



First to Seventh Year of School

Nelson Numeracy Assessment Kit

correlation to

New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

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Nelson Numeracy Assessment Kit

First Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — COUNTING SET OBJECTS	Number ENP/ANP	Exploring Number Strategy	Level 1 • form a set of up to 20 objects Stage 1 • counts one to one
Section B — PATTERN RECOGNITION	Number ENP/ANP	Exploring Number Knowledge	Level 1 • form a set of up to 20 objects Stage 1-5 • Tens Frames Activity (book 4)
Section C — IDENTIFYING & CONTINUING PATTERNS	Algebra	Exploring patterns and relationships	Level 1 make and describe repeating and sequential patterns
Section D — BASIC CONCEPT LANGUAGE	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position
Section E — COUNTING & COMPARING	Algebra	Exploring patterns and relationships	Level 1 • illustrate and talk about relationships
Section F — 1-1 CORRESPONDENCE	Number ENP/ANP	Exploring number Strategy	Level 1 • form a set of up to 20 objects • model and explain addition calculations with a sum of up to 20 Stage 1 • counts one to one
Section G — NUMBER RECOGNITION	Number ENP/ANP	Exploring number Knowledge	Level 1 • read and write any 2-digit whole number Stage 1 • identifies numerals to 10
Section H — WRITING NUMBERS	Number ENP/ANP	Exploring number Knowledge	Level 1 • read and write any 2-digit whole number Stage 0-3• Lucky Dip Activity (book 4)
Section I — ORDINAL NUMBER	Number	Exploring number	Level 1 • rote count to at least 50
Section J — COUNTING SEQUENCES	Number ENP/ANP	Exploring number Knowledge	Level 1 • rote count to at least 50 Stage 2 • says forward number word sequence up to 10 and number after Stage 2 • says backwards number word sequence from 10 and number before
Section K — NUMBERS BEFORE/AFTER	Number ENP/ANP	Exploring number Knowledge	Level 1 • rote count to at least 50 Stage 2 • says forward number word sequence up to 10 and number after Stage 2 • says backwards number word sequence from 10 and number before
Section L — CONSERVATION OF NUMBER	Number	Exploring computation and estimation	Level 1 • model and explain addition calculations with a sum of up to 20
Section M — SIMPLE ADDITION (no symbols)	Number ENP/ANP	Exploring number Strategy	Level 1 • make up, tell, and record number stories, up to 9, about given objects and sequence pictures Stage 2 • counts from one on materials
Section N — MENTAL ADDITION	Number ENP/ANP	Exploring computation and estimation Strategy	Level 1 • model and explain addition calculations with a sum of up to 20 Stage 3 • counts from one by imaging
Section O — SIMPLE SUBTRACTION (no symbols)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 1 • using up to 20 objects, model and explain subtraction calculations Stage 1-3 • Adding and Subtracting with Counters Activity (book 5)
Section P — MENTAL SUBTRACTION	Number ENP/ANP	Exploring computation and estimation Strategy	Level 1 • using up to 20 objects, model and explain subtraction calculations Stage 1-3 • Using One Hand Activity (book 5) Stage 1-3 • Using Tens Frames Activity (book 5)

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFYING ATTRIBUTES	Measurement	Estimating and measuring	Level 1 • order and compare lengths, masses, and volumes (capacities), and describe the comparisons, using measuring language
Section B — ESTIMATE, MEASURE & COMPARE (length, mass, capacity)	Measurement	Estimating and measuring	Level 1 • order and compare lengths, masses, and volumes (capacities), and describe the comparisons, using measuring language
Section C — INFORMAL MEASUREMENT	Measurement	Estimating and measuring	Level 1 • measure by counting non-standard units
Section D — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 1 • read aspects of time, including days of the week and clocks (to hours and half hours)

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — RECOGNISE SHAPES & OBJECTS (2D)	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere • classify objects by shape attributes
Section B — DRAWING 2D SHAPES	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere
Section C — RECOGNISE SHAPES & OBJECTS (3D)	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere
Section D — PATTERN & MOVEMENT	Geometry	Exploring symmetry and transformations	Level 1 • create and talk about symmetrical and repeating patterns
Section E — USING SIMPLE LOCATION/ POSITION LANGUAGE	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position
Section F — LOCATION (following a pathway)	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position
Section G — BUILDING A MODEL	Geometry	Exploring shape and space	Level 2 • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — CHANCE	Statistics	Exploring probability	Level 1 • classify events from their experiences as certain, possible, or impossible
Section B — POSE QUESTIONS & COLLECT INFORMATION REPRESENT DATA (make pictographs)	Statistics	Statistical investigations	Level 1 • collect everyday objects, sort them into categories, count the number of objects in each category, and display and discuss the results

