

Mathletics

The New Zealand Curriculum 2025

Year 2

Teacher Guide



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Publisher: Katy Pike

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Editors: Laurence Trinh, Stacey Belgre, Amanda Santamaria, Mark Stafford,
Amy Russo and Jarrah McEvoy

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Level 1, 148 Victoria Street West

Auckland 1010, New Zealand

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Contents

Term 1				
Week	Strand	Topic	Teacher Guide	Student Book
1	Number: Number Structures	Counting to 100	2	2
2	Number: Number Structures	Place Value to 120	4	7
3	Number: Operations	Addition to 20	6	12
4	Measurement: Measuring	Length	8	17
5	Number: Financial Mathematics	Money Checkpoint 1	10 12	22 25
6	Number: Operations	Subtract to 20	14	27
7	Number: Operations	Add and subtract to 100	16	32
8	Geometry: Shapes	2D shapes	18	37
9	Number: Number Structures	Numbers to 100: Te Reo Māori Checkpoint 2	20 22	42 45
Term 2				
1	Number: Operations	Skip counting $\times 2$ s, $\times 5$ s	26	47
2	Number: Rational Numbers	Fractions: Halves and quarters	28	52
3	Number: Operations	Multiplying by 10s, 2s and 5s	30	57
4	Measurement: Measuring	Time: O'clock and Half-past	32	62
5	Geometry: Shapes	3D Shapes Checkpoint 3	34 36	67 72
6	Number: Operations	2-digit addition Add and subtract 10s	38	74
7	Number: Rational Numbers	Fractions: Thirds	40	79
8	Measurement: Measuring	Weight (Mass)	42	84
9	Measurement: Measuring	Capacity Checkpoint 4	44 46	89 92

Term 3				
Week	Strand	Topic	Teacher Guide	Student Book
1	Number: Number Structures	Rounding to add	50	94
2	Number: Operations	Odd and even numbers Dividing by 2	52	99
3	Geometry: Spatial Reasoning	Flip, slide and turn	54	104
4	Number: Operations	Dividing by 5 and 10	56	109
5	Measurement: Measuring	Time to the quarter hour Checkpoint 5	58 60	114 117
6	Measurement: Measuring	Area and Perimeter	62	119
7	Geometry: Shapes & Pathways	Prisms Following Directions	64	124
8	Statistics: Develop Knowledge, Visualise and interpret Data	Graphs and data	66	129
9	Algebra: Equations and relationships	Repeating patterns Checkpoint 6	68 70	134 137
Term 4				
1	Algebra: Equations and relationships	Comparing numbers: are they Equal?	74	139
2	Number: Financial Mathematics	Equivalent Money Amounts	76	144
3	Number: Operations	2-digit addition Two step problems	78	149
4	Geometry: Pathways	Position and Directions	80	154
5	Statistics: Develop Knowledge, Visualise and interpret Data	Dot plots, tables and graphs Checkpoint 7	82 84	159 162
6	Number: Operations	Problem Solving $+$ $-$ \times \div	86	164
7	Measurement: Measuring	Months and Seasons	88	169
8		Revision	90	174
9	Number: Operations	Number Fact Practise Checkpoint 8	92 94	179 182

Introduction to the Programme

The Mathletics Programme is designed to support teaching and learning aligned with The New Zealand Curriculum – Mathematics and Statistics (2025)

The **Mathletics Programme Years 0–8** provides a comprehensive set of resources designed to support teachers in delivering high-quality mathematics teaching aligned with **The New Zealand Curriculum – Mathematics and Statistics**. The programme combines practical classroom materials with digital learning tools to support conceptual understanding, procedural fluency and problem solving.

The programme is built around a clear progression of mathematical ideas across the year. Concepts are introduced through explicit teaching, explored through discussion and hands-on activities, and reinforced through structured practice. Students then apply their learning through written tasks and digital activities that strengthen understanding and build confidence.

Each year level includes a **Teacher Guide, Student Book, Daily Lesson Plans** and **Mathletics online lessons**. Together, these resources support teachers in planning, teaching and assessing mathematics in a consistent and manageable way across the school year.

The programme supports the six strands of **The New Zealand Curriculum – Mathematics and Statistics**:

Number: numbers, quantities and calculations.

Algebra: patterns and relationships represented using symbols and diagrams.

Measurement: measuring and comparing length, mass, capacity and time.

Geometry: shapes, spatial relationships and transformations.

Statistics: collecting, representing and interpreting data.

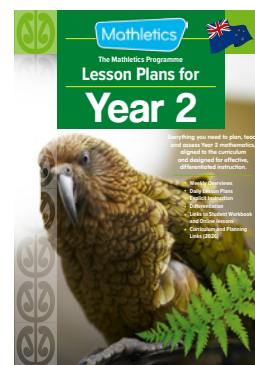
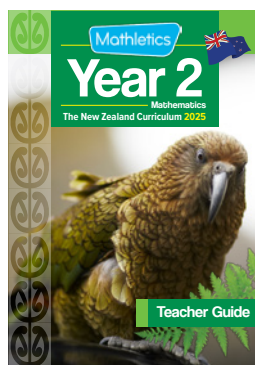
Learning is organised into weekly sequences that develop mathematical ideas step by step. Assessment opportunities are embedded throughout the programme so teachers can monitor understanding and respond to student needs.

By combining structured teaching guidance, rich classroom activities and digital reinforcement, the programme helps teachers create engaging mathematics lessons while building strong mathematical understanding for every student.



How the Programme Works

The Mathletics Programme provides teachers with **clear weekly guidance and flexible daily teaching support**. The programme integrates four key components: the **Teacher Guide, Daily Lesson Plans, Student Book** and **Mathseeds online lessons**.



Teacher Guide

The **Teacher Guide** provides a **week-by-week overview** of the mathematics learning across the year. Each week is presented as a double-page spread that summarises:

- the key mathematical ideas for the week
- learning intentions and success criteria
- the main classroom activities
- links to Student Book pages and Mathseeds lessons
- suggested assessment opportunities

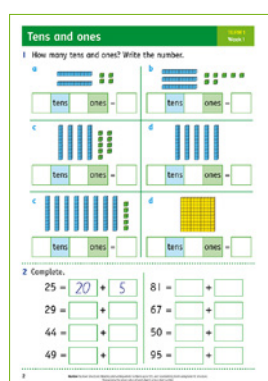
These weekly overviews provide teachers with a clear picture of the learning progression and support planning and reflection throughout the term.

Daily Lesson Plans (Downloadable)

Detailed **Daily Lesson Plans** are provided as a downloadable resource. These plans expand the weekly overview into a full sequence of daily lessons, including:

- explicit teaching explanations and worked examples
- language focus and discussion prompts
- step-by-step **I Do, We Do, You Do** teaching sequences
- hands-on activities and problem-solving tasks
- differentiation suggestions
- **Check for Understanding** questions

Providing these lesson plans digitally allows teachers to easily access and print the detailed guidance when needed while keeping the printed Teacher Guide concise and easy to use.



Student Book

The **Student Book** provides structured written practice that consolidates classroom learning. Tasks help students apply new ideas, practise key skills and represent mathematical thinking using diagrams, models and written explanations.

Mathseeds Online

The **Mathseeds online component** provides activities that reinforce concepts taught in class. These activities allow students to practise skills independently, receive immediate feedback and strengthen fluency with key mathematical ideas.

Assessment and Reflection

Assessment opportunities are embedded throughout the programme. Weekly quick quizzes and exit tasks allow teachers to check understanding, while reflection prompts in the Teacher Guide support ongoing **Teaching as Inquiry** and planning for next steps.

Together, these components create a connected learning system that supports **explicit teaching, meaningful practice and ongoing assessment**, helping teachers build strong mathematical understanding across the year.



Using the Mathletics Programme

Using the Mathletics Programme Teacher Guide, Lesson Plans and online learning package

The **Mathletics Programme: 0–8** provides practical, classroom-ready materials that enable schools to strengthen conceptual teaching and learning progressions across the Mathematics and Statistics learning area. Teachers retain full agency over planning, sequencing and delivery, using the programme to enrich, reinforce or extend learning within their existing mathematics programmes.

The Teacher Guide

The **Year 2 Teacher Guide** provides teachers with a clear, week-by-week overview of the mathematics concepts, skills and learning intentions taught across the term. Each week includes a summary of learning content, key activities, curriculum links and assessment focus areas. Together with the **Daily Lesson Plans**, it forms a complete, structured program that supports high-quality, consistent classroom instruction.

This guide ensures that every student experiences a balance of **conceptual understanding, procedural fluency and problem solving**, aligned to fully support the *New Zealand Curriculum – Mathematics and Statistics (2025)*.

Each week is presented as a **double-page spread** for easy reference and flexible use in planning, teaching and reflection.



The Mathletics Programme Teacher Guide				
YEAR 2 WEEK 1				
Term 1 Week 1 Overview Number structures: Counting to 100				
Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Tens and ones	Students will identify, represent and partition two-digit numbers using tens and ones.	<ul style="list-style-type: none"> Count how many tens and ones are shown Write the matching number Split a two-digit number into tens and ones Explain what each digit means Use place value to read numbers correctly 	<ul style="list-style-type: none"> Count tens and ones Fill in tens, ones and number lines Partition numbers such as 25, 29, 44, 67, 50, 95 Maths Showcase 86: Counting 70–100 	<ul style="list-style-type: none"> Page 2: Identify tens and ones on a ten-frame number partition
2 Counting to 100	Students will use number sequences and skip counting patterns to find, read and write numbers to 100.	<ul style="list-style-type: none"> Find missing numbers on a hundred chart Count by 2s, 5s and 10s Count backwards in a pattern Explain how numbers change across rows and columns Use patterns to count more quickly 	<ul style="list-style-type: none"> Complete a hundred chart Count by 2s, 5s and 10s Count backwards by 10s Notice chart patterns 	<ul style="list-style-type: none"> Page 3: Fill missing numbers on the hundred chart and continue skip-counting patterns.
3 Counting by 10s	Students will use groups of ten to count collections efficiently and find totals to 100.	<ul style="list-style-type: none"> Make and recognise a group of ten Count collections by 10s Tell how many there are altogether Use groups of ten instead of counting by ones Explain why counting by 10s is helpful 	<ul style="list-style-type: none"> Circle groups of ten in picture collections Count totals by 10s Draw 10 fish in each tank and find the total Maths lessons 79: Counting by 10s 	<ul style="list-style-type: none"> Page 4: Count objects by grouping them in tens and find totals.
4 Counting to 100	Students will use number sequences and place value to identify, count and represent numbers to 100.	<ul style="list-style-type: none"> Say and write the number before and after Say and write the number after Count groups of ten and extra ones Tell how many there are altogether Make a number using tens and ones 	<ul style="list-style-type: none"> Write the number before and after Count bundles of ten and loose ones Make 67 and 76 on ten-by-ten grids 	<ul style="list-style-type: none"> Page 5: Find before/after numbers, count tens and ones and represent numbers.
5 Order and compare numbers	Students will compare and order whole numbers to 100 using counting sequences and place value knowledge.	<ul style="list-style-type: none"> Find the smallest number in a group Find the largest number in a group Put numbers in order from smallest to largest Use tens and ones to help compare numbers Explain how one number is bigger or smaller 	<ul style="list-style-type: none"> Identify smallest and largest numbers Order sets from smallest to largest Compare numbers within 100 and just beyond 100 Complete challenge: ordering all numbers on the page 	<ul style="list-style-type: none"> Page 6: Order and compare numbers to 100.

