Refreshed Curriculum Phase 1 Correlations with Numicon

Year 0-1 Firm Foundations
Year 2 – Numicon 1
Year 3 – Numicon 2

Abbreviations: Numicon (N) Firm Foundations (FF) Pattern & Algebra (P&A) Numbers and the Number System, (NNS), Calculating (C), Geometry (G), Measurement (M), Statistics and Probability (*throughout all the strands*)

KNOW		**NUMICON**
I know that: **Mātauranga tau | Number** In base 10, there are ten digit symbols and their values are defined by their position within a number.	**I know how to:** • recognise, read, write, and order whole numbers up to 10,000	• FF - Being confident to 10 • N1 - Being confident to 100 • N2 - Introducing numbers to 1000 N-Firm Foundations – Numbers to 10, 20 including teen numbers – language, numerals and relationships to each other through the number line, size of representations N-FF Cards 1 - 18 N 1 – NNS 1 – 4 Numbers to 100 including teen numbers – language, numerals and relationships to each other through the number line, size of representations N2- NNS 1-6 Numbers to 1000 including teen numbers – language, numerals, and relationships to each other through the number line, size of representations, and position in relationship to each other – Hundreds, tens and ones
Digits in any column are worth ten times as much as those in the column to the right.		N1 NNS 1-4 N2- NNS 1-6 Numbers to 1000 including teen numbers – language, numerals, and relationships to each other through the number line, size of representations, and position in relationship to each other – Hundreds, tens and ones
Te reo Māori and other Pacific languages explicitly describe the logic of the base 10 numbering system.		Language is a specific focus in N-FF, Numicon 1 and 2. Inclusion of other languages is expected. Edushop provides maths language Māori resources.
Numbers can be composed and decomposed in different ways by using patterns.	• group, partition, and recombine whole numbers up to 1,000 • add and subtract two- and three-digit numbers	N-Firm Foundations – Numbers to 10 and extending to 20 N-FF Cards 3, 5, 6, 7, 8, 9, 10, 11,15, 17, 18 N1 – SF 1-12, P&A 1-5, Cal 1-4, 6-9 Numbers to 10 with patterns to 100 N2 – 1-7, 10-14 Numbers to 100 including patterns with tens and ones.

		Add/sub with 2-digit numbers
Multiplication and division involve recognising and working with groups, the number of groups, and the total.	• multiply two single-digit numbers or multiply a single-digit and a two-digit number • divide whole numbers with a single-digit divisor and no remainders	N-Firm Foundations Sharing, doubling and halving, skip counting in 10's, 2's and 5's N-FF Cards 11, 16, 18 N1 - NNS 2, 3 Sharing doubling and halving, Skip counting in 10's, 2's and 5's with an emphasis on number patterns N2 Cal 8, 9, 10, 15, 16 Sharing doubling and halving, Skip counting in 10's, 2's, 5's and 3's with an emphasis on number patterns
Fractions show parts of a whole in a region, a measurement, or a set of objects. The same amount (e.g., a half or a quarter) can be shown by equivalent fractions.	• recognise, read, write, represent, and order halves, thirds, quarters, fifths, sixths, and eighths • find a unit fraction of a whole (e.g., a region, measurement, or set of objects), and add unit fractions with like denominators.	N-FF Everyday life experiences of cutting into different and equal parts, exploring the whole and parts. N-FF Cards 3, 9, 11, 13, 15, 16 N1 – Cal 5 Introduction of halves and quarters through practical activities. Fractions as operators. N2 – NNS 6, Cal 16 Fractions as operators to calculate – addition and subtraction of halves, quarters, thirds and wholes.
Taurangi | Algebra		**Numicon**
I know: The commutative property applies to addition (e.g., 2 + 5 = 5 + 2) and multiplication (e.g., 5 × 2 = 2 × 5).	**I know how to:** • recall addition facts to 20 and their corresponding subtraction facts	N-FF Cards 5 - 18 N1- P&A 1 – 5 SF N2- P&A 1 – 7 Cal 1 - 7
	• recall multiplication and corresponding division facts for twos, fives, and tens	N-FF Cards 11, 16 and 18 N1 P&A 2, NNS 3 N2 Cal 8, 9, 15 P&A 5
	• solve true and false number sentences and open number sentences	N-FF Cards 7 - 18 N1 Cal 1 - 8 N2 Cal 1 - 8
The additive identity is 0 (e.g., 4 + 0 = 4 and 5 – 0 = 5), and the multiplicative identity is 1 (e.g., 5 × 1 = 5 and 4 ÷ 1 = 4).	• use the additive and multiplicative identities and commutative property	Additive Identity: N-FF Cards 12, 14, 17, 18 N1- Cal 4 N2- P&A 3 NNS 3, Cal 1 - 15
		Multiplicative identity: N-FF Cards 11, 16, 18 N1 P&A 2, NNS 3 N2- P&A 5 Cal 8, 9, 11, 15
		Commutative property: N-FF Cards 17, 18 N1 P&A 2, NNS 3 N2 Cal 1 - 15
The equal sign is relational; it shows that the two sides of an equation are the same.		N-FF Cards 1 – 18 – equivalence as a relationship, money as an exchange N1- P&A 1, Cal 1 - 8 N2- P&A 3, Cal 1 - 15