Nelson Numeracy Assessment Kit

Second Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — COUNTING COLLECTIONS OF OBJECTS (1–1 correspondence)	Number ENP/ANP	Exploring number Strategy	Level 1 • form a set of up to 20 objects Stage 2 • counts from one on materials
Section B — NUMBERS AT A GLANCE	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 1 • make sensible estimates and check the reasonableness of answers Stage 1-5 • Tens Frames Activity (book 4)
Section C — ORDINAL NUMBER	Number	Exploring number	Level 1 • rote count to at least 50
Section D — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 1 • form a set of up to 20 objects • read and write any 2-digit whole number Level 2 • order any set of three or more whole numbers (up to 99) Stage 3 • identifies numerals to 100 Stage 4 • says forward number word sequence up to 100 and number after Stage 4 • says backwards number word sequence from 100 and number before
Section E — PLACE VALUE	Number	Exploring number	Level 1 • read and write any 2-digit whole number Level 2 • explain the meaning of the digits in 2- or 3-digit whole numbers
Section F — NUMBER PATTERNS	Algebra	Exploring patterns and relationships	Level 1 • make and describe repeating and sequential patterns • continue a repeating and sequential pattern • illustrate and talk about relationships
Section G — WHOLE NUMBERS (computation/operations: addition, subtraction, informal multiplication)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 1 • model and explain addition calculations with a sum of up to 20 • using up to 20 objects, model and explain subtraction calculations Stage 2 • counts from one on materials
Section H — MENTAL STRATEGIES (whole numbers up to 10)	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 2 • recall the basic addition and subtraction facts • mentally perform calculations involving addition and subtraction Stage 4 • knows doubles and teen facts
Section I — FRACTIONS	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 1 • find, by practical means, one half and one quarter of a shape, and a half of a set of Objects Stage 4 • recognizes unit fractions
Section J — PROBLEM SOLVING (addition)	Number Measurement	Exploring computation and estimation Estimating and measuring	Level 1 • model and explain addition calculations with a sum of up to 20 Level 1 • compare the values of coins and notes

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — COMMON MEASUREMENT LANGUAGE	Measurement	Estimating and measuring	Level 1 • order and compare lengths, masses, and volumes (capacities), and describe the comparisons, using measuring language
Section B — ESTIMATE, MEASURE & COMPARE (length, mass, capacity)	Measurement	Estimating and measuring	Level 1 • order and compare lengths, masses, and volumes (capacities), and describe the comparisons, using measuring language
Section C — INFORMAL MEASUREMENT	Measurement	Estimating and measuring	Level 1 • measure by counting non-standard units
Section D — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 1 • read aspects of time, including days of the week and clocks (to hours and half hours) Level 2 • read time and know the units of time — minute, hour, day, week, month, and year

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE, COMPARE & DRAW 2D SHAPES	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere • classify objects by shape attributes Level 2 • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects
Section B — IDENTIFY, DESCRIBE & COMPARE 3D SHAPES	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere • classify objects by shape attributes Level 2 • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects
Section C — LINES	Geometry	Exploring shape and space	Level 1 • classify objects by shape attributes
Section D — PATTERN & MOVEMENT	Geometry	Exploring symmetry and transformations	Level 1 • create and talk about symmetrical and repeating patterns
Section E — USING LOCATION/POSITION LANGUAGE	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position
Section F — LOCATION (find, follow & describe a pathway)	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — RECOGNISE & DESCRIBE CHANCE EVENTS	Statistics	Exploring probability	Level 1 • classify events from their experiences as certain, possible, or impossible
Section B — POSE QUESTIONS & COLLECT INFORMATION REPRESENT DATA (make pictographs)	Statistics	Statistical investigations	Level 1 • collect everyday objects, sort them into categories, count the number of objects in each category, and display and discuss the results