Assessment Focus and Teacher Reflection – Week 1		
YEAR 2 END OF WEEK 1		
Unit: Number Structures: Counting to 100 Focus: Counting forwards and backwards, skip-counting, grouping in tens, understanding place value, and comparing and ordering numbers to 120.		
Key Understandings to Assess		
Area	Expected Understanding	Evidence to Look For
Counting sequences	Students can count forwards and backwards to 100 and beyond.	Continues number sequences accurately and identifies numbers before and after.
Skip counting patterns	Students recognise and continue skip-counting patterns.	Counts accurately in 2s, 5s and 10s.
Tens and ones	Students understand that two-digit numbers are made from tens and ones.	Partitions and explains numbers such as 47 = 40 + 7.
Place value understanding	Students understand the value of each digit in a two-digit number.	Explains the meaning of digits in numbers such as 29, after 95.
Comparing and ordering numbers	Students compare and order numbers using place value.	Orders numbers correctly and identifies larger/smaller numbers.
Assessment Opportunities		
Type	Suggested Activity	What to Observe
Observation	When students complete counting and place value tasks.	Are students using place value and skip-counting strategies confidently?
Oral Check	Ask questions about before/after, skip-counting and partitions.	Listen for accurate mathematical language and reasoning.
Written Work	Review Student Book pp. 2–6.	Check counting, partitioning and ordering accuracy.
Practical Task	Build numbers using materials or draw tens and ones models.	Can students explain their thinking clearly?
Quick Quiz/ Exit Ticket	Quick question on counting, place value or comparing numbers.	Identify students needing support or extension.
Quick Quiz / Exit Ticket (5 Questions) 1. What number comes after 79? 2. Count by 10s: 20, 30, 40, ____ 3. What is 55 made of? 4. Which number is larger: 61 or 16? 5. Put these numbers in order: 72, 29, 81	Teaching as Inquiry: Reflection Notes Reflection Prompts Which students are confident with counting and skip-counting patterns? Which students understand tens and ones securely? Are students using place value to compare numbers? What misconceptions or gaps need revisiting next week? Which students need extension or extra support?	Notes/Next Steps _____ _____ _____ _____ _____

Left page Week Overview:

Summarises the week's focus, learning intentions, success criteria, main activities and Student Book links.

- Provides quick visibility of the mathematical progression.
- Highlights connections to *Mathseeds* online lessons.
- Supports lesson preparation and group differentiation.

Right page Assessment and Teacher Reflection:

Identifies what to assess and how to gather evidence of learning throughout the week.

- Includes suggested formative assessment methods (observation, oral check, written work, quick quiz).
- Offers 5-question exit tickets to check understanding.
- Provides reflection prompts to guide Teaching as Inquiry and next steps.

How a Lesson Works

Each **Daily Lesson Plan** provides a clear structure that guides teachers through the introduction, exploration and practice of a mathematical idea. Lessons are designed to build conceptual understanding, develop mathematical language and provide opportunities for students to practise and apply new learning.

Number: Operations **YEAR 2 WEEK 3 Day 3**

DAILY LESSON PLAN Week 3 • Lesson 3
Topic: Fluent facts to 10

In this lesson, students develop fluency with number facts to 10 by finding missing numbers, completing equations, and exploring number combinations that make 10. Students use visual models, number relationships and mental strategies to build confidence with basic addition facts.

Learning Intention
Students will understand that numbers can be combined in different ways to make 10.

Success Criteria

- ✓ I can find missing numbers in equations to 10.
- ✓ I can identify pairs of numbers that make 10.
- ✓ I can complete addition equations accurately.
- ✓ I can use visual models to help solve problems.
- ✓ I can explain how I know my answer is correct.

Language Focus
Key terms: addition, equation, total, missing number, make 10, number fact, pair, combine
Sentence stems:

- ___ plus ___ equals 10.
- I know ___ and ___ make 10.
- The missing number is ___.
- I used the picture to help me solve the problem.
- I checked my answer by ___.

Launch Activity (5 minutes)
Display a ten-frame with counters showing part of 10 filled.
Ask: 'How many counters are there? How many more are needed to make 10?'
Practise several examples together using quick visual prompts.

Assessment for Learning
Ask:

- What number pairs make 10?
- What is missing in $6 + _ = 10$?
- How can we use pictures to help solve equations?

Explicit Instruction (10–12 minutes)

1. Finding Missing Numbers to Make 10
I Do • Model solving missing-number equations.
Think aloud: '7 plus what equals 10? I know 7 and 3 make 10.'
We Do • Solve several missing-number equations together.
Ask: 'What number is missing? How do you know?'
You Do • Students solve missing-number equations independently using counters or fingers if needed. Check for understanding through oral explanations.

2. Using Visual Models to Solve Equations
I Do • Demonstrate using pictures or ten-frames to identify number combinations that make 10.
Explain: 'Pictures help us see how pieces combine to make the whole.'
We Do • Count and identify groups together from visual models.
Ask: 'How many shapes are there altogether? How many of each colour?'
You Do • Students complete equations using picture models and explain their thinking.

3. Building Fluency with Facts to 10
I Do • Model recalling facts to 10 quickly using known number pairs.
Example: 5 and 5 make 10, so I know $5 + 5 = 10$.
We Do • Practise quick-fire number facts together.
Ask: 'What pairs can you think of that make 10?'
You Do • Students practise fluent facts through partner games or mini-whiteboard activities. Check for understanding through quick-response questioning.

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Learning Intention and Success Criteria

Each lesson begins with a clear **learning intention** that identifies the key mathematical idea for the lesson. **Success criteria** describe what students should be able to do by the end of the lesson and provide a shared focus for learning.

Language Focus

Key mathematical vocabulary and sentence stems support students in explaining their thinking. These prompts encourage students to use precise mathematical language when discussing patterns, strategies and solutions.

Launch Activity

A short warm-up activity activates prior knowledge and introduces the mathematical idea. This stage often includes quick questions or number tasks that help students notice patterns and prepare for the new concept.

Explicit Instruction

Teachers model the mathematical concept using examples, visual representations and worked solutions. Lessons follow a gradual release approach:

I Do – the teacher demonstrates the concept

We Do – the class works through examples together

You Do – students apply the idea independently

This structure helps students move from guided learning to independent understanding.

Guided and Independent Practice

Students practise and apply new learning through structured tasks and problem-solving activities. **Hands-on activities** encourage students to explore patterns, test ideas and explain their reasoning.

Student Book Practice

Students consolidate their understanding through written tasks in the **Student Book**, applying the concepts explored during the lesson.

Mathseeds Online Practice

Interactive **Mathseeds lessons** reinforce key skills and provide additional independent practice. These activities provide immediate feedback and help strengthen fluency with important mathematical ideas.

Reflect and Check

Short questions and discussion prompts help teachers check student understanding. Students are encouraged to explain their thinking and reflect on the strategies they used.

Teaching as Inquiry

Each lesson includes prompts to help teachers observe student understanding and identify next steps for teaching. This supports ongoing planning and targeted support for students who need additional practice or extension.

Number: Operations **YEAR 2 WEEK 3 Day 3**

Differentiation Tips
Support

- Use counters, cubes or ten-frames.
- Focus first on smaller combinations to 10.
- Provide visual supports for missing-number equations.

Extension

- Challenge students to explain strategies mentally.
- Ask students to write multiple equations for the same total.
- Encourage students to solve facts quickly without materials.

Teaching as Inquiry
Observe which students can recall facts automatically and which students still rely heavily on counting strategies.

Problem Solving and Reasoning
Discuss:

- Why are number facts to 10 important?
- How can pictures help us solve equations?
- Why can different number pairs make the same total?
- How can we check if a missing number is correct?

Encourage students to explain their thinking using mathematical language, such as addition, total, equation, make 10, missing number, number fact, pair.

Hands-On Activity 1 (10 minutes)
Make 10 Memory
Students play a matching game using cards with number pairs that make 10. They explain why the pairs belong together.

Hands-On Activity 2 (10 minutes)
Build 10 Towers
Students use connecting cubes to build towers of 10 in different colour combinations. They record matching addition equations for each tower combination, e.g. 6 red cubes + 4 blue cubes = 10.

Student Book Practice
Students complete page 14 in their workbooks: **Fluent facts to 10**
Focus: Find missing numbers and complete equations that total 10 using visual models and number facts.

Mathseeds Online Practice
Lesson: Lesson 93, Number Fact Families
Focus: Solve problems using the commutative property of addition. Fluently add to 10. Recognise different number combinations that make 10 and fact families. Understand the equals sign. Work out if addition equations are true or false. Subitise small groups of objects in different formations.

Reflect and Check (5 minutes)
Quick questions:

- What number goes with 8 to make 10?
- What is missing in $4 + _ = 10$?
- Name two numbers that make 10.
- How can pictures help solve equations?

Exit Question
'How do number facts help us solve addition problems quickly?'

Feedback
Praise students for using efficient strategies and confidently identifying number pairs that make 10.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still rely on counting all instead of recalling facts.
- Provide additional practice with number pairs to 10 and visual models.
- Extend confident students with related subtraction facts and mental strategies.

Curriculum and Planning Links
NZ Curriculum – Number
Operations Knowledge

- Numbers can be added using representations.

Practices

- Memorising addition facts up to 20

Algebra
Equations and relationships

Practices

- Checking the truth of number sentences and completing open number sentences involving addition using ten frames

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Prior Learning: Year 1 Overview

This summary highlights the key mathematical knowledge and practices covered during Year 1. These understandings provide the foundation for learning in Year 1.



Number – Number structures

Read, write, compare and order numbers to 1,000. Represent numbers to 1,000 using base 10 structure. Recognise the place value of digits in three-digit numbers and use groups of ones, tens and hundreds to structure numbers. Use grouping and rounding to the nearest 10 or 100 to estimate quantities. Identify odd and even numbers and skip count in sequences such as 2s, 3s, 4s, 5s, 8s, 10s and 100s.



Number – Operations

Add and subtract numbers to 1,000 using mental strategies, known facts, place value, and written strategies, including column methods. Solve one-step and simple multi-step problems involving addition and subtraction. Multiply and divide using grouping, arrays, repeated addition or subtraction, and known facts. Recall multiplication and related division facts for 2s, 3s, 4s, 5s, 8s and 10s. Multiply a two-digit number by a one-digit number. Divide whole numbers by a one-digit divisor with no remainders.



Number – Rational numbers

Recognise fractions as equal parts of a whole and represent fractions of sets, of regions, in measurements, and on number lines. Work with unit fractions and fractions with denominators up to 12. Compare fractions with the same denominator, identify simple equivalent fractions and add or subtract fractions with the same denominator within a whole. Find a fraction of a quantity and, given a fraction, calculate the whole.



Number – Financial mathematics

Represent amounts of money using common coins and notes. Combine amounts and calculate totals or change using addition and subtraction.



Algebra – Equations and relationships

Compare numbers in equations using greater than ($>$), less than ($<$) and equals ($=$). Check the truth of number sentences and complete open number sentences involving the four operations. Recognise, continue and create repeating and growing number patterns using shapes and numbers, and refer to individual terms using ordinal numbers.



Measurement – Measuring

Estimate, measure, order and compare length, mass and capacity using metric units. Measure, estimate and compare the perimeter and area of rectilinear shapes on grids in square units. Measure and calculate the perimeter of simple polygons with up to 5 sides in metric units. Describe turns using full, half and quarter rotations, in clockwise and anti-clockwise directions. Read time to the minute on analogue and digital clocks. Read time in words and on a calendar. Describe durations using common units of time.



Geometry – Shapes and Spatial Reasoning

Identify and describe regular polygons and common three-dimensional shapes from different viewpoints. Recognise lines of symmetry and create symmetrical patterns. Flip, slide and turn shapes to create patterns.



Geometry – Pathways

Follow and create step-by-step directions to move or place objects or people, including half and quarter turns. Use simple maps and directional language to describe locations.



