

Mathletics



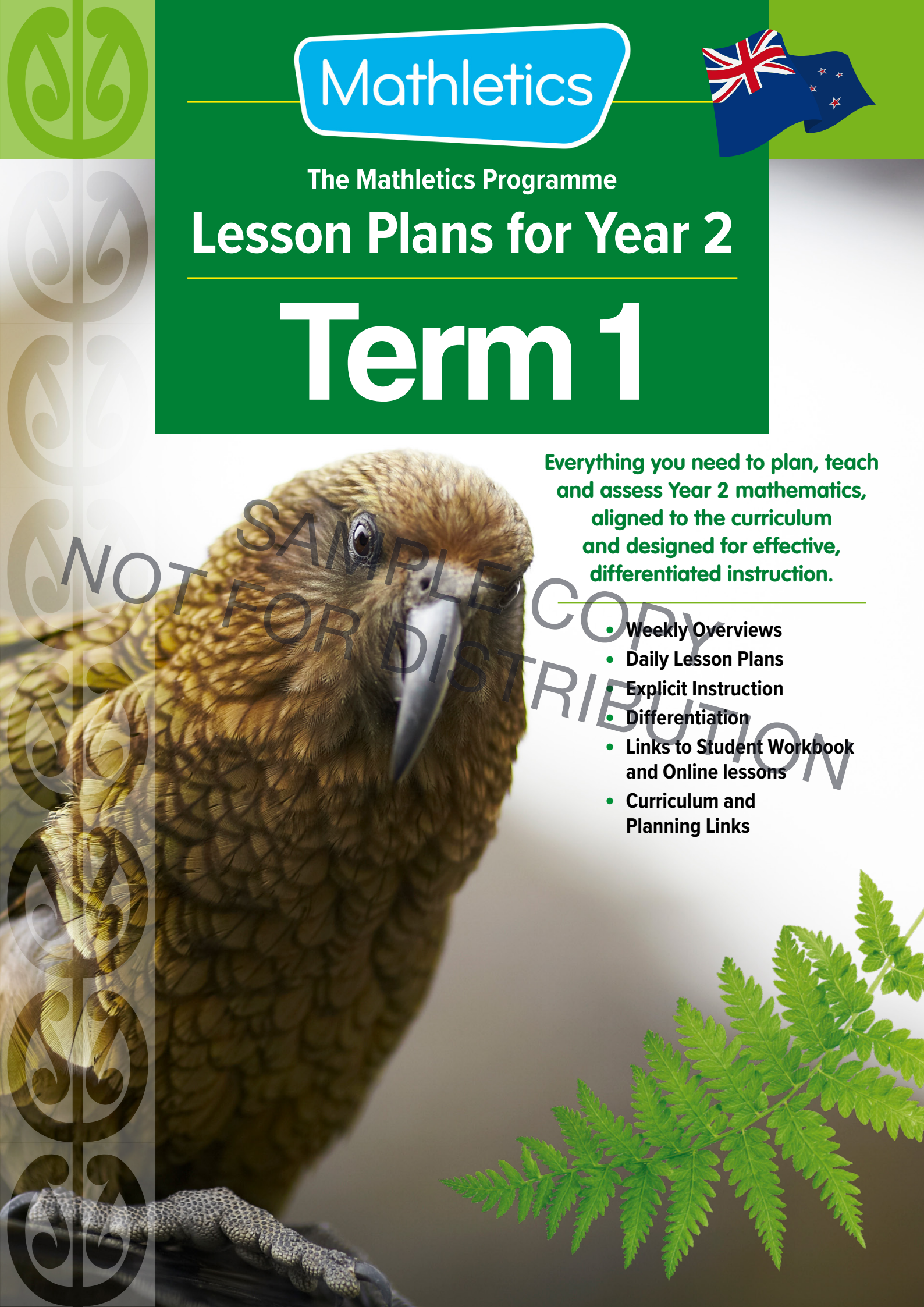
The Mathletics Programme

Lesson Plans for Year 2

Term 1

Everything you need to plan, teach and assess Year 2 mathematics, aligned to the curriculum and designed for effective, differentiated instruction.

- Weekly Overviews
- Daily Lesson Plans
- Explicit Instruction
- Differentiation
- Links to Student Workbook and Online lessons
- Curriculum and Planning Links



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The Athletics Programme – Year 2 Lesson Plans

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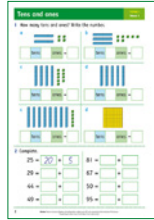
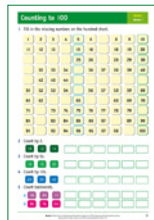

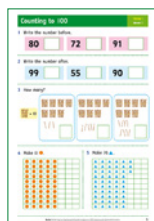
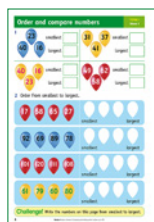
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Term 1 Teaching Overview Weeks 1–9

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> 

DAILY LESSON PLAN Week 1 • Lesson 1**Topic:** Tens and ones

In this lesson, students identify how many tens and ones are shown in base-10 materials, write the matching numeral and split two-digit numbers into tens and ones, for example $25 = 20 + 5$.

Learning Intention

Students will identify, represent and partition two-digit numbers using tens and ones.

Success Criteria

- ✓ I can count how many tens and ones are shown.
- ✓ I can write the number that matches the materials.
- ✓ I can split a two-digit number into tens and ones.
- ✓ I can explain what each digit means.
- ✓ I can use place value to read numbers correctly.

Language Focus

Key terms: tens, ones, place value, digit, number, partition, make, altogether

Optional te reo Māori links: tekau, tahi, tau

Sentence stems:

- I can see ___ tens and ___ ones.
- ___ tens and ___ ones makes ___.
- The digit ___ shows the tens.
- The digit ___ shows the ones.
- ___ = ___ + ___.

Launch Activity (5 minutes)

Show students one ten and 4 single ones.

Ask:

- If I have 2 tens and 4 ones, what number is that?
- What does the first digit tell us in a number like 24?
- What does the second digit tell us?

Explain: Two-digit numbers are made from tens and ones.

Assessment for Learning

Ask:

- How many ones make one ten?
- What number is 3 tens and 5 ones?
- What does the 2 mean in 25?
- What does the 5 mean in 25?
- How do you know that 50 has no ones?

Explicit Instruction (10 minutes)**1. Count the tens and ones and write the number**

I Do • Display a two-digit number using base-10 materials.

Think aloud:

'I can see 2 tens and 4 ones. That makes 24.'

Explain that base-10 materials help students see that numbers are made of tens and ones.

We Do • Build and count another two-digit number together.

You Do • Students build, count and write two-digit numbers using base-10 materials or drawings.

2. Connect the numeral to the place-value chart

I Do • Draw or display a place-value chart with 36.

Think aloud: 'The first digit tells how many tens. The second digit tells how many ones.'

We Do • Fill in another place-value chart together, using a number represented with materials or a drawing.

You Do • Students complete place-value charts for two-digit numbers, identifying the tens, ones and number.

3. Partition a number into tens and ones

I Do • Write a two-digit number and model partitioning it into tens and ones.

Example: $25 = 20 + 5$

Think aloud:

'I break 25 into tens and ones. Two tens is 20 and 5 ones is 5.'

Explain that partitioning helps students understand the value of each digit.

We Do • Partition one or two numbers together, such as:

- $29 = 20 + 9$
- $50 = 50 + 0$

You Do • Students partition two-digit numbers into tens and ones.

Differentiation

Support

- Use real base-10 blocks or bundled sticks
- Start with numbers under 50
- Have students physically build the number before writing it
- Practise matching 2 tens and 3 ones, 4 tens and 1 one, and similar examples orally

Extension

- Ask students to make their own two-digit number with materials and write it three ways
- Have students explain the difference between pairs such as 81 and 18
- Challenge students to find all the numbers in question 2 with more tens than ones
- Ask students to write a number that has 9 tens and 5 ones, then partition it

Teaching as Inquiry

Observe which students can identify, partition, read and understand tens and ones with base-10 materials and numerals.

Hands-On Activity 1 (10 minutes)

Build the Number

Give students base-10 materials. Say numbers such as 24, 36, 50, 67, 95.

Students build the number, then say: ‘ ___ tens and ___ ones makes ___.’

Hands-On Activity 2 (10 minutes)

Match It Three Ways

Prepare cards showing:

- base-10 pictures
- numerals
- partitioned forms such as $80 + 1$

Students match the three cards that show the same number.

Student Book Practice

Students complete **p2 – Tens and ones**

Focus: Count, partition and represent tens and ones with base-10 materials.

Mathseeds Online Practice

Lesson: Lesson 86, Counting 70-100

Focus: Count to 100 starting at any number. Read and write numerals. Order numbers on a number line. Order numbers on a number chart. Compare groups of objects. Use comparative language: larger, smaller. Understand the meaning of the equal sign to determine true or false.

Reflect and Check (5 minutes)

Quick questions:

- What number is 2 tens and 5 ones?
- What number is 8 tens and 1 one?
- What does the 6 mean in 67?
- What does the 7 mean in 67?
- How would you split 44 into tens and ones?

Exit Question

‘How do tens and ones help you understand a number?’

Feedback

Praise students for reading two-digit numbers accurately with place value language, such as tens and ones. Encourage students to explain their reasoning.

Next Steps for Teacher

- Identify students who still individually count, skip count or double-count objects.
- Provide additional practice with one-to-one correspondence and counting collections.
- Extend students with larger numbers.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The base-10 number system is organised by place value.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure
- Recognising the place value of each digit in a two-digit number.

DAILY LESSON PLAN Week 1 • Lesson 2**Topic:** Counting to 100

In this lesson, students complete a hundred chart, count forward in 2s, 5s and 10s and count backwards in number patterns.