Nelson Numeracy Assessment Kit

Third Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 2 • read any 3-digit whole number • order any set of three or more whole numbers (up to 99) Stage 4 • can identify numerals to 1000 Stage 5 • says number after up to 1000 Stage 5 • says number before up to 1000
Section B — WHOLE NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 2 • explain the meaning of the digits in 2- or 3-digit whole numbers Stage 4 • counts in tens, knows number of tens, knows place value of tens digit
Section C — PATTERNS	Algebra	Exploring patterns and relationships	Level 2 • continue a sequential pattern and describe a rule for this
Section D — WHOLE NUMBERS (computation/operations: addition, subtraction, multiplication, division)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 2 • make sensible estimates and check the reasonableness of answers • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 4 • advanced counting – counts on Stage 4 • advanced counting – uses skip counting Stage 5 • early-additive part-whole – uses repeated addition
Section E — MENTAL STRATEGIES (with whole numbers up to 20 — addition)	Number ENP/ANP	Exploring computation and estimation Knowledge Strategy	Level 2 • make sensible estimates and check the reasonableness of answers • recall the basic addition and subtraction facts • mentally perform calculations involving addition and subtraction • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 4 • knows doubles and teens facts Stage 4 • advanced counting – counting on
Section F — FRACTIONS	Number ENP/ANP	Exploring number Knowledge Strategy	Level 2 • write and solve story problems which involve halves, quarters, thirds, and fifths Stage 4 • recognizes unit fractions Stage 2-4 • equal sharing – shares objects physically or by imaging Stage 2-4 • Required Knowledge Activity (book7)
Section G — PROBLEM SOLVING: addition, subtraction, multiplication, equal addition or multiplication, division, money problems)	Number	Exploring computation and estimation	Level 2 • make sensible estimates and check the reasonableness of answers • recall the basic addition and subtraction facts • mentally perform calculations involving addition and subtraction • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — COMMON MEASUREMENT LANGUAGE	Measurement	Estimating and measuring	Level 1 • order and compare lengths, masses, and volumes (capacities), and describe the comparisons, using measuring language
Section B — INFORMAL & FORMAL MEASUREMENT	Measurement	Estimating and measuring	Level 1 • measure by counting non-standard units Level 2 • carry out practical measuring tasks, using appropriate metric units for length, mass, and capacity
Section C — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 1 • read aspects of time, including days of the week and clocks (to hours and half hours) Level 2 • read time and know the units of time — minute, hour, day, week, month, and year

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE, COMPARE & DRAW 2D SHAPES	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere • classify objects by shape attributes Level 2 • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects
Section B — IDENTIFY, DESCRIBE & COMPARE 3D SHAPES	Geometry	Exploring shape and space	Level 1 • identify, and describe in their own language, the following 2-dimensional and 3-dimensional shapes: triangle, square, oblong (non-square rectangle), circle, oval, pentagon, hexagon, diamond, box, cylinder, and sphere • classify objects by shape attributes Level 2 • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects
Section C — LINES			
Section D — USING LOCATION/POSITION LANGUAGE	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position Level 2 • describe and interpret position, using the language of direction and distance
Section E — LOCATION (find, follow & describe a pathway)	Geometry	Exploring shape and space	Level 1 • follow and give a sequence of instructions related to movement and position Level 2 • describe and interpret position, using the language of direction and distance
Section F — READ SIMPLE MAPS	Geometry	Exploring shape and space	Level 3 • draw and interpret simple scale maps

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — RECOGNISE & DESCRIBE CHANCE EVENTS	Statistics	Exploring probability	Level 2 • compare familiar or imaginary, but related, events and order them on a scale from least likely to most likely
Section B — COMPARE & INTERPRET INFORMATION FROM GRAPHS	Statistics	Interpreting statistical reports	Level 2 • talk about the features of their own data displays • make sensible statements about the situation represented by a statistical data display drawn by others
Section C — COLLECT, ORGANISE & INTERPRET INFORMATION REPRESENT DATA (make graphs)	Statistics	Statistical investigations	Level 2 • collect and display category data and whole number data in pictograms, tally charts, and bar charts, as appropriate