Statistics – Developing knowledge from data, Visualisation and Interpretation of data

Collect categorical and numerical data by asking investigative questions. Represent data using tallies, tables, dot plots and bar graphs. Interpret data displays by describing patterns and answering questions about the data.

Year 2 Overview

This summary highlights the key mathematical knowledge and practices developed in Year 2.



Number – Number Structures

Read, write, compare and order numbers up to 10,000. Represent numbers to 10,000 using base 10 structure and recognise the place value of digits in four-digit numbers. Round whole numbers to the nearest 10, 100 and 1,000 and tenths to the nearest whole number.

Use rounding to estimate answers. Count forwards and backwards in jumps of 2-10, 25, 50, 100 and 1,000.



Number – Operations

Add and subtract numbers up to four digits using mental strategies, known facts, place value, and written methods including the vertical algorithm. Recall multiplication and division facts from 0×0 up to 10×10 . Use place value and known facts to multiply and divide mentally. Use mental and written strategies including diagrams and vertical algorithm formats to multiply two- and three-digit numbers by a one-digit number and divide up to three-digit numbers by a one-digit divisor with no remainder.



Number – Rational numbers

Read, write, compare, order and represent tenths as fractions, decimals and using diagrams. Recognise $\frac{1}{2}$ in tenths and as a decimal. Understand tenths as a place value and what happens when whole numbers are divided by 10 and tenths are multiplied by 10. Compare and order fractions with the same numerator or denominator. Recognise equivalent fractions and connect fractions, improper fractions and mixed numbers on a number line. Add and subtract fractions with the same denominator and decimals to one decimal place. Find fractions of quantities and determine a whole from a unit fraction. Scale quantities.



Number – Financial mathematics

Represent the same amount of money using multiple combinations of coins and notes. Calculate totals and determine change in everyday purchasing situations.



Algebra – Equations and relationships

Check the truth of number sentences and complete open number sentences involving the four operations. Recognise, continue, create and describe growing patterns that change through addition, subtraction or multiplication.



Measurement – Measuring

Estimate and measure length, mass and capacity using metric units, benchmarks and appropriate tools. Measure temperature in degrees Celsius. Measure the perimeter and area of shapes in metric units using grids and calculations relying on side lengths. Explore the volume of rectangular prisms using cube blocks. Estimate angle size using benchmark turns. Read time to the minute on analogue and digital clocks. Measure and compare durations using hours, minutes and seconds.



Geometry – Shapes and Spatial reasoning

Identify, classify and describe regular and irregular polygons using edges, vertices and angles. Recognise and describe lines of symmetry in two-dimensional shapes. Visualise three-dimensional shapes and connect them with two-dimensional representations. Perform simple transformations including reflections, translations and rotations.



Geometry – Pathways

Follow and create sequences of directions to move objects or people, including half and quarter turns. Use simple maps and grid references to locate and describe positions.



Statistics – Developing knowledge from data, Visualisation and Interpretation of data

Collect numerical data from investigations and organise it for analysis. Represent data using dot plots and bar graphs. Interpret data displays by identifying frequencies, describing patterns and answering questions about the data.

Year 2 Knowledge and Practices

The New Zealand Curriculum Mathematics and Statistics 2025

Knowledge	Practices	Student Pages			
Number – Number structures		Term 1	Term 2	Term 3	Term 4
<p>The whole numbers from 0 to 120 form a sequence. The base 10 number system is organised by place value (hundreds, tens, and ones for three-digit numbers). The names of numbers between 101 and 120 use 'one hundred and -' phrasing. The place value of digits helps with comparing and ordering.</p>	Reading and writing whole numbers up to 120, and representing them using base 10 structure	2, 3, 5, 7, 8, 9, 10, 33	76		
	Comparing and ordering whole numbers up to 120	3, 5, 6, 11			
	Using te reo Māori for numbers up to 100	42, 43, 44			
	Recognising the place value of each digit in a two-digit number, and a three-digit number up to 120	2, 10, 33			
	Approximately locating numbers up to 120 on a partially labelled number line	3, 5, 9			
<p>Arranging objects into groups can help when finding their total. Groups of 10s are used to structure and count larger collections. Ten 10s can be renamed as one 100.</p>	Finding the total number of objects up to 120 by separating them into groups	4, 42, 43	49		
<p>Rounding to the nearest 10 depends on the value of the ones place; a number line supports this.</p>	Rounding numbers up to 120 to the nearest 10				
<p>Sequences generated by counting can overlap (e.g. counting in 2s and counting in 5s overlap for numbers that are multiples of 2 and 5). Counting in 3s produces alternating patterns of odd and even numbers. Numbers ending in the digits 0, 2, 4, 6, and 8 are even and numbers ending in 1, 3, 5, 7, and 9 are odd.</p>	Counting forwards in 3s from multiples of 3s				
	Counting forwards and backwards in 2s, 5s, and 10s from any whole number between 0 and 120	7, 8, 9, 11	47, 49, 51, 57, 58		
	Identifying odd and even numbers up to 120				
Number – Operations		Term 1	Term 2	Term 3	Term 4
<p>Number facts can be derived from known facts using place value (e.g. $70 + 20 = 90$ can be derived from $7 + 2 = 9$). Addition and subtraction are inverse operations. Numbers can be added and subtracted using representations, mental strategies, known facts, and place value.</p>	Memorising addition and subtraction facts up to 20 (e.g. $17 + 3 = 20$)	27, 31			
	Memorising doubles and halves to 20	15, 16, 31			
	Adding and subtracting numbers up to 100 (e.g. $32 + 20$ or $32 + 2$)	12, 13, 29, 30, 32, 33, 34, 35, 36	74, 76, 77, 78		
	Adding and subtracting 3 one-digit numbers (e.g. $7 + 3 + 6$).				
	Adding 100 to a one-digit number				
	Solving one-step addition and subtraction problems involving numbers up to 100		75		
	Solving multi-step addition and subtraction problems involving numbers up to 20				
<p>Arrays and groups can be used to represent and solve multiplication and division problems. Multiplying and dividing by 1 gives the same number (the identity property of multiplication). Multiplying by zero always results in zero (the zero property of multiplication). Two numbers can be multiplied in either order without changing the result; the same is not true when dividing (the commutative property of multiplication). Multiplication and division are inverse operations.</p>	Identifying the relationship between skip counting and multiplication facts for 2s, 5s, and 10s		48, 50, 51, 58		
	Memorising multiplication and corresponding division facts for 2s, 5s, and 10s		48, 50, 51, 58, 59, 60, 61		
	Multiplying and dividing with products and dividends up to 100		60, 61		
Number – Rational Numbers		Term 1	Term 2	Term 3	Term 4
<p>The denominator of a fraction shows the total number of equal parts a whole is divided into. The numerator of a fraction shows the number of parts being counted or considered. Fractions can be named (e.g. half) or written using words and symbols.</p>	Recognising, reading, writing (using symbols and words), and representing halves, thirds, and quarters as fractions of sets, quantities, and regions, using equal parts of the whole		52, 53, 54, 55, 56, 79, 80, 83		
	Recognising the equivalence of $\frac{3}{4}$ and $\frac{1}{2}$		81, 82		
<p>Equivalent fractions represent the same amount of the whole value (e.g. two quarters vs a half). A half is 1 of 2 equal parts, a third is 1 of 3 equal parts, and a quarter is 1 of 4 equal parts. Halves are larger than thirds, which are larger than quarters (when comparing fractions of the same whole).</p>	Directly compare two fractions involving halves, thirds, or quarters		54, 80, 81		
	<p>The size of the whole can be determined if a fractional part is known (e.g. if $12 = 5$, then the whole is 10).</p>	Finding a half, quarter, or third of a set by identifying groups and patterns (rather than sharing by ones)		55, 56, 79, 80, 82, 83	
	Finding a whole when given a $\frac{1}{2}$, $\frac{1}{3}$, or $\frac{1}{4}$ of a length, shape, or set of objects or quantities				
Number – Financial mathematics		Term 1	Term 2	Term 3	Term 4
<p>New Zealand coins and notes can be ordered and grouped to find the total value.</p>	Recognising and ordering New Zealand denominations according to their value, making groups of 'like' denominations, and calculating their value	22, 23, 24, 29, 30			
	Combining denominations of currency (either all notes or all coins) to make a particular value	22			
Algebra – Equations and relationships		Term 1	Term 2	Term 3	Term 4
<p>The symbols \times and \div represent multiplication and division in number sentences. Numbers can be compared using "greater than" ($>$), "less than" ($<$), and equals ($=$).</p>	Checking the truth of number sentences involving direct comparisons of whole numbers up to 120 (e.g. $16 > 60$, true or false?)				
	Checking the truth of number sentences and completing open number sentences involving addition, subtraction, multiplication, or division using tens frames, discrete materials, or number lines (e.g. $18 + \underline{\quad} = 17 + 6$, $6 \div \underline{\quad} = 2$, $2 + 2 + 2 = 3 \times 2$, true or false?)	14, 16, 28			

Year 2 Knowledge and Practices

The New Zealand Curriculum Mathematics and Statistics 2025

Knowledge	Practices	Student Pages			
Algebra – Equations and relationships		Term 1	Term 2	Term 3	Term 4
Patterns are made up of elements (including numeric or spatial elements) in a sequence governed by a rule, and they arise in a range of situations (e.g. cultural patterns, patterns in the local environment, patterns on everyday objects). Ordinal numbers (e.g. 1st, 2nd, 3rd) can be used to describe the elements in a sequence. Repeating patterns have a repeating group of elements called the unit of repeat. A missing element can be predicted from other elements in the pattern.	Recognising and describing the unit of repeat in a repeating pattern, and using the unit of repeat and ordinal position in a repeating pattern to predict further elements (e.g. ACDC in the pattern ACDCACDCACDC)		52		
Measurement – Measuring		Term 1	Term 2	Term 3	Term 4
Standard measuring units are universally agreed and commonly used units for making measurements that enable people to communicate clearly. Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length, mass (weight) and capacity.	Estimating and using an informal unit repeatedly to measure the length, mass (weight) or capacity of an object	17, 20	87, 90		
	Comparing and ordering several objects using informal units of length, mass (weight), or capacity	17, 18, 20	84, 85, 86, 87, 88, 89, 91		
	Estimating and measuring length (cm), mass (g) and capacity (mL), using tools with labelled markings and whole-number metric units	18, 19, 21	85, 91		
The distance around the boundary of a 2D shape gives its perimeter. A polygon is a 2D straight-edged shape where the sides connect to form a closed shape.	Measuring the perimeter of polygon using metric units				
Area is the measure of a region's size on a surface.	Measuring the area of rectangles using squares of equal size				
A turn is a rotation around a point. A turn can be directional and is described using clockwise (to the right) and anticlockwise (to the left).	Turning an object or person and describing how far they have turned, using full, half, quarter, and three-quarter turns as benchmarks				
Duration is the length of time between the start and end of an event. There are 60 minutes in an hour. There are 30 minutes in half an hour.	Naming and ordering the months and seasons				
	Describing durations of familiar events using years, months, weeks, and days, or hours, minutes and seconds				
	Telling the time on analogue and digital clocks to the hour, half-hour and quarter-hour, using the language of 'past' and 'o'clock'		62, 63, 64, 65, 66		
	Naming the month before and the month after Using ordinal numbers to identify months of the year				
Geometry – Shapes		Term 1	Term 2	Term 3	Term 4
Te reo Māori supports identifying shape attributes (e.g. triangle / tapatoru, square / tapawhā rite, same / ōrite, different / rereke).	Identifying, describing, visualising and sorting 2D and 3D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), rectangular prisms (cuboids), pyramids, and cones, using the attributes of shapes	37, 38, 39, 40, 41	67, 68, 69, 70, 71		
Geometry – Spatial reasoning		Term 1	Term 2	Term 3	Term 4
Shapes can flip (reflect), turn (rotate), slide (translate), and be used to create patterns.	Flipping, sliding and turning 2D shapes to make a pattern or compose a shape				
A line of symmetry is the line that divides a shape or an object into two equal and symmetrical parts. Line symmetry is where one half of an object or shape is a mirror image of the other half, across a line of symmetry.	Recognising lines of symmetry in patterns or pictures, and creating or completing symmetrical patterns or pictures				
Geometry – Pathways		Term 1	Term 2	Term 3	Term 4
Paths can be described using sequenced instructions for moving or locating an object (e.g. for moving to another part of the school).	Following and giving instructions to move to a different location, using direction, distances (e.g. number of steps), and half and quarter turns				
Maps are 2D representations of places in the world showing the view from above with symbols to show locations and landmarks.	Interpreting diagrams to describe the positions of objects and places in relation to other objects and places				
Statistics – Developing knowledge from data		Term 1	Term 2	Term 3	Term 4
Data is information collected about the world. A variable refers to an attribute being studied (e.g. colour, height, age of children). A categorical variable (e.g. colour, brand) classifies objects into groups (categories). Categorical data can be counted.	Collecting categorical data for an investigative question with limited categories (e.g. What are the favourite pets of students in our class?)				
	Sorting categorical data into categories and considering if 'other' should be a category for sorting rare responses				
	Recording data using tally charts				
Statistics – Visualisation of data		Term 1	Term 2	Term 3	Term 4
Data visualisations are representations (including picture graphs and dot plots) of all available values for a variable that show the frequency for each value. Dot plots represent each data point with a dot of the same size.	Creating data visualisations for categorical data				
Statistics – Interpretation of data		Term 1	Term 2	Term 3	Term 4
Data visualisations are representations that help reveal the story of a set of data.	Describing data visualisations using the variable name and the context and giving the frequency for each category				
	Answering questions about data visualisations, including which category has the most or least items				