Learning Intention

Students will use number sequences and skip-counting patterns to find, read and write numbers to 100.

Success Criteria

- ✓ I can find missing numbers on a hundred chart.
- ✓ I can count forward by 2s, 5s and 10s.
- ✓ I can count backwards in a pattern.
- ✓ I can explain how numbers change across a row and down a column.
- ✓ I can use patterns to help me count more quickly.

Language Focus

Key terms: hundred chart, count on, count back, sequence, skip-count, pattern, before, after, row, column

Optional te reo Māori links: tau, tātau, tekau

Sentence stems:

- The missing number is ____.
- I know because the number before is ____ and the number after is ____.

Explicit Instruction (10 minutes)**1. Fill in missing numbers on a hundred chart**

I Do • Display a hundred chart with some numbers missing.

Model how to find a missing number by checking:

- the number before
- the number after
- the row pattern
- the numbers above or below, if helpful

Think aloud:

‘If I know 15 and 16, then the missing number before them is 14 because the row is counting up by ones.’

Explain that a hundred chart helps students see what comes before, after and between numbers.

We Do • Complete a few missing numbers together, asking students to explain how they know.

You Do • Students complete missing numbers on a hundred chart or number grid.

2. Count by 5s

I Do • Start a counting sequence by 5s, such as:

10, 15, 20, 25 ...

Model thinking aloud:

‘I am adding 5 each time. The numbers are getting larger by the same amount.’

Continue the sequence together:

30, 35, 40, 45, 50

- When I count by 2s/5s/10s, I add ____.
- When I count backwards, I take away ____.
- I notice the pattern ____.

Launch Activity (5 minutes)

Display a hundred chart. Ask:

- What comes after 14?
- What comes before 20?
- What do you notice when you move across a row?
- What do you notice when you count by 10s?

Explain: A hundred chart helps us see patterns in number sequences. Numbers increase in order and skip-counting lets us move through the sequence more efficiently.

Assessment for Learning

Ask:

- How do you know which number is missing?
- What happens when you move one space to the right?
- What happens when you count by 10s?
What is the same about numbers in a skip-counting pattern?
- How do you know what comes next?

Explain that skip-counting helps students notice patterns and count groups more efficiently.

We Do • Say the next few numbers together, tracking the pattern aloud.

You Do • Students continue counting sequences by 5s.

3. Count forwards and backwards by 10s

I Do • Start with a forward sequence by 10s, such as:

20, 30, 40 ...

Think aloud: ‘I am adding 10 each time. The tens digit changes, but the ones digit stays the same.’

Then model a backwards sequence, such as:

90, 80, 70 ...

Think aloud: ‘Now I am taking away 10 each time.’

You may also model a sequence such as:

86, 76, 66 ...

Think aloud: ‘I am taking away 10 each time, so the ones digit stays the same.’

We Do • Count one forwards sequence and one backwards sequence together.

You Do • Students complete counting sequences by 10s, both forwards and backwards.

Differentiation

Support

- Use a full hundred chart beside the page
- Practise orally before writing
- Cover part of the chart so students focus on one row at a time
- Use counters or number cards to act out the jumps

Extension

- Ask students to make their own skip-counting sequence
- Challenge them to start at a different number and count by 2s, 5s or 10s
- Have students explain what happens to the tens and ones in each sequence
- Ask students to find all the numbers on the chart that would appear in the count-by-5s pattern

Teaching as Inquiry

Observe which students use accurate skip counting by 2s, 5s and 10s both forward and backwards. Keep an eye on students who still need support with missing numbers.

Hands-On Activity 1 (10 minutes)

Human Number Line

Give students number cards to 30. Ask them to:

- stand in order
- step forward by 2s
- step forward by 5s
- step back by 10s.

Hands-On Activity 2 (10 minutes)

Skip-Count Cover-Up

Use a hundred chart and cover some numbers. Students work out the hidden numbers using:

- row patterns
- column patterns
- skip-counting patterns.

Student Book Practice

Students complete **p3 – Counting to 100**

Focus: Count by 2s, 5s and 10s and notice patterns in number sequences.

Mathseeds Online Practice

Lesson: Lesson 86, Counting 70-100

Focus: Count to 100 starting at any number. Read and write numerals. Order numbers on a number line. Order numbers on a number chart. Compare groups of objects. Use comparative language: larger, smaller. Understand the meaning of the equal sign to determine true or false.

Reflect and Check (5 minutes)

Quick questions:

- What comes after 14?
- Count by 5s from 10.
- Count by 10s from 20.
- What comes next: 86, 76, 66 ... ?
- How does the hundred chart help you?

Exit Question

'How do number patterns help you count more quickly?'

Feedback

Praise students for accurately skip counting to 100 by 2s, 5s and 10s. Encourage students to look for patterns and confidently explain these patterns to others.

Next Steps for Teacher

- Identify students who can accurately count forwards but struggle with counting backwards.
- Provide additional hundred charts and hands on practice to identify, follow and create 2s, 5s and 10s patterns to 100.
- Extend confident students beyond 100. Ask them to colour and observe where there is cross-over between the patterns.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The whole numbers from 0 to 120 form a sequence.

Practices

- Counting forwards and backwards in 2s, 5s and 10s from any whole number between 0 and 100

DAILY LESSON PLAN Week 1 • Lesson 3**Topic:** Counting by 10s

In this lesson, students recognise and circle groups of ten, count collections by 10s and apply this to a simple grouping task with fish tanks.

Learning Intention

Students will use groups of ten to count collections efficiently and find totals to 120.

Success Criteria

- ✓ I can make and recognise a group of ten.
- ✓ I can count collections by 10s.
- ✓ I can tell how many there are altogether.
- ✓ I can use groups of ten instead of counting by ones.
- ✓ I can explain why counting by 10s is helpful.

Language Focus

Key terms: group of ten, count by 10s, altogether, tens, ones, skip-count, pattern

Optional te reo Māori links: tekau, tatau, tau

Sentence stems:

- I can see ___ groups of ten.
- ___ groups of ten is ___.
- I counted by 10s: ___.
- Altogether there are ___.
- Counting by 10s is quicker because ___.

Launch Activity (5 minutes)

Show 10 counters in one pile; then 20 as two piles of 10; then 30 as three piles of 10.

Ask:

- How many are in one group?
- If I have 3 groups of ten, how many is that?
- What do I add each time when I count in 10s?
- Why might counting by 10s be faster than counting one by one?

Explain: Grouping makes counting easier.

Assessment for Learning

Ask:

- How many is one group of ten?
- What is 2 groups of ten?
- What is 3 groups of ten?
- How do you know when a collection has 10 in it?
- Why is it helpful to circle groups first?

Explicit Instruction (10 minutes)**1. Make groups of ten**

I Do • Display a collection of objects, pictures or counters.

Model how to look carefully and make one group of ten at a time.

Think aloud:

'I am not counting every object one by one. I am making a group of ten first.'

Then count the groups:

- 1 group of ten = 10
- 2 groups of ten = 20

Explain that grouping into tens helps us count larger collections more efficiently.

We Do • Make or circle one group of ten together.

You Do • Students make, circle or draw groups of ten and record the total.

2. Count by 10s to find how many altogether

I Do • Display a set that has been organised into groups of ten.

Model counting the groups by 10s.

Think aloud:

'If I can see 3 groups of ten, I count 10, 20, 30. There are 30 altogether.'

Model another example:

'If I can see 2 groups of ten, I count 10, 20. There are 20 altogether.'

Explain that skip-counting by 10s is a faster way to count equal groups of ten.

We Do • Count one organised set together by 10s.

You Do • Students count groups of ten and record the total.

3. Connect groups of ten to numerals

I Do • Write and model:

- 1 ten = 10
- 2 tens = 20
- 3 tens = 30

Think aloud: 'When I count by 10s, the tens change and the ones stay at zero.'

Connect this to place value by pointing out that 30 means 3 tens and 0 ones.

We Do • Say the tens sequence together:

10, 20, 30, 40, 50 ...

You Do • Students explain one total using:

'___ groups of ten = ___.'

Differentiation

Support

- Use real counters or cubes to make groups of 10
- Physically move items into groups before counting
- Practise 1 ten, 2 tens and 3 tens orally
- Keep a visible tens chart: 10, 20, 30, 40 ...

Extension

- Ask students to predict totals for 4, 5 or 6 groups of ten
- Have students draw their own collection in groups of 10
- Challenge students to explain why 30 means 3 tens and 0 ones
- Ask students to count backwards by 10s from 30

Teaching as Inquiry

Observe which students recognise and count collections by 10s. Keep an eye on students who still need support and are counting one-by-one.

Hands-On Activity 1 (10 minutes)

Make Ten Groups

Give students counters or linking cubes. Ask them to make:

- 1 group of 10
- 2 groups of 10
- 3 groups of 10.

Then say the totals aloud: 10, 20, 30.

Hands-On Activity 2 (10 minutes)

Tank Builder

Students draw or use counters to fill 'tanks' or boxes with 10 objects each. Then they count by 10s to find the total.

Student Book Practice

Students complete **p4 – Counting by 10s**

Focus: Find and circle groups of ten, counting by tens and then linking groups of ten to multiples of 10.

Mathseeds Online Practice

Lesson: Lesson 79, Counting by 10s

Focus: Sort objects into groups of ten. Recognize ten as a bundle of ten ones. Skip count by tens. Compose two-digit numbers using tens and ones. Count and create collections by partitioning numbers using place value.

Reflect and Check (5 minutes)

Quick questions:

- How many is 1 group of ten?
- How many is 2 groups of ten?
- How many is 3 groups of ten?
- Count by 10s to 30.
- Why is counting by 10s helpful?