Nelson Numeracy Assessment Kit

Fourth Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 2 • read any 3-digit whole number • order any set of three or more whole numbers (up to 99) Level 3 • explain the meaning of the digits in any whole number Stage 4 • knows number of tens in numbers to 100, orders no's to 1000 Stage 5 • says number after up to 1000 Stage 5 • says number before up to 1000
Section B — WHOLE NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 2 • explain the meaning of the digits in 2- or 3-digit whole numbers Level 3 • explain the meaning of the digits in any whole number Stage 6 • knows tens, hundreds, thousands in, and orders, whole numbers
Section C — PATTERNS	Algebra	Exploring patterns and relationships	Level 2 • continue a sequential pattern and describe a rule for this
Section D — WHOLE NUMBERS (computation/operations: addition, subtraction, multiplication, division, mathematical laws)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 2 • make sensible estimates and check the reasonableness of answers • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 5 • early additive part-whole – forms factors, uses known multiplication facts and repeated addition Stage 4-5 • Animal Arrays Activity (book 6) Stage 4-5 • Pirate Crews Activity Stage 4-5 • Biscuit Boxes Activity
Section E — MENTAL STRATEGIES (multiplication 1 to 5, 10 & 11 facts)	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 2 • demonstrate the ability to use the multiplication facts Level 3 • recall the basic multiplication facts Stage 6 • subtraction and multiplication facts
Section F — MENTAL STRATEGIES (operations with whole numbers)	Number ENP/ANP	Exploring computation and estimation Knowledge Strategy	Level 2 • make sensible estimates and check the reasonableness of answers • recall the basic addition and subtraction facts • mentally perform calculations involving addition and subtraction • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 4 • knows doubles and teens facts Stage 4 • advanced counting – counting on
Section G — FRACTIONS	Number ENP/ANP	Exploring number Knowledge Strategy	Level 2 • write and solve story problems which involve halves, quarters, thirds, and fifths Stage 4 • recognizes unit fractions Stage 2-4 • equal sharing – shares objects physically or by imaging Stage 2-4 • Required Knowledge Activity (book7)

NAK Strand: NUMBER & PATTERNS (continued)

Section H — PROBLEM SOLVING	Measurement & Number	Estimating and measuring Exploring computation and estimation	<p>Level 2</p> <ul style="list-style-type: none"> • give change for sums of money • represent a sum of money by two or more different combinations of notes and coins <p>Level 2</p> <ul style="list-style-type: none"> • make sensible estimates and check the reasonableness of answers • recall the basic addition and subtraction facts • mentally perform calculations involving addition and subtraction • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations
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NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — ESTIMATE, MEASURE & COMPARE MEASUREMENTS: length, perimeter, area, volume, capacity, mass, converting measurements	Measurement	Estimating and measuring	<p>Level 2</p> <ul style="list-style-type: none"> • carry out practical measuring tasks, using appropriate metric units for length, mass, and capacity <p>Level 3</p> <ul style="list-style-type: none"> • demonstrate knowledge of the basic units of length, mass, area, volume (capacity), and temperature by making reasonable estimates • perform measuring tasks, using a range of units and scales
Section B — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	<p>Level 2</p> <ul style="list-style-type: none"> • read time and know the units of time — minute, hour, day, week, month, and year <p>Level 3</p> <ul style="list-style-type: none"> • read and interpret everyday statements involving time • show analogue time as digital time, and vice versa

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE & COMPARE 2D SHAPES	Geometry	Exploring shape and space Exploring symmetry and transformations	<p>Level 2</p> <ul style="list-style-type: none"> • make, name, and describe, using their own language and the language of geometry, everyday shapes and objects <p>Level 3</p> <ul style="list-style-type: none"> • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry <p>Level 2</p> <ul style="list-style-type: none"> • create and talk about geometric patterns which repeat (show translation), or which have rotational or reflection symmetry <p>Level 3</p> <ul style="list-style-type: none"> • describe patterns in terms of reflection and rotational symmetry, and translations • design and make a pattern which involves translation, reflection, or rotation
Section B — IDENTIFY, DESCRIBE & COMPARE 3D SHAPES	Geometry	Exploring shape and space	<p>Level 3</p> <ul style="list-style-type: none"> • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry • design and make containers to specified requirements • model and describe 3-dimensional objects illustrated by diagrams or pictures • draw pictures of simple 3-dimensional objects
Section C — LINES & ANGLES	Geometry	Exploring shape and space	<p>Level 3</p> <ul style="list-style-type: none"> • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section D — USE LOCATION/POSITION LANGUAGE & READ SIMPLE MAPS	Geometry	Exploring shape and space	<p>Level 3</p> <ul style="list-style-type: none"> • draw and interpret simple scale maps

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — CHANCE	Statistics	Exploring probability	<p>Level 3</p> <ul style="list-style-type: none"> • use a systematic approach to count a set of possible outcomes • predict the likelihood of outcomes on the basis of a set of observations
Section B — COMPARE & INTERPRET INFORMATION FROM GRAPHS	Statistics	Interpreting statistical reports	<p>Level 2</p> <ul style="list-style-type: none"> • make sensible statements about the situation represented by a statistical data display drawn by others
Section C — PRESENT, INTERPRET & SUMMARISE DATA REPRESENT DATA (make graphs)	Statistics	Statistical investigations Interpreting statistical reports	<p>Level 2</p> <ul style="list-style-type: none"> • collect and display category data and whole number data in pictograms, tally charts, and bar charts, as appropriate <p>Level 2</p> <ul style="list-style-type: none"> • talk about the features of their own data displays