Year 2

Term 1

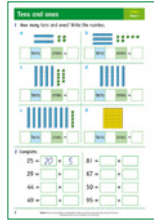
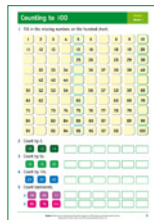
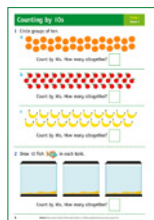
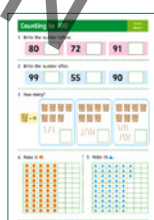
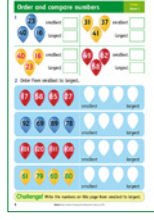
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Term 1 Teaching Overview Weeks 1–9

Week & Unit	High-Level Curriculum Focus	Student Book and Online lessons	Resources
Week 1 Number: Number structures: Counting to 100	Number Number structures The whole numbers from 0 to 120 form a sequence. The base-10 number system is organised by place value. The place value of digits helps with comparing and ordering. Groups of 10s are used to structure and count larger collections.	Pages 2–6 Mathseeds lessons 79, 86	Base-10 materials Hundred chart Bundles of tens, linking cubes Picture cards with base-10 pictures, numerals and partitioned forms Numeral cards to 30 Collections of objects and counters
Week 2 Number: Number structures: Place value to 120	Number Number structures The whole numbers from 0 to 120 form a sequence. The base 10 number system is organised by place value.	Pages 7–11 Mathseeds lessons 79, 86	Base-10 materials Hundred chart Number lines Dice Picture cards with base-10 pictures, numerals and partitioned forms Numeral cards on the decade to 120
Week 3 Number: Operations: Addition to 20	Number Operations Numbers can be added using representations, mental strategies, known facts and place value. Algebra Equations and relationships Completing open number sentences involving addition using tens frames	Pages 12–16 Mathseeds lessons 51, 65, 93	Number lines Dice, counters Ten frames with number facts to 10 Picture cards with number facts to 10 Mini whiteboards Connecting cubes in two colours
Week 4 Measurement: Measuring: Length	Measurement Measuring Measuring tools are usually marked with standard units. Comparing and ordering several objects using informal units of length Estimating and measuring length (cm) using tools with labelled markings and whole-number metric units	Pages 17–21 Mathseeds lesson 84	Centimetre cubes, string, strips of paper, ribbon Rulers (cm and m), tape measures Classroom objects
Week 5 Number: Financial mathematics: Money	Number Financial mathematics New Zealand coins and notes can be ordered and grouped to find the total value.	Pages 22–24 Mathseeds lesson 83	Coins and notes (images, play money and value cards)
Checkpoint 1 Mid-term review	Assessment and Review Review numbers to 120, addition to 20, length and money.	Pages 25–26	
Week 6 Number: Operations: Subtract to 20	Number Operations, Financial mathematics Memorising addition and subtraction facts up to 20 New Zealand coins and notes can be ordered and grouped to find the total value. Memorising doubles and halves to 20 Algebra Equations and relationships Completing open number sentences involving subtraction using number lines	Pages 27–31 Mathseeds lesson 92, 93, 96, 100	Domino images Counters, cubes Subtraction cards Number lines Coins and notes (images, play money and value cards) Classroom items marked with prices
Week 7 Number: Operations: Add and subtract to 100	Number Operations Numbers can be added using representations, mental strategies, known facts, and place value. Adding and subtracting numbers to 100 Number Number structures The base 10 number system is organised by place value.	Pages 32–36 Mathseeds lessons 85, 95, 96	Number lines Base-10 materials Place value chart Hundred chart Counters Pictures of addition and subtraction (up to 100)
Week 8 Geometry: Shapes: 2D shapes	Geometry Shapes Te reo Māori supports identifying shape attributes (e.g. triangle / tapatoru, square / tapawhā rite, same / ōrite, different / rerekē).	Pages 37–41 Mathseeds lesson 52	Range of 2D shapes and shape cards Grid paper, geoboards, mini whiteboards Craft sticks, string, pipe-cleaners
Week 9 Number: Number structures: Numbers to 100: Te Reo Māori	Number Number structures Using te reo Māori for numbers up to 100	Pages 42–44	Te reo Māori words for numbers on the decade to 100 Ten frames, base-10 materials, bundles of ten, counters, place value charts and hundred charts
Checkpoint 2 End-of-term term review	Assessment and Review Review numbers to 100, addition, subtraction, length, as well as 2D shapes.	Pages 45–46	

Term 1 Week 1 Overview Number structures: Counting to 100

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Tens and ones	Students will identify, represent and partition two-digit numbers using tens and ones.	<ul style="list-style-type: none"> ✓ Count how many tens and ones are shown ✓ Write the matching number ✓ Split a two-digit number into tens and ones ✓ Explain what each digit means ✓ Use place value to read numbers correctly 	<ul style="list-style-type: none"> – Count base-10 materials – Fill in tens, ones and numeral boxes – Partition numbers such as 25, 29, 44, 81, 67, 50, 95 – Mathseeds lesson 86: Counting 70–100 	<p>Page 2: Identify tens and ones and complete number partitions.</p> 
2 Counting to 100	Students will use number sequences and skip-counting patterns to find, read and write numbers to 100.	<ul style="list-style-type: none"> ✓ Find missing numbers on a hundred chart ✓ Count by 2s, 5s and 10s ✓ Count backwards in a pattern ✓ Explain how numbers change across rows and columns ✓ Use patterns to count more quickly 	<ul style="list-style-type: none"> – Complete a hundred chart – Count by 2s, 5s and 10s – Count backwards by 10s – Notice chart patterns 	<p>Page 3: Fill missing numbers on the hundred chart and continue skip-counting patterns.</p> 
3 Counting by 10s	Students will use groups of ten to count collections efficiently and find totals to 120.	<ul style="list-style-type: none"> ✓ Make and recognise a group of ten ✓ Count collections by 10s ✓ Tell how many there are altogether ✓ Use groups of ten instead of counting by ones ✓ Explain why counting by 10s is helpful 	<ul style="list-style-type: none"> – Circle groups of ten in picture collections – Count totals by 10s – Draw 10 fish in each tank and find the total – Mathseeds lesson 79: Counting by 10s 	<p>Page 4: Count objects by grouping them in tens and find totals.</p> 
4 Counting to 100	Students will use number sequences and place value to identify, count and represent numbers to 100.	<ul style="list-style-type: none"> ✓ Say and write the number before ✓ Say and write the number after ✓ Count groups of ten and extra ones ✓ Tell how many there are altogether ✓ Make a number using tens and ones 	<ul style="list-style-type: none"> – Write the number before and after – Count bundles of ten and loose ones – Make 61 and 76 on ten-by-ten grids 	<p>Page 5: Find before/after numbers, count tens and ones and represent numbers.</p> 
5 Order and compare numbers	Students will compare and order whole numbers to 100 using counting sequence and place value knowledge.	<ul style="list-style-type: none"> ✓ Find the smallest number in a group ✓ Find the largest number in a group ✓ Put numbers in order from smallest to largest ✓ Use tens and ones to help compare numbers ✓ Explain how one number is bigger or smaller 	<ul style="list-style-type: none"> – Identify smallest and largest numbers – Order sets from smallest to largest – Compare numbers within 100 and just beyond 100 – Complete challenge ordering all numbers on the page 	<p>Page 6: Order and compare numbers to 100.</p> 

Unit: Number Structures: Counting to 100

Focus: Counting forwards and backwards, skip-counting, grouping in tens, understanding place value, and comparing and ordering numbers to 120.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Counting sequences	Students can count forwards and backwards to 100 and beyond.	Continues number sequences accurately and identifies numbers before and after.
Skip-counting patterns	Students recognise and continue skip-counting patterns.	Counts accurately in 2s, 5s and 10s.
Tens and ones	Students understand that two-digit numbers are made from tens and ones.	Partitions and explains numbers such as $47 = 40 + 7$.
Place value understanding	Students understand the value of each digit in a two-digit number.	Explains the meaning of digits in numbers such as 29, 61 or 95.
Comparing and ordering numbers	Students compare and order numbers using place value.	Orders numbers correctly and identifies larger/smaller numbers.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Watch students complete counting and place value tasks.	Are students using place value and skip-counting strategies confidently?
Oral Check	Ask questions about before/after, skip-counting and tens/ones.	Listen for accurate mathematical language and reasoning.
Written Work	Review Student Book pp. 2–6.	Check counting, partitioning and ordering accuracy.
Practical Task	Build numbers using materials or draw tens and ones models.	Can students explain their thinking clearly?
Quick Quiz/Exit Ticket	Quick question on counting, place value or comparing numbers.	Identify students needing support or extension.

Quick Quiz / Exit Ticket (5 Questions)

1. What number comes after 79?
2. Count by 10s: 20, 30, 40, __, __
3. What is 56 made of?
4. Which number is larger: 61 or 16?
5. Put these numbers in order: 72, 29, 81

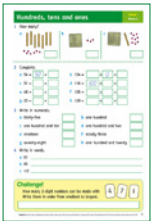
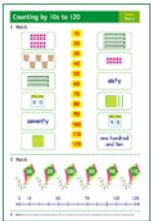


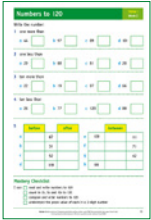
Teaching as Inquiry: Reflection Notes

Reflection Prompts

- Which students are confident with counting and skip-counting patterns?
- Which students understand tens and ones securely?
- Are students using place value to compare numbers?
- What misconceptions or gaps need revisiting next week?
- Which students need extension or extra support?