Exit Question

- 'How do groups of ten help you find the total?'

Feedback

Praise students for accurately counting by 10s. Encourage students to connect groups of ten to multiples of ten.

Next Steps for Teacher

- Identify students who can accurately count forwards but struggle with counting backwards by 10s.
- Provide additional base-10 materials to practise counting by tens.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- Arranging objects into groups can help when finding their total.
- Groups of 10s are used to structure and count larger collections.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure.
- Finding the total number of objects up to 120 by separating them into groups (e.g. groups of ten).

DAILY LESSON PLAN Week 1 • Lesson 4**Topic:** Counting to 100

In this lesson, students identify the number before and number after, count collections using groups of ten and extra ones, and represent numbers such as 61 and 76 on a ten-by-ten grid.

Learning Intention

Students will use number sequences and place value to identify, count and represent numbers to 100.

Success Criteria

- ✓ I can say and write the number before a given number.
- ✓ I can say and write the number after a given number.
- ✓ I can count groups of ten and extra ones.
- ✓ I can tell how many there are altogether.
- ✓ I can make a number using tens and ones.

Language Focus

Key terms: before, after, tens, ones, altogether, group of ten, sequence, place value, make

Optional te reo Māori links: tau, tatau, tekau, tahi

Sentence stems:

- The number before ___ is ___.
- The number after ___ is ___.

Explicit Instruction (10 minutes)**1. Write the number before and after**

I Do • Display a two-digit number and model finding the number before and after.

Think aloud: 'To find the number before, I count back one. The number before 80 is 79.'

'To find the number after, I count on one. The number after 55 is 56.'

Model a few examples, including numbers near a decade boundary:

- before 72 is 71
- before 91 is 90
- after 90 is 91
- after 99 is 100

Explain that knowing the number before and after helps students understand the forward and backward counting sequence.

We Do • Solve a few examples together, asking students to explain whether they counted back one or counted on one.

You Do • Students find the number before and after given numbers.

2. Count tens and ones in a collection

I Do • Display a collection organised into bundles of ten and single ones.

Point out the key idea:

- one bundle = 10
- single sticks are ones

Model how to:

- count the bundles of ten first
- count the extra ones next
- combine them to find the total

- I can see ___ tens and ___ ones.
- ___ tens and ___ ones makes ___.
- To make ___, I need ___ tens and ___ ones.

Launch Activity (5 minutes)

Write these on the board: 80, 72, 91, 99, 55, 90. Ask:

- What number comes before 80?
- What number comes after 99?
- What number comes after 55?
- If I have 6 tens and 1 one, what number is that?

Explain: Numbers can be understood in order and in groups of tens and ones.

Assessment for Learning

Ask:

- What does 'before' mean?
 - What does 'after' mean?
 - How many does one bundle stand for?
 - If I have 7 tens and 6 ones, what number is that?
- Why is 100 after 99?

Think aloud: 'I can see 7 bundles of ten and 3 ones. That makes 73.'

Explain that grouping in tens helps us count efficiently and understand how numbers are made.

We Do • Count one collection together, identifying the tens first and then the ones.

You Do • Students count collections of tens and ones and write the total.

3. Make a two-digit number using tens and ones

I Do • Display a two-digit number, such as 61 or 76.

Model how to represent the number using tens and ones.

Think aloud:

'To make 61, I need 6 tens and 1 one.'

'To make 76, I need 7 tens and 6 ones.'

Model by:

- making the full tens first
- adding the extra ones
- saying the number as tens and ones

Explain that the digits in a two-digit number show how many tens and how many ones.

We Do • Build one number together, counting the tens and ones aloud.

You Do • Students represent two-digit numbers using tens and ones, then explain their model using:

'___ tens and ___ ones makes ___.'

Differentiation

Support

- Use a number line to 100
- Use real bundled sticks or tens blocks
- Practise before/after orally before writing
- Build the number with materials before colouring the grid

Extension

- Ask students to write both the number before and the number after a given number
- Have students explain numbers like 61 and 76 in tens and ones
- Challenge students to make another number such as 68 or 54 on a blank grid
- Ask students to compare 61 and 76 and say which is larger and why

Teaching as Inquiry

Observe which students can move back and forward one in the sequence confidently to identify the number before and the number after.

Hands-On Activity 1 (10 minutes)

Before and After Cards

Give students number cards. They work in pairs to say:

- the number before
- the number after.

Then they check with a number line or hundred chart.

Hands-On Activity 2 (10 minutes)

Build and Make

Give students base-10 blocks or bundled sticks. Say a two-digit number. Students build it and say: '___ tens and ___ ones makes ___.'

Student Book Practice

Students complete **p5 – Counting to 100**

Focus: Write the number before and after as well as count tens and ones in a collection.

Mathseeds Online Practice

Lesson: Lesson 86, Counting 70-100

Focus: Count to 100 starting at any number. Read and write numerals. Order numbers on a number line. Order numbers on a number chart. Compare groups of objects. Use comparative language: larger, smaller. Understand the meaning of the equal sign to determine true or false.

Reflect and Check (5 minutes)

Quick questions:

- What number comes before 72?
- What number comes after 99?
- What number comes after 90?
- If I have 6 tens and 1 one, what number is it?
- If I have 7 tens and 6 ones, what number is it?

Exit Question

'How do tens and ones help you make a number?'

Feedback

Praise students for accurately moving back and forward one in a sequence. Encourage students to use mathematical language, such as before, after, tens and ones.

Next Steps for Teacher

- Identify students who can count in a sequence but struggle to identify before and after accurately.
- Provide additional base-10 materials to practise making numbers with tens and ones.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The base 10 number system is organised by place value.
- The place value of digits helps with comparing and ordering.
- Arranging objects into groups can help when finding their total.
- Groups of 10s are used to structure and count larger collections.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure.
- Comparing and ordering whole numbers up to 120.
- Finding the total number of objects up to 120 by separating them into groups.

DAILY LESSON PLAN Week 1 • Lesson 5**Topic:** Order and compare numbers

In this lesson, students identify the smallest and largest numbers in a set, then order groups of numbers from smallest to largest. The page includes numbers within 100 and just beyond 100, so students use both counting sequence knowledge and place value to compare and order whole numbers.

Learning Intention

Students will compare and order whole numbers to 120 using counting sequence and place value knowledge.

Success Criteria

- ✓ I can find the smallest number in a group.
- ✓ I can find the largest number in a group.
- ✓ I can put numbers in order from smallest to largest.
- ✓ I can use tens and ones to help compare numbers.
- ✓ I can explain how I know one number is bigger or smaller.

Language Focus

Key terms: smallest, largest, order, compare, tens, ones, before, after, sequence, greater, less

Optional te reo Māori links: tau, tatau, tekau

Sentence stems:

- The smallest number is ____.
- The largest number is ____.

Explicit Instruction (10 minutes)**1. Find the smallest and largest number**

I Do • Display a small set of numbers, such as: 23, 40, 16

Model how to compare the numbers by looking at the tens first.

Think aloud:

‘I look at the tens first. 16 has 1 ten, 23 has 2 tens, and 40 has 4 tens. So 16 is the smallest and 40 is the largest.’

Model another set, such as: 31, 41, 37

Explain that comparing numbers relies on understanding place value and where numbers sit in the counting sequence.

We Do • Find the smallest and largest number in one more set together.

You Do • Students identify the smallest and largest numbers in a set and explain how they know.

2. Order numbers from smallest to largest

I Do • Display a set of numbers, such as: 17, 58, 65, 27

Think aloud:

- 17 has 1 ten
- 27 has 2 tens
- 58 has 5 tens
- 65 has 6 tens

So the order is: 17, 27, 58, 65

- I know ____ is bigger than ____ because ____.
- In order from smallest to largest: ____.
- I looked at the tens first, then the ones.

Launch Activity (5 minutes)

Write these on the board:

- 23, 16, 40
- 31, 41, 37
- 61, 79, 60, 80

Ask:

- Which is the smallest?
- Which is the largest?
- How do you know?
- What part of the number do you look at first?

We can compare numbers by looking at their place value. For two-digit numbers, students compare the tens first, then the ones if needed.

Assessment for Learning

Ask:

- What does smallest mean?
- What does largest mean?
- Which is bigger: 58 or 65? How do you know?
- If two numbers have the same tens, what do you compare next?
- Why is 101 bigger than 99?

Example language:

‘I don’t guess. I compare the tens first, then place the numbers in order.’

Explain that numbers can be ordered from smallest to largest by using place value and the counting sequence.

We Do • Order another set of numbers together, asking students which number should come first and why.

You Do • Students order sets of numbers from smallest to largest.

3. Compare numbers with the same tens

I Do • Display a close pair of numbers, such as: 79 and 78

Think aloud: ‘The tens are the same, so now I compare the ones. 8 ones is less than 9 ones, so 78 is smaller than 79.’

Then model another pair, such as:

60 and 61

Think aloud: ‘They both have 6 tens, so I check the ones. 60 has 0 ones, so it comes before 61.’

Explain that when the tens are the same, students need to compare the ones.

We Do • Compare one or two close pairs together, using tens first and then ones.

You Do • Students compare and order numbers where the tens are the same, explaining their thinking with:

‘I looked at the tens first, then the ones.’

Differentiation

Support

- Use a number line to 100 or 120
- Give students number cards to physically arrange
- Compare only two numbers first before moving to sets of four
- Use place-value materials to show tens and ones

Extension

- Ask students to write comparison statements, such as $58 < 65$
- Have students create their own set of four numbers for a partner to order
- Challenge students to explain why a number is smallest or largest using full sentences
- Ask students to order numbers that are very close together, such as 109, 101, 110, 111

Teaching as Inquiry

Observe which students can identify the smallest and largest numbers and can order numbers to 120.