Nelson Numeracy Assessment Kit

Fifth Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • says number before or after up to 1 000 000 Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section B — WHOLE NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section C — PATTERNS	Algebra	Exploring patterns and relationships	Level 2 • continue a sequential pattern and describe a rule for this Level 3 • describe in words, rules for continuing number and spatial sequential patterns • make up and use a rule to create a sequential pattern
Section D — WHOLE NUMBERS (computation/operations: addition, subtraction, multiplication, division, mathematical laws)	Number ENP/ANP	Exploring computation and estimation Strategy Knowledge	Level 2 • make sensible estimates and check the reasonableness of answers • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 6 • advanced additive part-whole – uses at least two different advanced mental part-whole strategies Stage 6 • advanced additive part-whole – derives multiplication facts Stage 6 • subtraction and multiplication facts
Section E — MENTAL STRATEGIES (multiplication 1 to 12 facts/ division 1 to 5, 10 & 11 facts)	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 2 • demonstrate the ability to use the multiplication facts Level 3 • recall the basic multiplication facts Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts
Section F — MENTAL STRATEGIES (operations with whole numbers)	Number ENP/ANP	Exploring computation and estimation Knowledge Strategy	Level 2 • mentally perform calculations involving addition and subtraction • demonstrate the ability to use the multiplication facts Level 3 • recall the basic multiplication facts Stage 4 • knows doubles and teens facts Stage 5 • addition basic facts and multiplication facts for 2,5,10 Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts Stage 4 • advanced counting – counting on Stage 5 • early additive part-whole – derives addition and subtraction facts
Section G — DECIMAL NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • order decimals with up to 3 decimal places Stage 7 • knows tenths in, and orders, decimals

NAK Strand: NUMBER & PATTERNS (continued)

Section H — DECIMAL NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in decimal numbers with up to 3 decimal places Stage 8 • knows tenths, hundredths, thousandths in decimals, names percentages as decimals and vice versa
Section I — DECIMAL NUMBERS (computation/operations: addition of decimals, subtraction of decimals)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 3 • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations • solve practical problems which require finding fractions of whole number and decimal amounts Stage 6-7 • Pipe Music with Decimals Activity (book 7) Stage 6-7 • Candy Bars Activity (book 7)
Section J — FRACTIONS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 2 • write and solve story problems which involve halves, quarters, thirds, and fifths Stage 5 • orders unit fractions Stage 6 • co-ordinates numerators and denominators Stage 7 • recognizes equivalent fractions
Section K — FRACTIONS (computation/operations & fractional parts: addition of fraction, subtraction of fractions)	Number ENP/ANP	Exploring number Exploring computation and estimation Strategy	Level 2 • write and solve story problems which involve halves, quarters, thirds, and fifths Level 3 • solve practical problems which require finding fractions of whole number and decimal amounts Stage 6-7 • Fractional Blocks Activity (book 7)
Section L — REPRESENTING FRACTIONS & DECIMALS	Number ENP/ANP	Exploring Number Strategy	Level 4 • find fractions equivalent to one given • express a fraction as a decimal, and vice versa Stage 7-8 • Deci-mats Activity (book 7)
Section M — PROBLEM SOLVING	Measurement Number	Estimating and measuring Developing concepts of time, rate, and change Exploring computation and estimation	Level 2 • give change for sums of money • represent a sum of money by two or more different combinations of notes and coins Level 3 • read and interpret everyday statements involving time Level 3 • make sensible estimates and check the reasonableness of answers

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — ESTIMATE, MEASURE & COMPARE MEASUREMENTS: length, perimeter, area, volume, capacity, mass, measuring units, converting measurements	Measurement	Estimating and measuring	Level 3 • demonstrate knowledge of the basic units of length, mass, area, volume (capacity), and temperature by making reasonable estimates • perform measuring tasks, using a range of units and scales
Section B — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 3 • read and interpret everyday statements involving time • show analogue time as digital time, and vice versa

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE, DRAW & COMPARE 2D SHAPES SYMMETRY	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section B — IDENTIFY, DESCRIBE & COMPARE 3D SHAPES	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section C — LINES & ANGLES	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section D — USE LOCATION/POSITION LANGUAGE & READ SIMPLE MAPS	Geometry	Exploring shape and space	Level 3 • draw and interpret simple scale maps Level 4 • specify location, using bearings or grid references