Patterns are made of numeric or spatial elements in a sequence governed by a rule.	• describe a rule that explains how a pattern works	N-FF Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 16 N1- Securing Foundations 1-10, P&A 3, 4, 5 N2- P&A 1, 5, Cal 1, 3, 4, 6, 7, 10, 11, 12, 14
Identifying the rule of a pattern involves working out the unit of repeat.	• follow, and create patterns from, rules or simple algorithms. • find another element of a pattern, given part of it	N-FF Cards 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 16 N1- SF 1 – 12 P&A 1 - 5 N2 P&A 1, 5, Cal 1, 3, 4, 6, 7, 10, 11, 12, 14
An algorithm is a sequence of rules that can be followed.		N-FF Cards 17, 18 N1 SF 12, P&A 1, Cal 1-9 N2 P&A 1, 3, 5, Cal 1, 3, 4, 6, 7, 10, 11, 12, 14
Ine | Measurement		**Numicon**
I know: Measuring starts at the beginning of the object being measured. • The size of the measurement unit must remain the same. • Measurement units are repeated with no gaps or overlaps. • The measurement is the total number of units used.	**I know how to:** • estimate and then reliably measure	N-FF Cards 1, 2, 7, 9 N1 - Mea 1 – 6, Cal 6 N2 P&A 3, NNS 3, Mea 1 - 7
Length around the outside of a two-dimensional shape gives Perimeter.	• length	N-FF Cards 4, 6, 8, 9, 11, 13, 17 N1 Mea 1 N2 Geo 1 Mea 1
Covering a surface gives area.	• area	N-FF Cards 1 - 18 N1 SF 1 – 12 Geo 1-5 N2 Geo 1, 2 Mea 4
Filling a three-dimensional shape gives capacity.	• capacity	N-FF Cards 4, N1 – Mea 5, Cal 6 N2- Mea 5
Filling a three-dimensional shape gives volume. *(*This should read as: *Measuring a three-dimensional shape gives volume.)*	• volume	N1 - Mea 5 N2 Geo 2, Mea 5
	• mass (size)	N-FF Cards 1, 2, 3, 7, 15 N1 – Mea 4, Cal 6 N2 Mea 5
	• using standard metric units	N1 – Mea 1 non-standard measurements N2 Mea 1, 4
	• use rulers, scales, square grids, and cubes to measure	N2 - Mea 1 - 7
	• tell the time to hours, half hours, and quarter past or quarter to the hour, using language and a range of cultural tools, including analogue and digital clocks	N-FF Cards 8, N1 Mea 3 units of time, Mea 6 telling the time N2 P&A 1 Geo 5, Mea 7
	• find out how far something has been turned, using half and	N1- Geo 5 N2 Geo 5 Mea 7