Hands-On Activity 1 (10 minutes)

Balloon Number Sort

Write numbers from the page on cards. Students work in pairs to:

- find the smallest
- find the largest
- arrange the cards from smallest to largest.

Then they explain how they decided.

Hands-On Activity 2 (10 minutes)

Human Number Line

Give students number cards and ask them to stand in order. Then ask:

- Who is the smallest?
- Who is the largest?
- Who comes between 60 and 79?
- Can anyone swap places to make the order correct?

Student Book Practice

Students complete **p6 – Order and compare numbers**

Focus: Identify smallest and largest numbers, order groups of numbers from smallest to largest, use place value to compare numbers.

Mathseeds Online Practice

Lesson: Lesson 86, Counting 70-100

Focus: Count to 100 starting at any number. Read and write numerals. Order numbers on a number line. Order numbers on a number chart. Compare groups of objects. Use comparative language: larger, smaller. Understand the meaning of the equal sign to determine true or false.

Reflect and Check (5 minutes)

Quick questions:

- Which is smaller: 40 or 16?
- Which is larger: 49 or 62?
- Put these in order: 61, 79, 60, 80
- Which is bigger: 101 or 108?
- What do you look at first when comparing numbers?

Exit Question

'How does place value help you order numbers?'

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The whole numbers from 0 to 120 form a sequence.
- The place value of digits helps with comparing and ordering.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure.
- Comparing and ordering whole numbers up to 120.

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

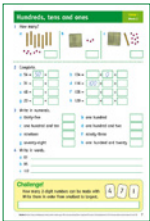
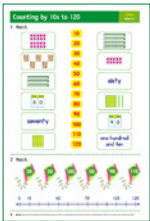


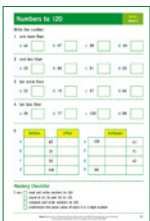
Teaching as Inquiry: Reflection Notes

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> 

DAILY LESSON PLAN Week 2 • Lesson 1**Topic:** Hundreds, tens and ones

In this lesson, students identify quantities shown with hundreds, tens and ones materials, partition numbers into place-value parts, read and write numerals and number words, and make simple comparisons within and beyond 100.

Learning Intention

Students will identify, represent, partition, read and write numbers using hundreds, tens and ones.

Success Criteria

- ✓ I can count how many hundreds, tens and ones are shown.
- ✓ I can write the number that matches the materials.
- ✓ I can split a number into hundreds, tens and ones.
- ✓ I can write numbers in numerals and in words.
- ✓ I can explain what each digit means.

Language Focus

Key terms: hundreds, tens, ones, place value, digit, number, partition, numeral, words

Optional te reo Māori links: rau, tekau, tahi, tau

Explicit Instruction (10 minutes)**1. Making Hundreds, Tens and Ones**

I Do • Show 72 using base-10 blocks: 7 tens and 2 ones.

Think aloud: 'Each digit tells us something about the number. The 7 is in the tens place, so it means 70. The 2 is in the ones place, so it means 2.'

Model recording: $72 = 70 + 2$

Then show 102 with base-10 blocks: 1 hundred, 0 tens and 2 ones.

Explain: The zero is important because it shows there are no tens.

Model recording: $104 = 100 + 0 + 2$

We Do • Work through examples together using base-10 blocks to build different two- and three-digit numbers to 120.

Ask:

- What digit is in the tens place?
- What digit is in the ones place?
- Do we need a hundreds digit?
- Why do we need a zero in numbers like 107?

You Do • Students use base-10 blocks to build given numbers and record them as expanded numbers. Check for understanding: ask students to explain what each digit means in 112.

2. Reading and Writing Numbers to 120

I Do • Write the number word twenty-seven and model how to match it to the numeral 27.

Think aloud: 'Number words tell us how many tens and ones are in a number.'

Sentence stems:

- I can see ___ hundred(s), ___ ten(s) and ___ one(s).
- ___ hundred(s), ___ ten(s) and ___ one(s) makes ___.
- ___ = ___ + ___ + ___.
- In words, ___ is ___.
- The digit ___ shows the ___.

Launch Activity (5 minutes)

Using base-10 blocks show 124.

Ask:

- How much is the hundred worth?
- How much is one ten worth?
- How much is one one worth?
- What number do these make altogether?

Explain: 'Our number system is built in groups of ten. Ten ones make one ten and ten tens make one hundred.'

Assessment for Learning

Ask:

- How do you know how many there are without counting every single one?
- How can base-10 materials help us read a number?

Write one hundred and one and model how this becomes 101.

Explain: In 101, there is 1 hundred, 0 tens and 1 one.

We Do • Read number words together and write the matching numerals, such as: thirteen, twenty-seven, forty-two, one hundred and seven.

Ask:

- What part of the word tells us the tens?
- What part tells us the ones?
- How do we know this number has a hundred?

You Do • Students match number word cards to numeral cards, then record selected numbers in a place-value chart. Check for understanding: ask students to write the numeral for one hundred and nine and explain why there is a zero in the tens place.

3. Making Numbers

I Do • Roll two dice and model making different two-digit numbers.

Think aloud: 'The value of a digit changes depending on where it is placed.'

We Do • Using mini whiteboards get students to continue making possible two-digit numbers using the three dice. Make the smallest number. Make the largest number.

You Do • Students make, write and order the different two-digit numbers they have made.

Check for understanding: ask students to explain why 63 is greater than 36.

Problem Solving and Reasoning

Discuss:

- Why is 104 different from 140?
- What does the zero mean in 104?
- How do you know 120 is bigger than 105?
- Why is 116 equal to $100 + 10 + 6$?
- How does knowing hundreds, tens and ones help you read a number?

Encourage students to explain using place value language: hundreds, tens, ones, greater than, less than, smallest, largest

Differentiation

Support

- Use real base-10 blocks
- Start with only two-digit numbers before moving to three-digit numbers
- Build the number physically before writing it
- Use a place-value chart with labelled columns

Extension

- Ask students to make their own number with 1 hundred, some tens and some ones
- Have students write a number in words and swap with a partner to write in numerals
- Challenge students to compare pairs such as 104 and 140 or 116 and 112

Teaching as Inquiry

Observe which students recognise hundreds, tens and ones rather than counting individually.

Hands-On Activity 1 (10 minutes)

Build the Number

Give students base-10 materials. Say numbers between 1–120. Students build the number and say: ‘___ hundred(s), ___ ten(s), ___ one(s).’

Hands-On Activity 2 (10 minutes)

Place Value Match

Prepare cards showing base-10 pictures, numerals, partitioned forms and word forms. Students match all cards that show the same number.

Student Book Practice

Students complete **p7 – Hundreds, tens and ones**

Focus: counting base-10 representations, partitioning, connecting writing numerals, number words and representations, and making and ordering two-digit numbers from given digits

Reflect and Check (5 minutes)

Quick questions:

- What is 1 hundred, 0 tens and 5 ones?
- What is 116 split into place-value parts?
- Write ninety-three in numerals.
- Write 112 in words.
- What does the 2 mean in 120?

Exit Question

‘How can knowing hundreds, tens and ones help us read and write numbers?’

Feedback

Encourage students to check their answers by building the number, saying the number aloud, and matching each digit to its place value. Praise students for using reasoning vocabulary, such as hundreds, tens, ones, digit, number word, numeral, and place value.

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce reading and writing numbers up to 120
- Recognising the value of each digit including understanding zero as a placeholder
- Extend confident students by asking them to represent numbers in more than one way and explain how digit position changes value.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The base 10 number system is organised by place value: tens and ones for two-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.

Practices

- Reading and writing whole numbers up to 120 and representing them using base 10 structure
- Recognising the place value of each digit in a two-digit number, and a three-digit number up to 120.

DAILY LESSON PLAN Week 2 • Lesson 2**Topic:** Counting by 10s to 120

In this lesson, students count forwards in 10s to 120; match numbers to different representations; and place multiples of 10 on a number line. They connect base-10 materials, word forms, numerals and place-value charts.

Learning Intention

Students will count by 10s to 120 and match numbers to different place-value representations.

Success Criteria

- ✓ I can count forwards by 10s to 120.
- ✓ I can match a number to base-10 materials.
- ✓ I can match a number to its word form.
- ✓ I can match a number to a tens-and-ones chart.
- ✓ I can place multiples of 10 on a number line.

Language Focus

Key terms: count by 10s, hundreds, tens, ones, numeral, word form, number line, match, place value

Optional te reo Māori links: rau, tekau, tahi, tau

Sentence stems:

- I counted by 10s: ____.
- This picture shows ____ because ____.
- ____ tens and ____ ones makes ____.
- On the number line, ____ goes here because ____.
- I know these match because ____.

Launch Activity (5 minutes)

Write these on the board: 10, 20, 30, 40, 50

Ask:

- What pattern do you notice?
- What are we adding each time?
- What would come after 90?
- What would come after 100?

Explain: Counting by 10s follows a regular pattern. The constant jump is 10 each time and this links directly to the base-10 structure of our number system.

Assessment for Learning

Ask:

- What does one tens stand for?
- How many tens are in 80?
- What does 90 look like on a tens-and-ones chart?
- How do you know where 110 goes on the number line?
- What is the difference between 100 and 110?

Explicit Instruction (10 minutes)**1. Count by 10s with materials**

I Do • Show one group of 10 counters, sticks, or cubes.

Say: 'This is 10. When we add another group of 10, we count 10 more.'

Add groups one at a time and count aloud: 10, 20, 30, 40, 50 ...

Emphasise that each new group adds 10.

We Do • Students point to or build groups of 10 while counting together.

Ask:

- How many groups of 10?
- What number is that?
- What comes next?