Notes/Next Steps

Term 1 Week 2 Overview Number Structures: Place Value to 120

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Hundreds, tens and ones	Numbers can be represented using hundreds, tens and ones.	<ul style="list-style-type: none"> ✓ Count hundreds, tens and ones ✓ Partition numbers ✓ Read and write number words and numerals 	<ul style="list-style-type: none"> – Build and represent numbers – Match number words and numerals – Use place-value charts 	<p>Page 7: Count base-10 models, partition numbers, match number words and numerals, order numbers</p> 
2 Counting by 10s to 120	Counting by 10s helps us count efficiently to 120.	<ul style="list-style-type: none"> ✓ Count in 10s to 120 ✓ Match multiples of 10 to models and words ✓ Use a number line 	<ul style="list-style-type: none"> – Count forwards/backwards in 10s – Match models, numerals and words – Use number lines to 120 – Mathseeds lesson 79: Counting by 10s 	<p>Page 8: Match multiples of 10 to representations and place on a number line</p> 
3 Counting to 120	Numbers to 120 can be counted, ordered and represented.	<ul style="list-style-type: none"> ✓ Count in 5s to 120 ✓ Locate numbers on a number line ✓ Represent numbers using place value 	<ul style="list-style-type: none"> – Count in 5s from 100–120 – Locate numbers on number lines – Represent numbers with base-10 materials 	<p>Page 9: Continue counting patterns, place numbers on a number line, show numbers with base-10 blocks</p> 
4 Numbers to 120	Place value helps us understand numbers to 120.	<ul style="list-style-type: none"> ✓ Record numbers in place-value charts ✓ Explain digit value ✓ Place numbers on a number line 	<ul style="list-style-type: none"> – Complete place-value charts – Identify hundreds, tens and ones – Explore digit value 	<p>Page 10: Complete place-value tasks and place numbers on number lines</p> 
5 Numbers to 120	Numbers change predictably when adding or subtracting 1 or 10.	<ul style="list-style-type: none"> ✓ Find 1 more and 1 less ✓ Find 10 more and 10 less ✓ Identify numbers before, after, and between 	<ul style="list-style-type: none"> – Use number lines and place value patterns – Explore adding and subtracting 1 and 10 – Complete before, after, and between activities – Mathseeds lesson 86: Counting 70-100 	<p>Page 11: Find 1 more/less and 10 more/less and complete before, after, and between number tasks.</p> 

Unit: Number Structures: Place Value to 120

Focus: hundreds, tens and ones; counting to 120; numbers to 120; more or less

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Reading and Writing Numbers	Students can read and write numbers to 120 using numerals and number words.	Correctly matches, reads and records numbers to 120.
Base-10 Representation	Students represent numbers using hundreds, tens and ones.	Uses base-10 materials or place-value charts accurately.
Place Value Understanding	Students understand that digit value depends on place.	Explains the value of digits in two- and three-digit numbers.
Counting Patterns	Students count forwards and backwards in 5s and 10s to 120.	Continues number patterns accurately and identifies missing numbers.
Number Line Understanding	Students locate and order numbers to 120 on a number line.	Places numbers reasonably and compares numbers correctly.
More and Less	Students find one more/less and ten more/less.	Correctly identifies before, after and between numbers.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Students build numbers using base-10 materials.	Can they identify hundreds, tens and ones accurately?
Oral Check	Ask students to explain digit value in a number.	Use of correct place-value language.
Counting Check	Count forwards/backwards in 5s and 10s.	Accuracy and recognition of patterns.
Number Line Task	Place numbers on a number line to 120.	Ability to estimate and compare positions.
Written Work	Review Student Book pp. 7–11.	Accuracy in place value, counting and more/less tasks.

Quick Quiz / Exit Ticket (5 Questions)

- Write the numeral for one hundred and ten.
- What number has 1 hundred, 0 tens and 6 ones?
- What is ten more than 89?
- What is one less than 101?
- Order these numbers from smallest to largest: 95, 61, 110, 12.

Teaching as Inquiry: Reflection Notes

Reflection Prompts

Students confidently reading and writing numbers to 120:

Students accurately using hundreds, tens and ones:

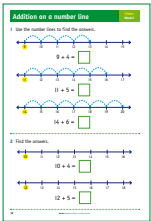
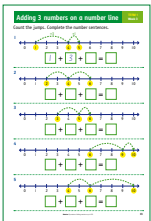
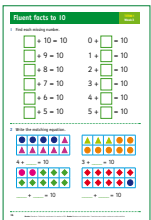
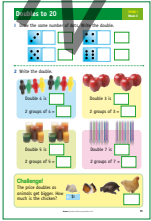
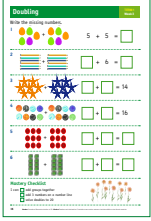
Students counting in 5s and 10s with confidence:

Students locating and comparing numbers on number lines:

Students understanding one more/less and ten more/less:

Notes/Next Steps

Term 1 Week 3 Overview Number: Operations

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Addition on a number line	Number lines can be used to solve addition problems.	<ul style="list-style-type: none"> ✓ Use a number line to solve addition problems ✓ Count forwards accurately ✓ Make jumps on a number line 	<ul style="list-style-type: none"> – Count forwards using number lines – Make jumps to solve addition problems – Record matching equations – Mathseeds lesson 65: Addition to 20 	<p>Page 12: Solve addition problems using jumps on a number line and write equations.</p> 
2 Adding 3 numbers on a number line	Number lines can help solve addition problems involving 3 numbers.	<ul style="list-style-type: none"> ✓ Add 3 numbers using a number line ✓ Count forwards using jumps ✓ Combine groups to find totals ✓ Record complete number sentences 	<ul style="list-style-type: none"> – Solve addition problems with 3 numbers – Count forwards using multiple jumps – Record addition equations – Mathseeds lesson 51: Addition to 10 with two and three groups 	<p>Page 13: Solve addition problems involving 3 numbers using number lines.</p> 
3 Fluent facts to 10	Numbers can be combined in different ways to make 10.	<ul style="list-style-type: none"> ✓ Find number bonds to 10 ✓ Complete addition equations ✓ Use visual models to solve problems 	<ul style="list-style-type: none"> – Complete missing-number equations – Use ten-frames and pictures to find totals – Practise fluent facts to 10 – Mathseeds lesson 93: Number fact families 	<p>Page 14: Find missing numbers and complete equations that total 10.</p> 
4 Doubles to 20	Doubles are made by combining two equal groups.	<ul style="list-style-type: none"> ✓ Identify doubles facts to 20 ✓ Add equal groups together ✓ Write doubles equations 	<ul style="list-style-type: none"> – Identify equal groups – Write doubles equations – Mathseeds lesson 72: Doubles 	<p>Page 15: Identify doubles and solve equations to 20.</p> 
5 Doubling	Doubling combines two equal groups to make a total.	<ul style="list-style-type: none"> ✓ Identify doubles in pictures ✓ Complete doubles equations ✓ Add equal groups accurately ✓ Use doubles to solve problems 	<ul style="list-style-type: none"> – Solve doubling problems using pictures – Complete missing-number doubles equations – Use doubles strategies to solve addition problems 	<p>Page 16: Complete doubles equations and solve doubling problems using pictures and numbers.</p> 

Unit: Number: Operations

Focus: Solving addition problems using number lines, developing fluent facts to 10, and using doubles strategies to solve addition problems.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Addition on number lines	Students use number lines to solve addition problems by counting forwards.	Correctly starts at the given number and makes accurate jumps forwards.
Adding 3 numbers	Students combine 3 numbers accurately using counting-on strategies.	Tracks multiple jumps correctly and records complete equations.
Fluent facts to 10	Students identify number pairs that make 10.	Quickly recalls and applies facts to 10 using equations or visual models.
Doubles facts	Students understand doubles as two equal groups.	Correctly identifies and solves doubles facts to 20.
Mathematical reasoning	Students explain addition strategies using mathematical language.	Uses terms such as total, double, equal groups, count on and equation appropriately.
More and Less	Students find one more/less and ten more/less.	Correctly identifies before, after and between numbers.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Watch students solve addition problems using number lines and materials.	Are students counting forwards accurately and tracking jumps correctly?
Oral Check	Ask students to explain doubles facts and number pairs to 10.	Listen for confident recall and mathematical explanations.
Written Work	Review Student Book pp. 12–16.	Check accuracy of equations, number-line jumps and doubles facts.
Practical Task	Use counters or cubes to model doubles and addition problems.	Can students represent equal groups and explain totals?
Exit Ticket	Quick addition or doubles fact question.	Identify students needing support with counting-on or fluent facts.

Quick Quiz / Exit Ticket (5 Questions)

1. What number do you land on after $9 + 4$?
2. What is $1 + 3 + 1$?
3. What number goes with 7 to make 10?
4. What is double 6?
5. Why are doubles made from equal groups?

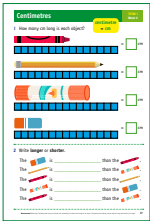
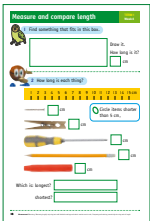
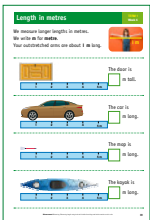
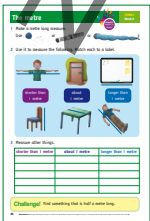
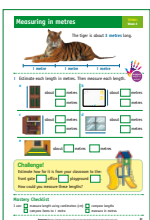
Teaching as Inquiry: Reflection Notes

Reflection Prompts

- Which students confidently use number lines to solve addition problems?
- Which students can recall number facts to 10 fluently?
- Are students accurately identifying and using doubles facts?
- Which students still rely heavily on counting all rather than counting on?
- Which students need extension or extra support?

Notes/Next Steps

Term 1 Week 4 Overview Measurement: Measuring: Length

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Centimetres	Centimetres are used to measure and compare length.	<ul style="list-style-type: none"> ✓ Measure in centimetres ✓ Compare lengths ✓ Use longer and shorter correctly 	<ul style="list-style-type: none"> – Measure classroom objects – Count centimetre units – Compare object lengths – Mathseeds lesson 84: Measuring length 	<p>Page 17: Measure and compare objects using centimetres and length language.</p> 
2 Measure and compare length	A ruler can measure and compare length in centimetres.	<ul style="list-style-type: none"> ✓ Use a ruler correctly ✓ Record measurements in cm ✓ Compare lengths 	<ul style="list-style-type: none"> – Measure with rulers – Compare longest and shortest – Identify objects shorter than 5 cm 	<p>Page 18: Measure objects, compare lengths and identify shorter objects.</p> 
3 Length in metres	Metres are used to measure longer lengths.	<ul style="list-style-type: none"> ✓ Read and record metres ✓ Measure longer objects ✓ Compare metre lengths 	<ul style="list-style-type: none"> – Use metre benchmarks – Measure longer objects – Compare lengths in metres 	<p>Page 19: Read, record and measure lengths using metres.</p> 
4 The metre	A metre can help estimate and compare length.	<ul style="list-style-type: none"> ✓ Use a metre benchmark ✓ Compare objects to 1 metre ✓ Sort by length 	<ul style="list-style-type: none"> – Make a metre measure – Compare classroom objects – Sort shorter/about/longer than 1 metre 	<p>Page 20: Use a metre measure to compare and classify objects.</p> 
5 Measuring in metres	Metres can estimate and measure longer distances.	<ul style="list-style-type: none"> ✓ Estimate and measure in metres ✓ Record measurements ✓ Compare estimates and results 	<ul style="list-style-type: none"> – Estimate longer lengths – Measure school spaces – Compare estimates with actual lengths 	<p>Page 21: Estimate, measure and record lengths in metres.</p> 

Unit: Measurement: Measuring: Length

Focus: Estimating, measuring and comparing length with centimetres and metres

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Measuring in Centimetres	Students measure shorter objects using centimetres.	Measures accurately and records using cm.
Using a Ruler	Students use a ruler correctly to measure length.	Aligns objects correctly and reads measurements accurately.
Comparing Lengths	Students compare and order objects by length.	Uses longer, shorter, longest and shortest correctly.
Measuring in Metres	Students recognise metres are used for longer lengths.	Uses m correctly and measures longer objects.
Estimating Length	Students estimate and check measurements using benchmarks.	Makes reasonable estimates and compares with actual measurements.
Accurate Measuring Practices	Students measure carefully without gaps or overlaps.	Explains correct measuring methods and uses tools consistently.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Students measure classroom objects using rulers or centimetre strips.	Accuracy when aligning and measuring.
Oral Check	Ask questions about cm, m and measuring steps.	Understanding of measurement language and tools.
Practical Task	Measure and compare objects in centimetres and metres.	Correct unit choice and comparison language.
Estimate and Measure Task	Estimate then measure classroom objects or spaces.	Reasonable estimates and accurate checking.
Written Work	Review Student Book pp. 17–21.	Accuracy with measurement, comparisons and estimates.