	quarter turns as benchmarks.	
Money – not included		FF – play opportunities with shopping N1- Mea 2, Cal 3- Money – coins, usage, patterns, P&A 2, NNS 1, Cal 6 N2- Cal 4, 9, 12 - 15, P&A 5 Mea 2, 3
Mokowā | Space		**Numicon**
I know that: Patterns and regularities in shapes can be used to compare, classify, and predict.	**I know how to:** • visualise, identify, compare, and classify two- and three-dimensional shapes	N-FF Cards 1, 2, 3, 4, 5, 6, 8, 10, 11, 12, N1 Geo 1 – 5 P & A 1 - 5 N2 NNS 1 – 7 P&A 6 Geo 1 - 5
Two-dimensional shapes can be composed or decomposed to form new shapes and can have symmetry.	• compose and decompose two-dimensional shapes using the properties of shapes, such as lines of symmetry	N-FF Cards 1 - 18 N1- Geo 1 - 5 N2 Geo 1 - 4
Shapes and objects can flip (reflection), turn (rotation), and slide (translation) and be used to create patterns.	• predict and justify what will happen to two-dimensional shapes if you rotate, reflect, or translate them	N-FF Cards 1 - 18 N1 - Geo 5 N2 Geo 5
Objects can be rotated in space and may appear different from other perspectives.	• use pepeha to describe location by referring to environmental features	N-FF Cards 1 – 18 through Exploring Maths all around us, role play and 'Understanding the world'. N1- Geo 4, 5 N2 Geo 5
Maps are two-dimensional representations of places in the world. They use symbols to show locations and landmarks.	• draw simple maps of familiar places to provide directions	N-FF Card 17 N1 - Geo 5 N2 - Geo 5
	• interpret simple maps to locate objects and pathways.	N-FF Card 17 N1 - Geo 5 N2 – Geo 5
Tauanga | Statistics		**Numicon**
I know that: Data is information about the world and comes in many forms. People and the environment are not data, but data can tell us things about people, their lives, and their environment.	**I know how to:** • explore summary investigative questions about everyday situations, using categorical data and discrete numerical (whole -number) data	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 P&A 2, 4, 5 Mea 3, 4, 5, Cal 7 N2 P&A 3, 6, 7 NNS 4, Mea 1-4, 6 Geo 2-4
	• use survey and data-collection questions	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 P&A 2, 4, 5 Mea 3, 4, 5, Cal 7 N2 P&A 6, 7, Mea 1-4, 6 Geo 2-4
Summary investigative questions and the statistical enquiry cycle (PPDAC – Problem, Plan, Data, Analysis, Conclusion) are used to investigate a group.	• collect, record, and sort data or use secondary data sources	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 P&A 2, 4, 5 Mea 3, 4, 5, Geo 1, 3, 4, 5 N2 P&A 6, 7, NNS 4, Mea 1-4, 6 Geo 2-4
Data visualisations are representations of all available values of one or more variables	• create and make statements about data visualisations	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 Mea 3, 4, 5 Geo 1, 3, 4, 5 P&A 5 N2 P&A 6, 7, Mea 1, 4 Geo 2-4

that reveal relationships or tell a story.	• answer an investigative question by choosing statements from findings	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 P&A 5 N2 P&A 6, 7, NNS 4, Geo 2-4 Mea 1, 4
	• identify relevant features in others' data visualisations.	N-FF Cards 2, 3, 4, 5, 6, 9, 10, 14 N1 P&A 5 N2 P&A 7 Geo 2-4, Mea 1, 4
Tūponotanga | Probability		**Numicon**
I know that: A chance-based situation has a set of possible outcomes that can be arranged into events. The probability of an event is the chance of it occurring.	**I know how to:** • explore chance-based investigative questions about games and everyday situations in my life	N-FF Cards 1 – 18 through Role Play activities N1- P&A 2, 4, 5 N2 P&A 7, Mea 2, 3
The statistical enquiry cycle (PPDAC) can be used for chance-based investigations for predicting outcomes of everyday situations and activities and whether they are certain, likely, possible, unlikely, or impossible.	• collect and record data to answer chance-based investigative questions	N-FF Cards 1 – 18 through Role Play activities N1 - P&A 2, 4 5Cal 7 N2 P&A 7
	• create and describe data visualisations for the frequencies of outcomes in chance-based situations	N-FF Cards N1 P&A 2, 4, 5 Cal 7 N2 P&A 7
	• explain and question statements about chance-based situations, with reference to data.	N-FF Cards 1 – 18 through Role Play activities N1 P&A 2, 4, Cal 7 N2 P&A 7