You Do • Students build a number using groups of 10, then say, 'I made ____ because I have ____ groups of 10.'

2. Show the same number in different ways

I Do • Choose a number, such as 70. Show it with base-ten materials, write 70, and write seventy.

Say: 'These all show the same number. Seven tens is 70.' Repeat with 110.

We Do • Build and record another number together, such as 40, 90, or 120.

Ask:

- How many tens?
- Why is there a zero in the ones place?
- How do we know these match?

You Do • Students match number cards, word cards, and picture cards. They explain one match: These match because they all show ____.

3. Count by 10s on a number line

I Do • Show a number line from 0 to 120 on the floor.

Say: 'Each jump is 10.' Ask a student to demonstrate the jump from 0 to 10, then continue: 10, 20, 30, 40 ...

We Do • Count together as students move or point along the number line. Ask:

- What number comes next?
- How do you know?
- How many jumps of 10?

You Do • Students use their own number line to count forward by 10s from 0, 20 or 50. They can jump along with their index fingers. They explain: 'I started at ____ and made ____ jumps of 10. I landed on ____.'

Problem Solving and Reasoning

Discuss:

- How do you know a picture shows 40 and not 4?
- Why does 80 have 8 tens and 0 ones?
- What is the same about 60, 70, 80 and 90?
- How is 110 different from 100?
- Why does the number line help when matching numbers?

Differentiation

Support

- Use real base-10 materials
- Count aloud together in 10s before matching
- Give only a few matches at a time
- Use a class tens chart: 10, 20, 30, 40 ...

Extension

- Ask students to continue counting by 10s beyond 120
- Have students create their own matching card for 30, 70 or 120
- Challenge students to explain the difference between 100, 110 and 120
- Ask students to place extra numbers such as 60 or 80 on a blank number line

Teaching as Inquiry

Observe which students can count by 10s fluently and recognise numbers in different representations.

Hands-On Activity 1 (10 minutes)

Rocket Launch Count

Create cards numbered 0, 10, 20, 30 ... 120 (one per student or pair). Shuffle the cards and hand one to each student or pair. Students stand in a scattered formation around the room. Call '3, 2, 1 LAUNCH!' Students race to physically arrange themselves in the correct order from 0 to 120 in a line or arc across the room, holding their card out for others to see. Once in order, the class reads out their sequence together. Add claps, stomps or funny voices on each 10.

Hands-On Activity 2 (10 minutes)

Rocket Launch Countdown

Extend your rocket launch. Call 'REVERSE ROCKETS!' and get students to countdown on the decade from 120 to 0. Challenge students by asking one student to turn their card face-down. The class chants the sequence and calls out the missing number. Repeat 2–3 times with different students.

Student Book Practice

Students complete **p8 – Counting by 10s to 120**

Focus on matching numbers to representations, counting base-10 materials by 10s, recognising number words and place-value charts and placing multiples of 10 on a number line.

Mathseeds Online Practice

Lesson: Lesson 79, Counting by 10s

Sort objects into groups of ten. Recognise ten as a bundle of ten ones. Skip count by tens. Compose two-digit numbers using tens and ones. Count and create collections by partitioning numbers using place value.

Reflect and Check (5 minutes)

Quick questions:

- Count by 10s to 120.
- What number has 8 tens and 0 ones?
- What number word matches 60?
- What comes after 100 when counting by 10s?
- Where does 110 go on the number line?

Exit Question

'How do different pictures and words show the same number?'

Feedback

Praise students for matching multiples of 10 to numerals, number words, and base-10 representations. Encourage them to count forwards by 10s and use the number line to locate each number accurately between 0 and 120.

Next Steps for Teacher (Teacher as Inquiry)

- Reinforce counting forwards and backwards in 10s to 120
- Continue matching multiples of 10 to number words and representations including using place-value charts to identify tens and ones
- Extend confident students by asking them to start counting in 10s from different numbers and explain what changes and what stays the same.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The base-10 number system is organised by place value.
- Ten ones form one ten and ten tens form one hundred.
- Year 2 learners read and write whole numbers up to 120 and represent them using base-10 structure.

Practices

- Representing numbers with hundreds, tens and ones materials
- Recognising the place value of digits in two-digit numbers and three-digit numbers up to 120
- Matching numerals, word forms and place-value representations

DAILY LESSON PLAN Week 2 • Lesson 3**Topic:** Counting to 120

In this lesson, students continue counting by 5s to 120; place numbers between 100 and 120 on a partially labelled number line; and represent numbers such as 106, 113, 117 and 109 using hundreds, tens and ones.

Learning Intention

Students will count, locate and represent numbers from 100 to 120 using skip-counting and place value.

Success Criteria

- ✓ I can count by 5s from 100 to 120.
- ✓ I can locate numbers between 100 and 120 on a number line.
- ✓ I can show a number using hundreds, tens and ones.
- ✓ I can explain how many hundreds, tens and ones are in a number.
- ✓ I can use place value to read numbers past 100.

Language Focus

Key terms: count by 5s, hundred, tens, ones, number line, between, before, after, place value, sequence

Optional te reo Māori links: rau, tekau, tahi, tau, tataua

Explicit Instruction (10 minutes)**1. Counting on from 100**

I Do • Place one hundred on the mat and think aloud: 'I know this is 100. Watch how I count on from here.'

Add one and say '101', another and say '102', continuing to 105. Narrate every move: 'Each time I add one, the number grows by one. The hundred never changes — the hundred is always there.' Write each number on the board as you go, pointing to the digit in the ones place changing.

We Do • Return to 100. Tell students: 'We are going to build 108 together. Call out what to add.'

Take student direction, adding blocks one at a time as the class counts out loud from 100. Repeat for 113 and 119, each time starting fresh from the hundred.

Ask: 'What do we notice about the hundreds digit? What changes each time?'

You Do • Students work in pairs. One partner calls a number between 101 and 120, the other builds it from scratch starting with the hundred and counting on with ones (and tens where appropriate). They record the number on their whiteboard.

2. What's My Number?

I Do • Build 116 on the mat without telling students the number. Say: 'Instead of counting every block one by one, I'm going to read the mat like a number.' Point to the hundred. 'This tells me hundreds. There is one, so I start at 100.'

Sentence stems:

- I counted by 5s: ____.
- This number goes here because ____.
- ____ is between ____ and ____.
- ____ has ____ hundred(s), ____ ten(s) and ____ one(s).
- I know because ____.

Launch Activity (5 minutes)

Write these on the board: 100, 105, 110, 115, 120

Ask:

- What pattern do you notice?
- What are we adding each time?
- What comes after 105?
- What comes between 110 and 120?'

Counting by 5s helps us move through numbers quickly and notice regular patterns.

Assessment for Learning

- What do you add when you count by 5s?
- What do you notice about the final digit in each number?

Point to the ten: 'This tells me tens and there is one, so I add 10. That's 110.'

Point to the ones: 'These tell me ones and there are six. 110 and 6 more is 116.'

Write 116. Repeat with 104, narrating the same three-step read.

We Do • Build a number secretly and reveal the mat.

Say: 'Read the mat with me.'

Point to each group of blocks in turn; students call out the value. Use numbers that test them: try 120 (zero ones) and 100 (zero tens and ones) to surface the role of zero.

Ask: 'How is reading the mat faster than counting every block?'

You Do • Students work independently in pairs. Provide base-10 materials and whiteboards. Students take turns make their number with base-10 materials and the partner must write the number it represents without counting individual blocks.

Problem Solving and Reasoning

Discuss:

- How do you know what comes next when counting by 5s?
- Why does 109 go before 110?
- Why does 106 have no tens?
- What is the same about 106, 109, 113 and 117?
- How do hundreds, tens and ones help us read numbers?

Differentiation

Support

- Use concrete base-10 blocks
- Count aloud together on a class number line
- Use only one number at a time for place-value modelling

Extension

- Ask students to continue counting by 5s past 120
- Have students write their own numbers between 100 and 120 and place them on a number line
- Challenge students to make a number with 1 hundred, 1 ten and 8 ones, then explain it

Teaching as Inquiry

Observe which students can count by 5s past 100 fluently and locate these numbers accurately on a number line.

Hands-On Activity 1 (10 minutes)

Build It, Read It, Write It

Ask students to work in pairs with base-10 materials. Each pair places one hundred on the mat.

Ask: 'What number is this?' Confirm 100. Establish that everything they build today will start with this hundred and it stays on the mat the whole time. Call out a number between 100 and 120. Students add the correct number of tens and ones alongside the hundred.

Ask: 'How do you know that's 114 and not 141?'

One partner secretly builds a number between 100 and 120 behind their hands. The other partner counts the blocks and writes the number. Swap roles.

Ask: 'Did you count the hundred first, then the tens, then the ones?'

Hands-On Activity 2 (10 minutes)

The 100–120 Number Walk

Set-up cards numbered 100–120 spread face-down on a table or the floor. Tell students they are going on a number walk between 100 and 120. Each stop on the walk is a mystery number they need to identify using blocks. Students take turns flipping a card, reading the number aloud, and building it with base-10 blocks. The group watches and agrees (thumbs up/thumbs down) before that student sketches the blocks in their recording sheet using quick symbols (a square for the hundred, a line for a ten, a dot for a ones).

Encourage students to say the number as they build: 'One hundred ... and one ten ... and three ones. That's 113.'

If a student flips a multiple of 10 (e.g. 110), ask: 'How many ones do we need?' to reinforce zero as a placeholder.

Student Book Practice

Students complete **p9 – Counting to 120**

Focus: Counting by 5s to 120, placing numbers on a partially labelled number line, showing numbers using hundreds, tens and ones and connecting 3-digit numerals to place-value materials

Reflect and Check (5 minutes)

Quick questions:

- Count by 5s from 100 to 120.
- What number comes between 107 and 109?
- How many hundreds are in 113?
- How many ones are in 106?
- Where would 118 go on the number line?