Quick Quiz / Exit Ticket (5 Questions)

1. What does cm stand for?
2. What does m stand for?
3. Is 8 cm longer or shorter than 5 cm?
4. Name one object about 1 metre long.
5. Why should there be no gaps when measuring?




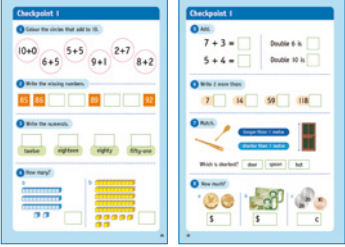
Teaching as Inquiry: Reflection Notes

Reflection Prompts

- Which students are confidently measuring in centimetres and metres?
- Which students are accurately using rulers and metre measures?
- Which students can compare lengths using accurate vocabulary?
- How are students using 1 metre as a benchmark to help with estimating?
- Which students need extension or extra support?

Notes/Next Steps

Term 1 Week 5 Overview Number: Financial mathematics: Money

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 Coins	New Zealand coins have different values and can be combined in different ways to make the same amount.	<ul style="list-style-type: none"> ✓ Recognise New Zealand coins ✓ Name coin values in cents ✓ Write coin values using c and cents ✓ Combine coins to make 50c ✓ Make the same amount in more than one way ✓ Explain the total value of a group of coins 	<ul style="list-style-type: none"> – Recognise and name 10c, 20c and 50c coins – Match coin values to words and symbols – Use play coins to make 50c using 3, 4 and 5 coins – Investigate different ways to make \$1 – Mathseeds lesson 83: Money (2) 	<p>Page 22: Complete coin values, write values using c and cents, make 50c using different numbers of coins and explore ways to make \$1.</p> 
2 New Zealand dollars	New Zealand coins and notes have different dollar values and can be combined to find a total amount.	<ul style="list-style-type: none"> ✓ Recognise New Zealand dollar coins and notes ✓ Write dollar values using the \$ symbol ✓ Identify \$1, \$2, \$5, \$10, \$20, \$50 and \$100 ✓ Add notes and coins to find a total ✓ Explain the value of a group of dollars 	<ul style="list-style-type: none"> – Recognise New Zealand dollar coins and notes – Match denominations to written values – Write missing dollar values using \$ – Add dollar coins and notes to find totals 	<p>Page 23: Write missing dollar values for coins and notes, recognise New Zealand dollar denominations and calculate totals using coins and notes.</p> 
3 Money	New Zealand coins and notes have different values and can be matched to prices.	<ul style="list-style-type: none"> ✓ Recognise New Zealand coins and notes ✓ Match money values to prices ✓ Identify the value of coins and notes ✓ Compare prices ✓ Find the least expensive item ✓ Find the most expensive item 	<ul style="list-style-type: none"> – Match coin and note values to item prices – Distinguish between cents and dollars – Compare prices using value – Identify least expensive and most expensive items 	<p>Page 24: Match New Zealand coins and notes to item prices, recognise cents and dollar values, compare item prices, circle the least expensive item and cross out the most expensive item.</p> 
4–5 Checkpoint 1	Students show what they know about number, addition, doubles, length and money from Weeks 1–5.	<ul style="list-style-type: none"> ✓ Identify facts that make 10 ✓ Complete number sequences ✓ Write numerals from number words ✓ Count base-10 representations ✓ Solve addition and doubles facts ✓ Count on by 2 ✓ Compare length using 1 metre ✓ Calculate money totals 	<ul style="list-style-type: none"> – Complete independent checkpoint tasks – Apply knowledge from Weeks 1–5 – Demonstrate number, operations, measurement and financial mathematics understanding – Teacher records diagnostic observations 	<p>Pages 25–26: Complete Checkpoint 1 tasks covering facts to 10, numbers to 120, base-10 representations, addition, doubles, two more, length comparison and money totals.</p> 

Unit: Financial mathematics: Money

Focus: Recognising New Zealand denominations, ordering money by value, grouping like denominations, combining coins or notes to make a value and calculating totals.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Recognising New Zealand money	Students recognise New Zealand coins, dollar coins and notes, and know their values.	Correctly identifies 10c, 20c, 50c, \$1, \$2, \$5, \$10, \$20, \$50 and \$100.
Recording money values	Students record money values using correct symbols.	Uses c for cents and \$ for dollars.
Comparing and ordering values	Students compare and order money values from least to greatest.	Orders denominations or prices correctly and uses language such as more, less, greater value, lower price and higher price.
Distinguishing cents and dollars	Students understand that cents and dollars are different units of money.	Does not confuse values such as 50c and \$50, or 20c and \$20.
Grouping like denominations	Students group coins or notes of the same denomination and calculate their value.	Groups like coins or notes and skip-counts or adds to find the total.
Combining money to make values	Students combine coins or notes to make a target amount.	Makes values such as 50c or \$1 using different combinations of coins.
Calculating totals	Students add coins or notes to find a total value.	Correctly totals groups such as \$2 + \$1, \$10 + \$5, \$20 + \$20 or 20c + 20c + 10c.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation (Formative)	Watch students sort play coins and notes by denomination.	Do they recognise each denomination and group like values accurately?
Oral Check	Ask: 'What is this coin or note worth?'	Listen for correct naming of dollars, cents and symbols.
Matching Task	Students match coins and notes to written values.	Can they connect images, symbols and word values correctly?
Ordering Task	Students order denominations from least to greatest.	Can they compare values and explain which is worth more or less?
Price Comparison Task	Students identify least and most expensive items from a set of prices.	Can they compare cents and dollar amounts correctly?
Checkpoint 1	Review pp.25–26 and marking rubric.	Identify strengths and gaps across number, operations, measurement and money.
Exit Ticket/Quick Quiz	Provide 5 short financial mathematics questions.	Identify students secure with money values and those needing additional support.

Quick Quiz / Exit Ticket (5 Questions)

1. What is the value of this coin: 20c?
2. Write five dollars using the dollar symbol.
3. How can you make 50c using three coins?
4. What is the total of \$20 + \$20?
5. Which is worth more: 50c or \$1?

Teaching as Inquiry: Reflection Notes

Reflection Prompts

- Which money concepts are students secure with?
- Which students need more support recognising, comparing or ordering coins and notes?
- What misconceptions were noticed, such as confusing cents and dollars, counting coins instead of value, or assuming larger coins are worth more?
- Which skills need follow-up practice: grouping, combining values, calculating totals or comparing prices?
- What teaching adjustments are needed next, such as play-money practice, matching tasks, skip-counting, small-group support or extension challenges?

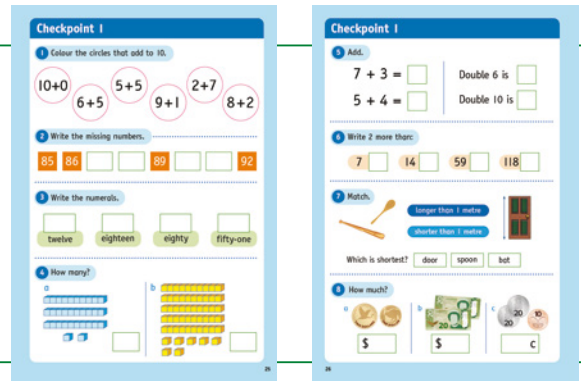
Notes/Next Steps

CHECKPOINT 1 Number and Measurement

Purpose

This Checkpoint assesses students' understanding of the key mathematical concepts taught across the first five weeks of Year 2. It is designed to give teachers a clear snapshot of students' knowledge, skills and fluency in early number, operations, measurement and financial mathematics.

The Checkpoint should take approximately **25–35 minutes** and can be completed in **two sittings if needed**.



Assessment Overview

Area	Focus	Curriculum Links	Key Skills Assessed
Numbers to 120	Counting sequences, numerals, base-10 representation	Number structures	Sequencing numbers, writing numerals, counting tens and ones
Addition and Doubles	Basic addition and doubles facts	Operations	Solving addition facts, recalling doubles to 20
Measurement	Length in metres	Measuring	Comparing objects as longer or shorter than 1 metre
Financial Mathematics	Coins and notes	Financial mathematics	Finding total value of coins and notes

Checkpoint 1 Structure

Part	Focus	Questions	Skills Tested
1	Addition facts to 10	Colour number sentences that add to 10	Recognising combinations that total 10
2	Number sequences	Complete missing numbers from 85 to 92	Counting forwards by 1, identifying missing numbers
3	Number words to numerals	twelve, eighteen, eighty, fifty-one	Reading number words and writing numerals
4	Base-10 representation	Count tens and ones in two representations	Understanding tens, ones and base-10 structure
5	Addition and doubles	7 + 3, 5 + 4, double 6, double 10	Addition facts and doubles to 20
6	Two more	7, 14, 59, 118	Counting on by 2, number relationships
7	Length comparison	Match longer/shorter than 1 metre; identify shortest	Comparing length using metre benchmark
8	Money totals	Dollar coins, \$20 notes, cent coins	Calculating value of NZ coins and notes

CHECKPOINT 1 Student Recording Sheet & Marking Rubric

Unit: Numbers to 120, Addition, Length and Money • Weeks: 1–5 Year 2 Mathematics

Total Marks: 30

Student Name: _____

Date: _____

Marking Sheet

Part	Task	Max Marks	Student Score	Notes / Observations
1. Facts to 10	Colour number sentences that add to 10: $10 + 0$, $5 + 5$, $9 + 1$, $8 + 2$	4	/ 4	
2. Missing numbers	Complete sequence: 87, 88, 90, 91	4	/ 4	
3. Write numerals	twelve, eighteen, eighty, fifty-one	4	/ 4	
4. Base-10 representations	Count tens and ones to identify two numbers	4	/ 4	
5. Addition and doubles	$7 + 3$, $5 + 4$, double 6, double 10	4	/ 4	
6. Two more	7, 14, 59, $118 + 2$	4	/ 4	
7. Length comparison	Match longer/shorter than 1 metre and identify shortest object	3	/ 3	
8. Money totals	Calculate totals for dollar coins, \$20 notes and cent coins	3	/ 3	
TOTAL:			/ 30	

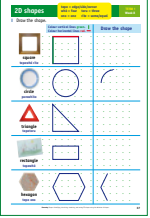
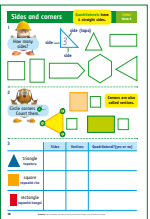
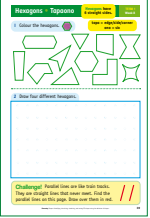

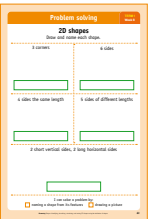
Achievement Rubric

Score Range	Level	Interpretation	Suggested Follow-Up
26–30	Secure	Strong understanding of early number, addition facts, doubles, length comparison and money values.	Ready to extend into more complex addition strategies, mixed coin combinations and further measurement comparisons.
20–25	Developing	Core skills are mostly secure, with some areas needing further practice.	Target number sequences, doubles recall, base-10 counting or money totals depending on errors.
12–19	Emerging	Partial understanding with several errors or gaps across number, operations or measurement.	Provide focused small-group support using concrete materials, number lines, ten frames, base-10 blocks and play money.
Below 12	At Risk	Significant foundational gaps in number recognition, counting, addition or comparison skills.	Prioritise intensive intervention on counting, number recognition, part-whole facts to 10 and concrete representations.