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — CHANCE	Statistics	Exploring probability	Level 3 <ul style="list-style-type: none"> • use a systematic approach to count a set of possible outcomes • predict the likelihood of outcomes on the basis of a set of observations
Section B — COMPARE & INTERPRET INFORMATION FROM GRAPHS	Statistics	Interpreting statistical reports	Level 2 <ul style="list-style-type: none"> • make sensible statements about the situation represented by a statistical data display drawn by others
Section C — PRESENT, INTERPRET & SUMMARISE DATA REPRESENT DATA (make graphs)	Statistics	Statistical investigations	Level 2 <ul style="list-style-type: none"> • collect and display category data and whole number data in pictograms, tally charts, and bar charts, as appropriate Level 3 <ul style="list-style-type: none"> • collect and display discrete numeric data in stem-and-leaf graphs, dot plots, and strip graphs, as appropriate

Nelson Numeracy Assessment Kit

Sixth Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • says number before or after up to 1 000 000 Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section B — WHOLE NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section C — PATTERNS	Algebra	Exploring patterns and relationships	Level 2 • continue a sequential pattern and describe a rule for this Level 3 • describe in words, rules for continuing number and spatial sequential patterns • make up and use a rule to create a sequential pattern
Section D — WHOLE NUMBERS (computation/operations: addition, subtraction, multiplication, division, mathematical laws)	Number ENP/ANP	Exploring computation and estimation Strategy Knowledge	Level 2 • make sensible estimates and check the reasonableness of answers • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 6 • advanced additive part-whole – uses at least two different advanced mental part-whole strategies Stage 6 • advanced additive part-whole – derives multiplication facts Stage 6 • subtraction and multiplication facts Stage 7 • division facts
Section E — MENTAL STRATEGIES (multiplication/division 1 to 12 facts)	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 3 • recall the basic multiplication facts Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts
Section F — MENTAL STRATEGIES (operations with whole numbers)	Number ENP/ANP	Exploring computation and estimation Knowledge Strategy	Level 2 • mentally perform calculations involving addition and subtraction Level 3 • make sensible estimates and check the reasonableness of answers • recall the basic multiplication facts • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations Stage 4 • knows doubles and teens facts Stage 5 • addition basic facts and multiplication facts for 2,5,10 Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts Stage 4 • advanced counting – counting on Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 6 • advanced additive part-whole – uses at least two different advanced mental part-whole strategies
Section G — DECIMAL NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • order decimals with up to 3 decimal places Stage 7 • knows tenths in, and orders, decimals

NAK Strand: NUMBER & PATTERNS (continued)

Section H — DECIMAL NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in decimal numbers with up to 3 decimal places Stage 8 • knows tenths, hundredths, thousandths in decimals, names percentages as decimals and vice versa
Section I — DECIMAL NUMBERS (computation/operations: addition of decimals, subtraction of decimals)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 3 • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations Stage 6-7 • Pipe Music with Decimals Activity (book 7) Stage 6-7 • Candy Bars Activity (book 7)
Section J — FRACTIONS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 4 • find fractions equivalent to one given Stage 5 • orders unit fractions Stage 6 • co-ordinates numerators and denominators Stage 7 • recognizes equivalent fractions
Section K — FRACTIONS (computation/operations & fractional parts: addition of fraction, subtraction of fractions)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 3 • solve practical problems which require finding fractions of whole number and decimal amounts Level 4 • find a given fraction or percentage of a quantity Stage 6-7 • Fractional Blocks Activity (book 7) Stage 7-8 • Comparing Apples with Apples (book 7)
Section L — REPRESENTING FRACTIONS & DECIMALS	Number ENP/ANP	Exploring number Strategy	Level 4 • express a fraction as a decimal, and vice versa Stage 7-8 • Deci-mats Activity (book 7)
Section M — PROBLEM SOLVING	Number	Exploring computation and estimation	Level 3 • make sensible estimates and check the reasonableness of answers • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — ESTIMATE, MEASURE & COMPARE MEASUREMENTS: length, perimeter, area, volume, measuring units, converting measurements	Measurement	Estimating and measuring	Level 3 • demonstrate knowledge of the basic units of length, mass, area, volume (capacity), and temperature by making reasonable estimates • perform measuring tasks, using a range of units and scales
Section B — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 3 • read and interpret everyday statements involving time • show analogue time as digital time, and vice versa Level 4 • perform calculations with time, including 24-hour clock times