Exit Question

'How do hundreds, tens and ones help you show a number?'

Feedback

Praise students for counting forward by 5s from 100 to 120, placing numbers accurately on a number line, and showing numbers using hundreds, tens and ones. Encourage them to explain how they know each number's position and how the base-10 blocks represent the total.

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce counting forwards and backwards in 5s to 120
- Locating numbers on a partially labelled number line to read and write numbers between 100 and 120
- Extend confident students by asking them to place numbers on blank number lines and justify their reasoning using nearby benchmark numbers

Curriculum and Planning Links

NZ Curriculum – Number

Number sequence

Knowledge

- The whole numbers from 0 to 120 form a sequence.
- The names of numbers between 101 and 120 use 'one hundred and -' phrasing.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure
- Comparing and ordering whole numbers up to 120
- Approximately locating numbers up to 120 on a partially labelled number line

DAILY LESSON PLAN Week 2 • Lesson 4

Topic: Numbers to 120

In this lesson, students identify numbers from hundreds, tens and ones materials; record place value in a table; explain what digits mean in numbers; and place numbers on a number line to 120.

Learning Intention

Students will identify, describe and place numbers to 120 using hundreds, tens, ones and a number line.

Success Criteria

- ✓ I can count hundreds, tens and ones to make a number.
- ✓ I can complete a hundreds-tens-ones chart.
- ✓ I can explain what a digit means in a number.
- ✓ I can place numbers to 120 on a number line.
- ✓ I can use place value to read numbers correctly.

Language Focus

Key terms: hundreds, tens, ones, place value, digit, number line, numeral, between, before, after

Optional te reo Māori links: rau, tekau, tahi, tau

Sentence stems:

- I can see ___ hundred(s), ___ ten(s) and ___ one(s).
- ___ hundred(s), ___ ten(s) and ___ one(s) makes ___.

Explicit Instruction (10 minutes)

1. Understanding Hundreds, Tens and Ones

I Do • Show 116 using base-10 blocks: 1 hundred, 1 ten and 6 ones.

Explain: Each digit has a value because of where it is placed. The first 1 is in the hundreds place, so it means 100. The second 1 is in the tens place, so it means 10. The 6 is in the ones place, so it means 6. Model recording: $116 = 1 \text{ hundred, } 1 \text{ ten, } 6 \text{ ones}$.

Then show 101 using base-10 blocks: 1 hundred, 0 tens and 1 one.

Explain that the zero is important because it shows there are no tens.

Model recording: $101 = 1 \text{ hundred, } 0 \text{ tens, } 1 \text{ one}$

We Do • Work through examples together, such as 55, 68, 102, 117 and 83.

Ask:

- How many hundreds are there?
- How many tens are there?
- How many ones are there?
- Do we need a zero? Why?
- What does each digit mean?

You Do • Students use base-10 blocks or place-value charts to represent given numbers and record the hundreds, tens and ones. Ask students to explain the hundreds, tens and ones in 108.

2. Numbers Have Three Places

I Do • Write 115 on the board. Think aloud: 'Every digit in this number has a job. The 1 on the left is in the hundreds place and it means one hundred.' Underline it and write 100 below.

- In ____, the ____ means ____.
- ____ goes here on the number line because ____.
- I know because ____.

Launch Activity (5 minutes)

Show 116.

Ask:

- What number is this?
- What is the value of the 1 in 116?
- What is the value of the 6 in 116?
- Where would 116 go on a number line from 0 to 120?

Explain: Place value helps us read, write and locate numbers.

Assessment for Learning

Ask:

- How many tens are in 86?
- How many hundreds are in 104?
- What does the 7 mean in 72?
- What does the 1 mean in 108?
- Where would 95 go on the number line?

'The 1 in the middle is in the tens place and it means one ten, or 10.' Underline it and write 10 below.

'The 5 is in the ones place and it means five ones.' Write 5 below. Draw the three-column grid and fill it in: 1 | 1 | 5.

Repeat with 106, deliberately pausing at the tens place: 'There are no tens in 106 and so I write a zero here. That zero is important; without it, 106 becomes 16.'

We Do • Write 47 on the board.

Ask: 'Is there a hundreds digit?'

With no hundreds, the column gets a zero. Work through tens (4) and ones (7) together with students directing you. Repeat with 105, 77, and 120.

You Do • Students work independently with a printed or drawn three-column grid. Call out six numbers (a mix of two-digit and three-digit) and students fill in the grid for each. Pairs then compare answers and discuss any disagreements before a whole-class share.

Ask: 'How do columns help you read numbers?'

Problem Solving and Reasoning

Discuss:

- What does the 0 mean in 104?
- Why is 110 bigger than 95?
- How do you know where 61 goes on the number line?

Differentiation

Support

- Use real base-10 blocks
- Start with two-digit numbers before moving to three-digit numbers
- Use a labelled place-value chart
- Use a classroom floor number line

Extension

- Ask students to make and describe their own number to 120
- Have students compare numbers such as 104 and 115
- Challenge students to place extra numbers such as 118 or 101 on the number line
- Ask students to explain why 120 has 1 hundred, 2 tens and 0 ones

Teaching as Inquiry

Observe which students identify hundreds, tens and ones correctly and are ready for more flexible comparison and ordering work.

Hands-On Activity 1 (10 minutes)

Build the Number

Give students base-10 materials. Say numbers such as 72, 86, 104, 115, 120. Students build the number and say: '___ hundred(s), ___ ten(s), ___ one(s).'

Hands-On Activity 2 (10 minutes)

Place Value and Number Line Match

Students receive cards showing:

- numerals
- place-value tables
- base-10 models
- number-line positions

They match the cards that show the same number.

Student Book Practice

Students complete **p10 – Numbers to 120**

Focus: Counting hundreds, tens and ones, completing place-value tables, explaining digit value, placing numbers on a number line to 120

Reflect and Check (5 minutes)

Quick questions:

- How many hundreds are in 104?
- How many tens are in 86?
- In 72, what does the 7 mean?
- In 108, what does the 1 mean?
- Where would 110 go on the number line?

Exit Question

'How does place value help you read and place a number?'

Feedback

Praise students for identifying numbers to 120 using hundreds, tens and ones, and for showing their understanding of place value. Encourage them to explain what each digit represents and to use the number line to place numbers accurately between 0 and 120.

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce identifying hundreds, tens and ones in numbers to 120 by explaining the value of digits
- Support students by representing numbers using base-10 materials
- Extend confident students by asking them to create their own numbers to 120, represent them in multiple ways, and explain where they belong on a number line.

Curriculum and Planning Links

NZ Curriculum – Number

Number sequence

Knowledge

- The whole numbers from 0 to 120 form a sequence.
- The names of numbers between 101 and 120 use 'one hundred and -' phrasing.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure
- Comparing and ordering whole numbers up to 120
- Approximately locating numbers up to 120 on a partially labelled number line

DAILY LESSON PLAN Week 2 • Lesson 5**Topic:** Numbers to 120

In this lesson, students use number sequence and place value to find one more, one less, ten more, ten less and numbers that come before, after and between.

Learning Intention

Students will use number sequence and place value to find numbers that are one more, one less, ten more, ten less, before, after and between.

Success Criteria

- ✓ I can find one more than a number.
- ✓ I can find one less than a number.
- ✓ I can find ten more and ten less than a number.
- ✓ I can identify numbers before, after and between.
- ✓ I can explain how place value helps me.

Language Focus

Key terms: one more, one less, ten more, ten less, before, after, between, tens, ones, place value

Optional te reo Māori links: tau, tatau, tekau

Explicit Instruction (10 minutes)**1. Number Neighbours**

I Do • Hold up a number card, such as 58.

Say: 'This number has two neighbours. The number before is one less. The number after is one more.'

Place cards like this: 57 — 58 — 59

Say: 58 lives between 57 and 59.

We Do • Give a student a number card, such as 73. Two other students stand on either side holding the one-less and one-more numbers. Ask the class:

- Who is the neighbour before?
- Who is the neighbour after?
- How do we know?

You Do • Students work in threes. One student chooses a number to 120. The other two students write and stand as the number neighbours. They swap roles.

2. Ten More, Ten Less Elevator

I Do • Draw a simple 'number elevator' with floors going up and down by 10, e.g. 25 on the middle floor, 35 one floor up, 5 one floor down

Say: 'Going up one floor adds 10. Going down one floor takes away 10.'

We Do • Start with 62. Ask:

- What floor is 10 more?
- What floor is 10 less?
- What digit changed?

Build the elevator together with the numbers: 72, 62, 52

Sentence stems:

- One more than ___ is ___.
- One less than ___ is ___.
- Ten more than ___ is ___.
- Ten less than ___ is ___.
- ___ comes before/after/between because ___.

Launch Activity (5 minutes)

Display a 1–120 number chart with some numbers missing in a 10s sequence, e.g. 22, 32, ____, ____, 62

Ask: 'What numbers are missing? Let's count together in 10s from 22 to 102.'

Repeat backwards: 'Now let's count backwards in 10s from 102 to 22.'

Ask: 'What pattern do you notice when we count in 10s? Which digit is changing?'

Assessment for Learning

- What happens to a number when you add/take away 1?
- What changes when you add/take away 10?
- How do you find a number between two others?

You Do • Students draw their own three-floor elevators using numbers to 120. They label the middle, ten-more, and ten-less floors, then trade with a partner to check.

3. Mystery Number Line

I Do • Show three spaces 41 — ___ — 43

Say: 'The mystery number is between 41 and 43. It must be 42.'

Then show: ___ — 90 — ___

Say: 'The mystery numbers are the neighbours of 90: 89 and 91.'