Diagnostic Notes (Teacher Use)

Skill Area	Observations	Follow-Up Plan
Number Sequences to 120		
Reading Number Words and Writing Numerals		
Base-10 Representation		
Addition		
Length Comparison Using 1 Metre		
Money Values and Totals		

Term 1 Week 8 Overview Geometry: Shapes: 2D shapes

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 2D shapes	2D shapes can be identified and described by their features.	<ul style="list-style-type: none"> ✓ Identify common 2D shapes ✓ Describe sides and corners ✓ Draw 2D shapes ✓ Recognise shapes in different positions 	<ul style="list-style-type: none"> – Identify and describe 2D shapes – Count sides and corners – Draw and label common shapes – Mathseeds lesson 52: Sorting and grouping 2D shapes 	<p>Page 37: Identify, describe and draw common 2D shapes.</p> 
2 Sides and corners	Shapes can be classified by their sides and corners.	<ul style="list-style-type: none"> ✓ Count sides and corners ✓ Recognise quadrilaterals ✓ Describe shape features ✓ Compare shapes using attributes 	<ul style="list-style-type: none"> – Count sides and corners of shapes – Sort quadrilaterals and non-quadrilaterals – Describe and compare shapes 	<p>Page 38: Identify sides and corners and recognise quadrilaterals.</p> 
3 Hexagons	Hexagons are 2D shapes with 6 straight sides.	<ul style="list-style-type: none"> ✓ Identify hexagons ✓ Count sides and corners ✓ Draw hexagons ✓ Compare hexagons with other shapes 	<ul style="list-style-type: none"> – Identify hexagons by their features – Compare hexagons with other polygons – Draw different hexagons 	<p>Page 39: Identify, describe and draw hexagons with 6 straight sides.</p> 
4 Polygons	Polygons are closed 2D shapes with straight sides.	<ul style="list-style-type: none"> ✓ Identify polygons ✓ Count sides and corners ✓ Sort polygons by features ✓ Describe polygons using mathematical language 	<ul style="list-style-type: none"> – Identify polygons and non-polygons – Count and compare sides and corners – Classify polygons by attributes 	<p>Page 40: Identify and classify polygons including pentagons, hexagons and octagons.</p> 
5 Problem solving: 2D shapes	Shape features can be used to solve geometry problems.	<ul style="list-style-type: none"> ✓ Identify shapes using clues ✓ Draw shapes from descriptions ✓ Explain shape reasoning ✓ Compare shape features 	<ul style="list-style-type: none"> – Solve shape clue problems – Draw shapes using given attributes – Explain reasoning using geometry language 	<p>Page 41: Solve problems involving sides, corners and shape features.</p> 

Unit: Number: Operations

Focus: Subtraction facts within 10 and 20, addition and subtraction relationships, using number lines, finding change from \$20, and applying doubles and halves to support number fluency.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Addition and subtraction relationships	Students understand that addition and subtraction are connected.	Uses number-line jumps to complete related addition and subtraction facts.
Subtraction with money	Students use subtraction to find change.	Correctly identifies the amount spent and calculates the change.
Change from \$20	Students count back from \$20 to find change.	Uses a number line, play money or mental strategy to solve change problems.
Subtraction facts within 20	Students recall and solve subtraction facts within 20.	Completes subtraction facts from 20 and explains the strategy used.
Doubles and halves	Students use doubles and halves to solve related facts.	Recalls doubles to 20 and identifies halves of even numbers to 20.
Mathematical reasoning	Students explain subtraction strategies clearly.	Uses language such as subtract, minus, change, count back, double and half.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Watch students solve subtraction facts using counters, fingers, number lines or mental strategies.	Are students counting back accurately? Are they beginning to recall facts fluently?
Oral Check	Ask quick subtraction, doubles, halves and change questions.	Can students explain how they found the answer?
Written Work	Review Student Book pp. 27–31.	Check accuracy with missing numbers, number-line jumps, money problems and doubles/halves.
Practical Task	Use play money or a class shop to find change from \$20.	Can students identify the starting amount, amount spent and change?
Partner Talk	Students explain one subtraction or change problem to a partner.	Are students using correct mathematical language and reasoning?

Quick Quiz / Exit Ticket (5 Questions)

1. What is $10 - 4$?
2. What is $20 - 7$?
3. Complete: $13 + \underline{\quad} = 17$
4. If you have \$20 and spend \$9, how much change do you get?
5. What is half of 16?

Teaching as Inquiry: Reflection Notes

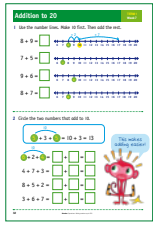
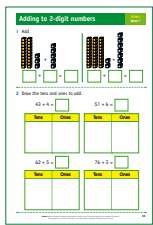
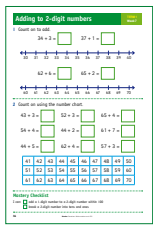
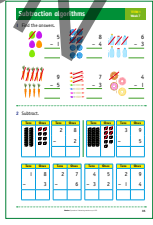
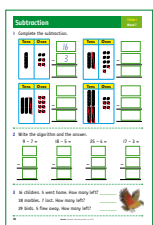
Reflection Prompts

- Which students are confidently solving subtraction facts within 10?
- Which students are beginning to recall subtraction facts within 20?
- Can students use the same number-line jump for addition and subtraction?
- Do students understand that change means the money left after spending?
- Which students can solve change from \$20 independently?
- Are students recalling doubles and halves to 20 accurately?

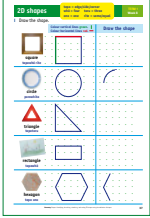
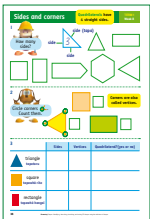
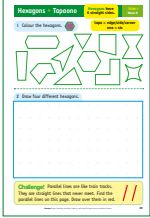
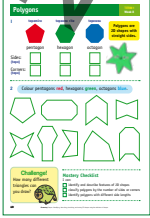
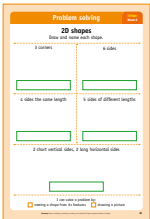
Notes/Next Steps

Term 1 Week 7 Overview

Number: Operations: Addition, Subtraction, Place Value and Algorithms

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Independent Practice
1 Addition to 20	Students will solve addition problems within 20 by making 10 first.	<ul style="list-style-type: none"> ✓ Use a number line to add within 20 ✓ Make 10 first ✓ Add the rest ✓ Find two numbers that add to 10 ✓ Record an addition equation 	<ul style="list-style-type: none"> – Use number lines to add within 20 – Make 10 first, then add the rest – Split numbers into parts – Circle two numbers that add to 10 – Record addition equations – Mathseeds lesson 96: Bridging to 10 	<p>Page 32: Addition-to-20 problems using number lines and make-10 equations.</p> 
2 Adding to 2-digit numbers	Students will add a one-digit number to a two-digit number using tens and ones.	<ul style="list-style-type: none"> ✓ Recognise tens and ones in a two-digit number ✓ Add ones to a two-digit number ✓ Represent addition using base-10 structure ✓ Draw tens and ones ✓ Record an addition equation 	<ul style="list-style-type: none"> – Build two-digit numbers with base-10 materials – Add ones to ones – Draw tens and ones in a place value chart – Connect base-10 representations to equations – Mathseeds lesson 95: Add within 100 	<p>Page 33: Two-digit plus one-digit addition problems using base-10 materials, drawings and equations.</p> 
3 Adding to 2-digit numbers	Students will add a one-digit number to a two-digit number by counting on.	<ul style="list-style-type: none"> ✓ Add a one-digit number to a two-digit number ✓ Count on using a number line ✓ Count on using a number chart ✓ Record an addition equation ✓ Explain how they counted on 	<ul style="list-style-type: none"> – Count on using number lines – Count on using a number chart – Start at the two-digit number – Count the correct number of steps – Record addition equations 	<p>Page 34: Addition problems using number lines, number charts and count-on strategies.</p> 
4 Subtraction algorithms	Students will subtract numbers using pictures, tens and ones and written algorithms.	<ul style="list-style-type: none"> ✓ Subtract using pictures ✓ Recognise tens and ones in a two-digit number ✓ Subtract ones from ones ✓ Subtract tens from tens ✓ Record a subtraction algorithm 	<ul style="list-style-type: none"> – Cross out pictures to show subtraction – Use tens-and-ones tables – Subtract ones first, then tens – Complete written subtraction algorithms – Record equations accurately 	<p>Page 35: Subtraction algorithms using pictures, tens-and-ones tables and written equations.</p> 
5 Subtraction	Students will use tens and ones to complete subtraction algorithms and solve subtraction word problems.	<ul style="list-style-type: none"> ✓ Subtract using pictures ✓ Recognise tens and ones ✓ Subtract ones from ones ✓ Subtract tens from tens ✓ Record a subtraction algorithm ✓ Solve subtraction word problems 	<ul style="list-style-type: none"> – Complete subtraction from base-10 pictures – Write the matching subtraction algorithm – Subtract ones and tens in the correct columns – Solve subtraction word problems – Check using materials or related facts – Mathseeds lesson 85: Find the difference (2) 	<p>Page 36: Subtraction algorithms and word problems using tens and ones.</p> 

Term 1 Week 8 Overview Geometry: Shapes: 2D shapes

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
1 2D shapes	2D shapes can be identified and described by their features.	<ul style="list-style-type: none"> ✓ Identify common 2D shapes ✓ Describe sides and corners ✓ Draw 2D shapes ✓ Recognise shapes in different positions 	<ul style="list-style-type: none"> – Identify and describe 2D shapes – Count sides and corners – Draw and label common shapes – Mathseeds lesson 52: Sorting and grouping 2D shapes 	<p>Page 37: Identify, describe and draw common 2D shapes.</p> 
2 Sides and corners	Shapes can be classified by their sides and corners.	<ul style="list-style-type: none"> ✓ Count sides and corners ✓ Recognise quadrilaterals ✓ Describe shape features ✓ Compare shapes using attributes 	<ul style="list-style-type: none"> – Count sides and corners of shapes – Sort quadrilaterals and non-quadrilaterals – Describe and compare shapes 	<p>Page 38: Identify sides and corners and recognise quadrilaterals.</p> 
3 Hexagons	Hexagons are 2D shapes with 6 straight sides.	<ul style="list-style-type: none"> ✓ Identify hexagons ✓ Count sides and corners ✓ Draw hexagons ✓ Compare hexagons with other shapes 	<ul style="list-style-type: none"> – Identify hexagons by their features – Compare hexagons with other polygons – Draw different hexagons 	<p>Page 39: Identify, describe and draw hexagons with 6 straight sides.</p> 
4 Polygons	Polygons are closed 2D shapes with straight sides.	<ul style="list-style-type: none"> ✓ Identify polygons ✓ Count sides and corners ✓ Sort polygons by features ✓ Describe polygons using mathematical language 	<ul style="list-style-type: none"> – Identify polygons and non-polygons – Count and compare sides and corners – Classify polygons by attributes 	<p>Page 40: Identify and classify polygons including pentagons, hexagons and octagons.</p> 
5 Problem solving: 2D shapes	Shape features can be used to solve geometry problems.	<ul style="list-style-type: none"> ✓ Identify shapes using clues ✓ Draw shapes from descriptions ✓ Explain shape reasoning ✓ Compare shape features 	<ul style="list-style-type: none"> – Solve shape clue problems – Draw shapes using given attributes – Explain reasoning using geometry language 	<p>Page 41: Solve problems involving sides, corners and shape features.</p> 

