year – investigate a calendar (its days, weeks, and months) and how long it takes to do tasks (i.e., duration).		
Financial Maths		**2, 9**
Geometry **Shapes** identify, sort by one feature, and describe familiar 2D shapes	identify, describe, and classify familiar 2D and 3D shapes presented in different orientations, including triangles, circles, rectangles (including squares), cubes, cylinders, and spheres	**1, 2, 3, 4, 5 (cuboids), 9, 10,**
use the mathematical processes to: – connect 2D shapes in the environment – investigate ways of sorting 2D shapes into groups – explain, justify, and compare how shapes have been grouped		
Spatial Reasoning compose by trial and error an outlined target shape using smaller shapes, and decompose a shape into smaller shapes	anticipate which smaller shapes might be used to compose a target shape, and then check by making the shape	**1, 2, 3, 4, 5, 9, 10,**
	slide, flip, and turn 2D shapes to make a pattern	
		FF 11, 14 – Symmetry

		To notice and discuss mirror symmetry To create simple symmetrical patterns
use the mathematical processes to: – investigate how shapes can be flipped and turned to make patterns – explain and justify how new shapes can be created, using the names and properties of the shapes and spatial vocabulary		
Pathways follow instructions to move to a familiar location or locate an object	follow and give instructions to move to a familiar location or locate an object	**FF 16, 17** Use the language of position spontaneously and appropriately. Behind, beside… To notice and describe distances between objects, places and distance travelled. Can move forwards and backwards when given directions. Give clear directions to a destination.
	use pictures, diagrams, or stories to describe the positions of objects and places	**FF 2** Positional language – beside, next to, before
use the mathematical processes to: – investigate ways of moving to different locations by following verbal instructions and simple diagrams and maps.	use the mathematical processes to: – connect half and quarter turns with fractions – investigate ways of moving to different locations by following verbal instructions and simple diagrams and maps.	
Statistics **Problem**	pose summary investigative questions that classify objects or individuals into groups or categories (e.g., colour, brand), and anticipate what the data might show	FF Finding differences in data – subtraction models. Constructing pictograms. Recording totals in a chart Recording 'time duration' in a chart Solve - How many more/fewer problems in data-handling situations.
	use the statistical processes to: – pose summary investigative questions about a group and for which the data will have categorical variables – investigate an area of interest and things students are curious about	
Plan	collect data for one variable by making observations or questioning others, and discuss how the data-gathering process might affect other people	
	use the statistical processes to: – plan ways of collecting data and survey questions, with support – investigate different survey questions and how they can be interpreted by others	

Data	collect categorical data for one variable	
	use the statistical processes to: – collect data using data cards, recording, and tally sheets – investigate different ways of collecting data	
Analysis	create and describe data visualisations (e.g., picture graphs, physical dot plots) for categorical data, giving the frequency for each category	
	Use statical processes to: investigate how different representations (e.g., a picture graph and dot plot) show the same information – explain and justify what a graph shows using 'I notice ...' statements	
Conclusion	choose statements that best answer the investigative question	
	use the statistical processes to: connect descriptions with data visualisations and analysis questions with features of the visualisations – investigate ways of reflecting on findings to determine if they make sense with what they already know – explain why some statements answer the investigative question and some do not	
Statistical literacy	agree or disagree with others' statements about simple data visualisations (e.g., pictographs, physical dot plots).	
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)	
Critical thinking in probability	use the statistical processes to: – connect relative frequency in words (e.g., two out of three) to fractions (e.g., 2/3) – investigate games of chance and list possible outcomes – use the statistical enquiry cycle (PPDAC) for chance-based investigations – explain, justify, and use the language of probability (impossible, unlikely, possible, likely, certain) and its ordering from impossible to certain.	