We Do • Put large number cards on the floor with one missing. Students act as detectives and decide what number is missing.

Ask:

- What clue tells us the answer?
- Are we counting by 1s or 10s here?
- How can we prove it?

You Do • Students create their own mystery number lines with one missing number. They swap with a partner to solve and explain the clue.

Problem Solving and Reasoning

Discuss:

- How is finding one more different from finding ten more?
- What changes when you add 10?
- Why is 110 between 109 and 111?

Differentiation

Support

- Use a number line to 120
- Use base-10 materials to show one more/less and ten more/less
- Practise orally before writing
- Start with numbers that do not cross a decade, then move to numbers like 19, 20, 99, 100

Extension

- Ask students to explain why $97 + 10 = 107$
- Have students write their own one more/less and ten more/less questions
- Challenge students with three-digit numbers near 120
- Ask students to create before/after/between puzzles for a partner

Teaching as Inquiry

Observe which students can move forward and backward by 1 and 10 confidently, and are ready for more flexible mental number work.

Hands-On Activity 1 (10 minutes)

Number Jump

Give students a number card. Call out:

- 'one more'
- 'one less'
- 'ten more'
- 'ten less'

Students show the new number with cards, on mini whiteboards or by moving on a floor number line.

Hands-On Activity 2 (10 minutes)

Before, After, Between Match

Prepare cards with:

- a middle number
- before/after pairs
- between pairs.

Students match the sets and explain how they know.

Student Book Practice

Students complete **p11 – Numbers to 120**

Focus: Finding one/ten more and one/ten less, as well as identifying numbers before, after and between and using place value and number sequence to justify answers

Mathseeds Online Practice

Lesson: Lesson 86, Counting 70–100

Focus: Count to 100 starting at any number. Read and write numerals. Order numbers on a number line. Order numbers on a number chart. Compare groups of objects. Use comparative language: larger, smaller. Understand the meaning of the equals sign to determine true or false.

Reflect and Check (5 minutes)

Quick questions:

- What is one more than 97?
- What is one less than 20?
- What is ten more than 66?
- What is ten less than 120?
- What number is between 109 and 111?

Exit Question

'How does place value help you find ten more or ten less?'

Feedback

Praise students for finding one more, one less, ten more and ten less than numbers to 120. Encourage them to use place value knowledge and patterns in the ones and tens digits to complete before, after and between numbers accurately.

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce counting forwards and backwards by 1 and 10
- Continue practising decade changes, such as 89 to 90
- Extend confident students by asking them to solve missing-number problems and explain the pattern using place-value language.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- The whole numbers from 0 to 120 form a sequence.

Practices

- Reading and writing whole numbers up to 120, and representing them using base 10 structure.
- Comparing and ordering whole numbers up to 120.
- Counting forwards and backwards in 2s, 5s, and 10s from any whole number between 0 and 120.

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:

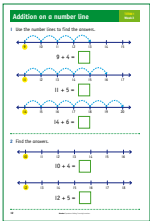
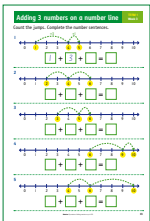
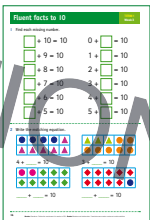
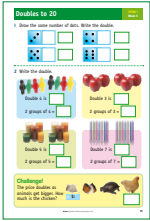
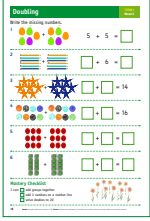
Students counting in 5s and 10s with confidence:

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> 

DAILY LESSON PLAN Week 3 • Lesson 1**Topic:** Addition on a number line

In this lesson, students use number lines to solve addition problems. Students practise counting forwards, making jumps on a number line and connecting addition to movement along a sequence of numbers.

Learning Intention

Students will understand how number lines can be used to solve addition problems.

Success Criteria

- ✓ I can use a number line to solve addition problems.
- ✓ I can count forwards accurately.
- ✓ I can make jumps on a number line.
- ✓ I can explain how addition changes a number.
- ✓ I can record addition equations correctly.

Language Focus

Key terms: addition, add, number line, count on, jump, forwards, equation, total

Sentence stems:

- I started at ____.
- I counted on ____ jumps.
- The total is ____.
- ____ plus ____ equals ____.
- I used the number line to help solve the problem.

Launch Activity (5 minutes)

Display a large classroom number line from 0–20. Model starting at a number and making jumps forwards, e.g. start at 9 and jump forwards 4 spaces. Ask students to count aloud together as the jumps are made.

Assessment for Learning

Ask:

- What number do we start at?
- Which direction do we move when adding?
- What number do we land on?

Explicit Instruction (10–12 minutes)**1. Counting On Using a Number Line**

I Do • Model solving an addition problem using a number line. Think aloud: 'I start at 6 and count on 4 jumps: 6, 7, 8, 9, 10. The answer is 10.'

We Do • Solve several addition problems together using the number line.

Ask: 'How many jumps do we need to make?'

You Do • Students solve simple addition problems using classroom number lines or mini whiteboards. Check for understanding through oral explanations.

2. Making Accurate Jumps

I Do • Demonstrate making one jump for each number added. Explain: Each jump represents one more.

We Do • Practise making jumps together on different addition problems.

Ask: 'Did we make the correct number of jumps?'

You Do • Students use counters or fingers to help track jumps on their number lines.

3. Recording Addition Equations

I Do • Model writing the matching addition equation after solving a problem, e.g. $7 + 6 = 13$.

We Do • Solve and record several equations together.

Ask: 'What number sentence matches the jumps?'

You Do • Students solve and record addition equations independently. Check for understanding through partner sharing.

Differentiation Tips

Support

- Use smaller number ranges such as 0–10.
- Provide number lines with highlighted counting marks.
- Allow students to use counters while jumping on the number line.

Extension

- Challenge students with larger starting numbers.
- Ask students to explain mental counting-on strategies.
- Encourage students to create their own addition problems using number lines.

Teaching as Inquiry

Observe which students can confidently count forwards and which students still rely heavily on counting from one.

Hands-On Activity 1 (10 minutes)

Human Number Line

Create a large floor number line using cards or tape. Students stand on a starting number and physically jump forwards to solve addition problems called out by the teacher.

Hands-On Activity 2 (10 minutes)

Dice and Jump

Students roll two dice. One number becomes the starting number and the second number tells how many jumps to make on a number line. Students record the matching addition equation after each turn.

Student Book Practice

Students complete **page 12** in their workbooks: **Addition on a number line**

Focus: Solve addition problems by counting forwards on number lines and recording equations.

Mathseeds Online Practice

Lesson: Lesson 65, Addition to 20

Focus: Solve addition of three whole numbers. Use the count on strategy. Solve addition problems using a number line. Solve addition problems by counting by twos. Compose numbers from 11 to 19 into tens and ones. Make number bonds for numbers to 20.

Reflect and Check (5 minutes)

Quick questions:

- Which direction do we move when adding?
- What number do we start at in $11 + 5$?
- How many jumps do we make in $14 + 6$?
- What is the total in $10 + 4$?

Exit Question

'How does a number line help us solve addition problems?'

Feedback

Praise students for accurate counting, careful jumps and correctly recording addition equations.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still count all instead of counting on.
- Provide additional practice using concrete number lines and jump strategies.
- Extend confident students with larger numbers and mental addition strategies.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations.

Practices

- Adding and subtracting numbers up to 100

DAILY LESSON PLAN Week 3 • Lesson 2**Topic:** Adding 3 numbers on a number line

In this lesson, students use number lines to solve addition problems involving 3 numbers. Students practise counting forwards in jumps, combining groups and recording complete addition equations.

Learning Intention

Students will understand how to add 3 numbers using a number line.

Success Criteria

- ✓ I can use a number line to add 3 numbers.
- ✓ I can count forwards accurately using jumps.
- ✓ I can combine groups to find a total.
- ✓ I can record complete addition equations.
- ✓ I can explain how I solved an addition problem.

Language Focus

Key terms: addition, number line, count on, jump, total, equation, forwards, combine

Sentence stems:

- I started at ____.
- I counted on ____ jumps.
- The total is ____.
- ____ plus ____ plus ____ equals ____.
- I used the number line to solve the problem.

Launch Activity (5 minutes)

Display a large number line and model solving a simple addition problem with 3 numbers, e.g. start at 2, jump 3, then jump 1 more. Count together aloud as the jumps are made and discuss how the total changes each time.

Assessment for Learning

Ask:

- What number do we start at?
How many jumps do we make altogether?
- What number do we land on?

Explicit Instruction (10–12 minutes)**1. Counting On with 3 Numbers**

I Do • Model solving an addition problem with 3 numbers using a number line.

Think aloud: 'I start at 1, jump 2 spaces to 3, then jump 1 more to 4. So $1 + 2 + 1 = 4$.'

We Do • Solve several addition problems together using number lines.

Ask: 'Where do we start? How many jumps do we need?'

You Do • Students solve addition problems using classroom number lines or mini whiteboards. Check for understanding through oral explanations.

2. Tracking Multiple Jumps

I Do • Demonstrate how each jump shows another number being added.

Explain: We can solve bigger problems by adding one part at a time.

We Do • Practise making jumps together and counting carefully after each jump.

Ask: 'What number did we land on after the first jump?'

You Do • Students use counters or fingers to track jumps while solving problems.

3. Recording Complete Number Sentences

I Do • Model writing a full addition equation to match the jumps on the number line, e.g. $2 + 2 + 1 = 5$.

We Do • Solve and record several equations together.

Ask: 'What equation matches the jumps?'

You Do • Students solve and write addition equations independently. Check for understanding through partner sharing.