Unit: Geometry: Shapes

Focus: Identifying, describing, drawing, comparing and classifying 2D shapes using features such as sides, corners, vertices and straight lines.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Identifying 2D shapes	Students recognise and name common 2D shapes.	Correctly identifies shapes such as triangles, squares, rectangles, hexagons, pentagons and octagons.
Describing shape features	Students describe shapes using sides, corners and straight or curved lines.	Uses geometry vocabulary accurately when discussing shapes.
Classifying shapes	Students sort shapes based on shared attributes.	Correctly groups shapes by number of sides, corners or straight edges.
Understanding polygons	Students understand polygons are closed shapes with straight sides.	Identifies polygons and explains why curved shapes are not polygons.
Drawing shapes	Students represent 2D shapes accurately.	Draws shapes with the correct number of sides and corners.
More and Less	Students find one more/less and ten more/less.	Correctly identifies before, after and between numbers.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Watch students sort, compare and describe shapes during lessons.	Are students correctly identifying shape features and using geometry vocabulary?
Oral Check	Ask questions about sides, corners, polygons and quadrilaterals.	Listen for accurate explanations and mathematical language.
Written Work	Review Student Book pp. 37–41.	Check shape identification, drawing accuracy and classification tasks.
Practical Task	Build or draw shapes using craft sticks, geoboards or dot paper.	Can students create shapes with the correct attributes and explain their reasoning?
Exit Ticket	Quick shape identification or drawing challenge.	Identify students needing support with shape vocabulary or classification.

Quick Quiz / Exit Ticket (5 Questions)

- How many sides does a hexagon have?
- Which shape has 4 equal sides?
- What is another word for corner?
- Why is a circle not a polygon?
- How can you tell if a shape is a quadrilateral?

Teaching as Inquiry: Reflection Notes

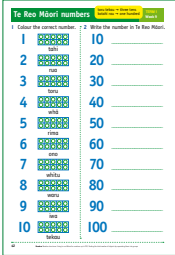
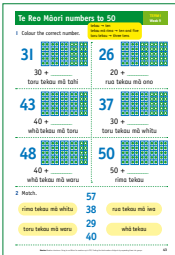

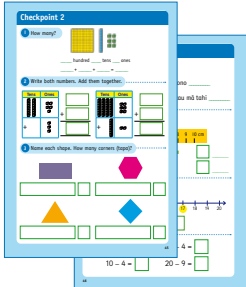
Reflection Prompts

- Which students can confidently identify and describe 2D shapes?
- Which students accurately use vocabulary such as side, corner, vertex and polygon?
- Are students able to classify shapes by their features?
- What misconceptions or gaps need revisiting next week?
- Which students need extension or extra support?

Notes/Next Steps

Term 1 Week 9 Overview

Number: Number structures: Numbers to 100 Te Reo Māori

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
<p>1 Te reo Māori numbers</p>	<p>Numbers can be represented using te reo Māori number names.</p>	<ul style="list-style-type: none"> ✓ Recognise te reo Māori numbers to 10 ✓ Match numerals and number words ✓ Read and write multiples of ten ✓ Connect quantities with number names 	<ul style="list-style-type: none"> – Match numerals to te reo Māori number words – Read and say numbers aloud – Write multiples of ten in te reo Māori 	<p>Page 42: Match numerals and quantities to te reo Māori number words and write multiples of ten.</p> 
<p>2 Te reo Māori numbers to 50</p>	<p>Te reo Māori number words represent tens and ones to 50.</p>	<ul style="list-style-type: none"> ✓ Recognise numbers to 50 ✓ Match te reo Māori numbers to numerals ✓ Identify tens and ones ✓ Build numbers to 50 	<ul style="list-style-type: none"> – Build numbers using tens and ones – Match te reo Māori number words to numerals – Represent numbers using place value materials 	<p>Page 43: Match te reo Māori number words to numerals and identify tens and ones to 50.</p> 
<p>3 Counting to 100 – Te reo Māori</p>	<p>Te reo Māori number words can represent numbers to 100 using tens and ones.</p>	<ul style="list-style-type: none"> ✓ Read te reo Māori numbers to 100 ✓ Identify tens and ones ✓ Match numerals and number words ✓ Represent numbers using place value 	<ul style="list-style-type: none"> – Build numbers using tens and ones – Read and match te reo Māori numbers – Represent numbers using place value blocks 	<p>Page 44: Represent, match and read numbers to 100 using te reo Māori number words.</p> 
<p>4 Checkpoint 2</p>	<p>Mathematical knowledge can be applied to solve problems involving place value, measurement, subtraction and shapes.</p>	<ul style="list-style-type: none"> ✓ Identify hundreds, tens and ones ✓ Solve addition and subtraction tasks ✓ Identify 2D shapes and corners ✓ Measure lengths in centimetres 	<ul style="list-style-type: none"> – Represent numbers with place value blocks – Solve addition and subtraction problems – Identify shapes and measure lines 	<p>Pages 45–46: Review number, operation and 2D shape skills.</p> 

Unit: Number: Number structures: Numbers to 100: Te Reo Māori

Focus: Reading, writing, representing and comparing numbers using te reo Māori number words, tens and ones, place value understanding, measurement, subtraction and shape knowledge.

Key Understandings to Assess

Area	Expected Understanding	Evidence to Look For
Te reo Māori numbers	Students recognise and use te reo Māori number words correctly.	Matches numerals to te reo Māori number words and reads numbers confidently.
Place value	Students understand numbers are made from tens and ones.	Correctly identifies and represents tens and ones using materials or drawings.
Number representation	Students represent numbers using place value materials and numerals.	Builds and records numbers accurately to 100.

Assessment Opportunities

Type	Suggested Activity	What to Observe
Observation	Watch students build and represent numbers using place value materials.	Are students correctly identifying tens and ones?
Oral Check	Ask students to read and explain te reo Māori numbers aloud.	Listen for correct pronunciation and place value understanding.
Written Work	Review Student Book pp. 42–46.	Check numeral matching, place value tasks, measurement and subtraction accuracy.
Practical Task	Build numbers using place value blocks or bundled sticks.	Can students explain how the number is made using tens and ones?
Exit Ticket	Quick question involving te reo Māori numbers, subtraction or measurement.	Identify students needing support with place value or number language.

Quick Quiz / Exit Ticket (5 Questions)

1. What does 'tekau' mean?
2. What number is 'waru tekau mā rima'?
3. How many tens are in 70?
4. What number is 'whā tekau mā toru'?
5. What number is 'whitu tekau'?

Teaching as Inquiry: Reflection Notes

Reflection Prompts

- Which students confidently use te reo Māori number words?
- Which students understand and apply place value using tens and ones?
- Are students accurately representing numbers to 100?
- Which students can confidently measure and compare lengths?
- What misconceptions or gaps need revisiting next week?
- Which students need extension or extra support?

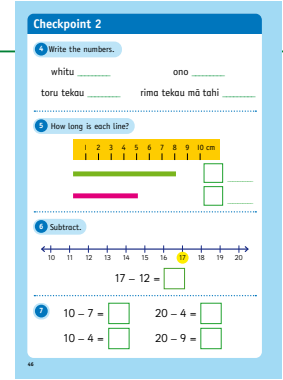
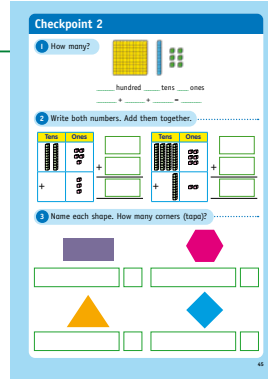
Notes/Next Steps

CHECKPOINT 2 Number and Geometry

Purpose

This Checkpoint assesses students' understanding of the key mathematical concepts taught across Weeks 1–9 of Year 2. It is designed to provide teachers with a snapshot of students' understanding of place value, te reo Māori number names, measurement using centimetres and metres, subtraction and 2D shape properties.

The Checkpoint should take approximately **25–35 minutes** and can be completed in **two sittings**.



Assessment Overview

Area	Focus	Curriculum Links	Key Skills Assessed
Place Value	Hundreds, tens and ones	Number structures	Representing numbers using place value materials
Addition	Adding tens and ones	Operations	Combining numbers and writing equations
Te Reo Māori Numbers	Reading and writing numbers	Number structures	Matching numerals and te reo Māori number words
Measurement	Measuring length in centimetres and metres	Measuring	Measuring and comparing lengths
Geometry	Shape identification and properties	Shapes	Naming shapes and identifying corners/sides
Subtraction	Subtracting using number lines and facts	Operations	Solving subtraction problems

Checkpoint 2 Structure

Part	Focus	Questions	Skills Tested
1	Hundreds, tens and ones	Identify hundreds, tens and ones; write the matching number	Understanding place value and number representation
2	Addition with tens and ones	Add numbers represented with place value blocks	Combining tens and ones accurately
3	Shape identification	Name shapes and identify corners	Recognising and describing 2D shapes
4	Te reo Māori numbers	Write numerals from te reo Māori number words	Connecting number words and numerals
5	Measurement	Measure line lengths using centimetres	Measuring accurately using standard units
6	Subtraction on a number line	Solve subtraction using a number line	Understanding subtraction as counting back
7	Basic subtraction facts	Solve subtraction equations	Recall subtraction facts and number relationships

CHECKPOINT 2 Student Recording Sheet & Marking Rubric
Unit: Number: Operations, Number structure, Geometry: Shapes

Weeks: 1–9 Year 2 Mathematics

Total Marks: 24

Student Name:
Date:
Marking Sheet

Part	Task	Max Marks	Student Score	Notes / Observations
1. Hundreds, tens and ones	Identify place value and write matching number	4	/ 4	
2. Addition with place value	Add tens and ones representations	4	/ 4	
3. Shape identification	Name shapes and identify corners	4	/ 4	
4. Te reo Māori numbers	Write numerals from number words	4	/ 4	
5. Measurement	Measure line lengths in centimetres	2	/ 2	
6. Subtraction on a number line	Solve $17 - 12$	2	/ 2	
7. Basic subtraction facts	Solve subtraction equations	4	/ 4	
TOTAL:			/ 24	

Achievement Rubric

Score Range	Level	Interpretation	Suggested Follow-Up
22–24	Secure	Strong understanding of place value, te reo Māori numbers, measurement, subtraction and shape concepts.	Ready to extend into larger numbers, problem solving and more complex operations.
16–21	Developing	Core skills are developing but some concepts require consolidation.	Target place value understanding, subtraction strategies and shape vocabulary.
10–15	Emerging	Partial understanding with noticeable gaps or inconsistent strategies.	Provide focused support with tens and ones, measurement skills and subtraction facts.
Below 10	At Risk	Significant foundational gaps in number and geometry understanding.	Prioritise intensive support with counting, place value, subtraction and shape recognition.

Diagnostic Notes (Teacher Use)

Skill Area	Observations	Follow-Up Plan
Place Value Understanding		
Addition Strategies		
Te Reo Māori Numbers		
Shape Identification		
Measurement Skills		
Subtraction Strategies		
Mathematical Language		