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE & COMPARE 2D & 3D SHAPES	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section B — LINES	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section C — ANGLES	Geometry	Exploring shape and space	Level 3 • describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section D — SYMMETRY	Geometry	Exploring symmetry and transformations	Level 2 • create and talk about geometric patterns which repeat (show translation), or which have rotational or reflection symmetry Level 3 • describe patterns in terms of reflection and rotational symmetry, and translations
Section E — USE LOCATION/POSITION LANGUAGE & READ SIMPLE MAPS	Geometry	Exploring shape and space	Level 3 • draw and interpret simple scale maps Level 4 • specify location, using bearings or grid references

Nelson Numeracy Assessment Kit

Seventh Year of School correlation to New Zealand Mathematics Curriculum and the Early Numeracy Project (ENP) and the Advanced Numeracy Project (ANP)

Please note: Mathematical Processes (Problem Solving, Developing Logic and Reasoning, and Communicating Mathematical Ideas) have been integrated into the various sections.

NAK Strand: NUMBER & PATTERNS

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — WHOLE NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • says number before or after up to 1 000 000 Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section B — WHOLE NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • explain the meaning of the digits in any whole number Stage 6 • knows tens, hundreds, thousands in, and orders whole numbers
Section C — PATTERNS	Algebra	Exploring patterns and relationships	Level 2 • continue a sequential pattern and describe a rule for this Level 3 • describe in words, rules for continuing number and spatial sequential patterns • make up and use a rule to create a sequential pattern • state the general rule for a set of similar practical problems • use graphs to represent number, or informal, relations
Section D — WHOLE NUMBERS (computation/operations: addition, subtraction, multiplication, division, mathematical laws)	Number ENP/ANP	Exploring computation and estimation Strategy Knowledge	Level 2 • make sensible estimates and check the reasonableness of answers • demonstrate the ability to use the multiplication facts • write and solve story problems which involve whole numbers, using addition, subtraction, multiplication, or division • write and solve story problems which require a choice of any combination of the four arithmetic operations Level 3 • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations Level 4 • explain satisfactory algorithms for addition, subtraction, and multiplication • demonstrate knowledge of the conventions for order of operations Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 6 • advanced additive part-whole – uses at least two different advanced mental part-whole strategies Stage 6 • advanced additive part-whole – derives multiplication facts Stage 7 • advanced proportional part-whole – uses at least two different advanced mental strategies Stage 6 • subtraction and multiplication facts Stage 7 • division facts
Section E — MENTAL STRATEGIES (multiplication/division 1 to 12 facts)	Number ENP/ANP	Exploring computation and estimation Knowledge	Level 3 • recall the basic multiplication facts Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts
Section F — MENTAL STRATEGIES (operations with whole numbers)	Number ENP/ANP	Exploring computation and estimation Knowledge Strategy	Level 2 • mentally perform calculations involving addition and subtraction Level 3 • make sensible estimates and check the reasonableness of answers • recall the basic multiplication facts • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations Stage 4 • knows doubles and teens facts Stage 5 • addition basic facts and multiplication facts for 2,5,10 Stage 6 • subtraction and multiplication basic facts Stage 7 • division facts Stage 4 • advanced counting – counting on Stage 5 • early additive part-whole – derives addition and subtraction facts Stage 6 • advanced additive part-whole – uses at least two different advanced mental part-whole strategies

NAK Strand: NUMBER & PATTERNS (continued)

Section G — DECIMAL NUMBERS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 3 • order decimals with up to 3 decimal places Stage 7 • knows tenths in, and orders, decimals
Section H — DECIMAL NUMBERS (place value)	Number ENP/ANP	Exploring number Knowledge	Level 3 • order decimals with up to 3 decimal places Stage 8 • knows tenths, hundredths, thousandths in decimals, names percentages as decimals and vice versa
Section I — DECIMAL NUMBERS (computation/operations: addition of decimals, subtraction of decimals, multiplication of decimals)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 3 • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations Stage 6-7 • Pipe Music with Decimals Activity (book 7) Stage 6-7 • Candy Bars Activity (book 7) Stage 7-8 • Folding Fractions and Decimals (book 7)
Section J — FRACTIONS (read, order & compare)	Number ENP/ANP	Exploring number Knowledge	Level 4 • find fractions equivalent to one given Stage 5 • orders unit fractions Stage 6 • co-ordinates numerators and denominators Stage 7 • recognizes equivalent fractions
Section K — FRACTIONS (computation/operations & fractional parts: addition of fraction, subtraction of fractions)	Number ENP/ANP	Exploring computation and estimation Strategy	Level 3 • solve practical problems which require finding fractions of whole number and decimal amounts Level 4 • find a given fraction or percentage of a quantity Stage 6-7 • Fractional Blocks Activity (book 7) Stage 7-8 • Comparing Apples with Apples (book 7)
Section L — REPRESENTING FRACTIONS, DECIMALS & PERCENTAGES	Number ENP/ANP	Exploring number Strategy	Level 4 • express a fraction as a decimal, and vice versa • express a decimal as a percentage, and vice versa • express quantities as fractions or percentages of a whole Stage 7-8 • Deci-mats Activity (book 7) Stage 8 • knows tenths, hundredths, thousandths in decimals, names percentages as decimals and vice versa
Section M — PROBLEM SOLVING	Number	Exploring computation and estimation	Level 3 • make sensible estimates and check the reasonableness of answers • write and solve problems which involve whole numbers and decimals and which require a choice of one or more of the four arithmetic operations

NAK Strand: MEASUREMENT

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — ESTIMATE, MEASURE & COMPARE MEASUREMENTS: length, perimeter, area, volume, measuring units, temperature, converting measurements	Measurement	Estimating and measuring	Level 3 • demonstrate knowledge of the basic units of length, mass, area, volume (capacity), and temperature by making reasonable estimates • perform measuring tasks, using a range of units and scales
Section B — CONCEPT OF TIME/CLOCKS	Measurement	Developing concepts of time, rate, and change	Level 3 • read and interpret everyday statements involving time • show analogue time as digital time, and vice versa Level 4 • perform calculations with time, including 24-hour clock times

NAK Strand: SPACE

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — IDENTIFY, DESCRIBE & COMPARE 2D & 3D SHAPES	Geometry	Exploring shape and space	Level 3 <ul style="list-style-type: none"> describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry design and make containers to specified requirements model and describe 3-dimensional objects illustrated by diagrams or pictures draw pictures of simple 3-dimensional objects
Section B — LINES	Geometry	Exploring shape and space	Level 3 <ul style="list-style-type: none"> describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section C — ANGLES	Geometry	Exploring shape and space	Level 3 <ul style="list-style-type: none"> describe the features of 2-dimensional and 3-dimensional objects, using the language of geometry
Section D — SYMMETRY	Geometry	Exploring symmetry and transformations	Level 2 <ul style="list-style-type: none"> create and talk about geometric patterns which repeat (show translation), or which have rotational or reflection symmetry Level 3 <ul style="list-style-type: none"> describe patterns in terms of reflection and rotational symmetry, and translations
Section E — USE LOCATION/POSITION LANGUAGE & READ SIMPLE MAPS	Geometry	Exploring shape and space	Level 3 <ul style="list-style-type: none"> draw and interpret simple scale maps Level 4 <ul style="list-style-type: none"> specify location, using bearings or grid references

NAK Strand: CHANCE & DATA

NAK Section	Strand	Substrand	Level and Achievement Objectives
Section A — CHANCE	Statistics	Exploring probability	Level 3 <ul style="list-style-type: none"> use a systematic approach to count a set of possible outcomes predict the likelihood of outcomes on the basis of a set of observations
Section B — COMPARE & INTERPRET INFORMATION FROM GRAPHS	Statistics	Interpreting statistical reports	Level 2 <ul style="list-style-type: none"> make sensible statements about the situation represented by a statistical data display drawn by others Level 3 <ul style="list-style-type: none"> use their own language to talk about the distinctive features, such as outliers and clusters, in their own and others' data displays make sensible statements about an assertion on the basis of the evidence of a statistical investigation
Section C — PRESENT, INTERPRET & SUMMARISE DATA REPRESENT DATA (make graphs)	Statistics	Statistical investigations Interpreting statistical reports	Level 2 <ul style="list-style-type: none"> collect and display category data and whole number data in pictograms, tally charts, and bar charts, as appropriate Level 3 <ul style="list-style-type: none"> collect and display discrete numeric data in stem-and-leaf graphs, dot plots, and strip graphs, as appropriate Level 2 <ul style="list-style-type: none"> make sensible statements about the situation represented by a statistical data display drawn by others Level 3 <ul style="list-style-type: none"> use their own language to talk about the distinctive features, such as outliers and clusters, in their own and others' data displays make sensible statements about an assertion on the basis of the evidence of a statistical investigation