Differentiation Tips

Support

- Use smaller numbers within 10.
- Provide number lines with highlighted intervals.
- Allow students to use counters while jumping along the number line.

Extension

- Challenge students with larger starting numbers.
- Ask students to solve addition problems mentally after using the number line.
- Encourage students to create their own 3-number addition problems.

Teaching as Inquiry

Observe which students can track multiple jumps accurately and which students still lose track when adding more than 2 numbers.

Hands-On Activity 1 (10 minutes)

Giant Jump Number Line

Create a large floor number line using tape or cards. Students solve 3-number addition problems by physically jumping along the number line while classmates count aloud together.

Hands-On Activity 2 (10 minutes)

Roll, Jump, Add

Students roll 3 dice and use the numbers to create an addition problem. They solve the problem on a number line and record the matching equation.

Student Book Practice

Students complete **page 13** of their workbooks: **Adding 3 numbers on a number line**

Focus: Solve addition problems involving 3 numbers using jumps on a number line.

Mathseeds Online Practice

Lesson: Lesson 51, Addition to 10 with Two and Three Groups

Focus: Solve addition of three whole numbers. Use the count on strategy. Represent numerals with objects to solve addition problems. Understand the equals sign and work out if addition equations are true or false.

Reflect and Check (5 minutes)

Quick questions:

- What number do we start at in $2 + 2 + 2$?
- How many jumps are needed in $4 + 2 + 4$?
- What is the total in $1 + 3 + 1$?
- Why do we count forwards when adding?

Exit Question

'How does a number line help us solve addition problems with 3 numbers?'

Feedback

Praise students for careful counting, accurate jumps and clearly recording addition equations.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to track multiple jumps on a number line.
- Provide additional practice with counting-on strategies and addition equations.
- Extend confident students with larger numbers and mental addition challenges.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations.

Practices

- Adding and subtracting 3 one-digit numbers

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 parts 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.

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 number 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 $4 + \underline{\quad} = 10$?
- 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 tens frames

DAILY LESSON PLAN Week 3 • Lesson 4**Topic:** Doubles to 20

In this lesson, students explore doubles facts to 20 by identifying equal groups, using visual models and connecting doubles to addition equations. Students develop fluency with doubles facts and use doubling strategies to solve problems.

Learning Intention

Students will understand that doubles are made by adding two equal groups together.

Success Criteria

- ✓ I can identify doubles facts to 20.
- ✓ I can add equal groups together.
- ✓ I can write doubles equations.
- ✓ I can use doubles to solve problems.
- ✓ I can explain how doubling works.

Language Focus

Key terms: double, equal groups, addition, total, groups of, equation, same amount

Sentence stems:

- Double ___ is ___.
- Two groups of ___ equals ___.
- I added the same number twice.
- The groups are equal because ___.
- I used doubling to solve the problem.

Launch Activity (5 minutes)

Show pairs of equal groups using counters or classroom objects. Ask students to identify the doubles fact represented, e.g. 2 groups of 4 → double 4 = 8. Count together aloud and discuss how doubles are made from equal groups.

Assessment for Learning

Ask:

- What does 'double' mean?
What is double 5?
- Why are doubles made from equal groups?

Explicit Instruction (10–12 minutes)**1. Identifying Doubles**

I Do • Model identifying doubles using visual groups and counters.

Think aloud: 'There are 2 groups of 3, so double 3 is 6.'

We Do • Solve several doubles examples together using pictures and materials.

Ask: 'Are the groups equal? What is the total?'

You Do • Students identify doubles facts using counters, cubes or pictures. Check for understanding through oral explanations.

2. Writing Doubles Equations

I Do • Demonstrate writing a doubles equation from equal groups, e.g. $5 + 5 = 10$.

Explain: Doubles use the same number twice.

We Do • Write several doubles equations together.

Ask: 'What equation matches these equal groups?'

You Do • Students write doubles equations independently.

3. Using Doubles Facts Fluently

I Do • Model recalling doubles facts quickly, e.g. 'I know double 7 is 14 because $7 + 7 = 14$.'

We Do • Practise quick doubles facts together orally.

Ask: 'What is double 6? What is double 8?'

You Do • Students practise doubles facts with a partner or mini whiteboards. Check for understanding through quick-response questioning.

Differentiation Tips

Support

- Use concrete materials such as counters or cubes.
- Focus first on doubles to 10 before extending to 20.
- Provide visual equal-group models.

Extension

- Challenge students to explain doubles mentally.
- Introduce near doubles (e.g. $6 + 7$).
- Encourage students to identify patterns in doubles facts.

Teaching as Inquiry

Observe which students can recall doubles automatically and which students still rely on counting all objects.

Hands-On Activity 1 (10 minutes)

Double It!

Students roll a die and build double the number using counters or cubes. They record the doubles equation that matches their model.

Hands-On Activity 2 (10 minutes)

Doubles Sorting Game

Students sort picture cards into matching doubles facts, e.g. 2 groups of 4, $4 + 4$, double 4, total of 8. They explain how the cards are connected.

Student Book Practice

Students complete **page 15** of their workbooks: **Doubles to 20**

Focus: Identify equal groups, write doubles equations and solve doubling problems to 20.

Mathseeds Online Practice

Lesson: Lesson 72: Doubles to 10

Focus: Solve addition problems using doubles as a strategy. Compare groups of objects. Use comparative language: larger, smaller. Find pairs of numbers that make 10. Solve addition of three whole numbers. Make number bonds for numbers to 20.

Reflect and Check (5 minutes)

Quick questions:

- What is double 4?
- What is double 7?
- Why are doubles made from equal groups?
- What equation matches double 5?

Exit Question

'How can doubles help us solve addition problems faster?'

Feedback

Praise students for identifying equal groups accurately and confidently recalling doubles facts.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still rely on counting rather than recalling doubles facts.
- Provide additional practice with equal-group models and doubles games.
- Extend confident students with near doubles and mental strategies.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations.

Practices

- Memorising doubles to 20

DAILY LESSON PLAN Week 3 • Lesson 5**Topic:** Doubling

In this lesson, students use doubles strategies to solve addition problems involving equal groups. Students identify doubles in pictures, complete missing-number equations, and connect doubling to repeated addition.

Learning Intention

Students will understand how doubling combines two equal groups to make a total.

Success Criteria

- ✓ I can identify doubles in pictures and groups.
- ✓ I can complete doubles equations.
- ✓ I can add equal groups together accurately.
- ✓ I can use doubles facts to solve problems.
- ✓ I can explain how doubling works.

Language Focus

Key terms: double, equal groups, addition, total, equation, same amount, groups of

Sentence stems:

- Double ___ is ___.
- Two groups of ___ equals ___.
- I added the same number twice.
- The missing number is ___.
- I used doubling to solve the problem.

Launch Activity (5 minutes)

Show two equal groups of classroom objects. Ask students to count each group and identify the doubles fact, e.g. 5 counters and 5 counters → $5 + 5 = 10$. Discuss how doubles are made from equal groups of the same amount.

Assessment for Learning

Ask:

- What does double mean?
Why are the groups equal?
- What is double 6?

Explicit Instruction (10–12 minutes)**1. Identifying Equal Groups**

I Do • Model identifying equal groups in pictures and connecting them to doubles facts.

Think aloud: 'There are 2 groups of 7, so double 7 is 14.'

We Do • Count and identify doubles together using visual models.

Ask: 'How many are in each group? What is the total?'

You Do • Students identify doubles facts using pictures, counters or cubes. Check for understanding through oral explanations.

2. Completing Doubles Equations

I Do • Demonstrate completing missing-number doubles equations, e.g. $6 + 6 = 12$.

Explain: The same number is added twice.

We Do • Solve several doubles equations together.

Ask: 'What number is missing? How do you know?'

You Do • Students complete doubles equations independently.

3. Using Doubles to Solve Problems

I Do • Model solving a problem using a known doubles fact, e.g. double 8 means $8 + 8 = 16$.

We Do • Solve doubles problems together using pictures and equations.

Ask: 'What doubles fact can help us?'

You Do • Students solve doubles problems using drawings or materials. Check for understanding through partner sharing.

Differentiation Tips

Support

- Use concrete materials such as counters or cubes.
- Focus on doubles facts to 10 before extending to 20.
- Provide visual equal-group models.

Extension

- Challenge students to solve doubles mentally.
- Introduce near doubles strategies.
- Encourage students to explain patterns in doubles facts.

Teaching as Inquiry

Observe which students can recall doubles automatically and which students still rely heavily on counting objects one by one.

Problem Solving and Reasoning

Discuss:

- Why must doubles always have equal groups?
- How can doubles help us solve addition problems more quickly?
- What patterns do you notice in doubles facts?
- How can we check if our doubles answer is correct?

Encourage students to explain their thinking using mathematical language, such as double, equal groups, addition, total, equation, same amount.

Hands-On Activity 1 (10 minutes)

Double Build

Students roll a die and build two equal groups using counters or cubes. They record the doubles equation and total, e.g. $4 + 4 = 8$.

Hands-On Activity 2 (10 minutes)

Doubles Hunt

Students search the classroom for objects that can be grouped into doubles. Examples may include pairs of pencils, books, counters or blocks. Students record their doubles equations on mini-whiteboards or paper.

Student Book Practice

Students complete **page 16** of their workbooks: **Doubling**

Focus: Complete doubles equations, identify equal groups and solve doubling problems using pictures and numbers.

Mathseeds Online Practice

Lesson: Lesson 72: Doubles to 10

Focus: Solve addition problems using doubles as a strategy. Compare groups of objects. Use comparative language: larger, smaller. Find pairs of numbers that make 10. Solve addition of three whole numbers. Make number bonds for numbers to 20.

Reflect and Check (5 minutes)

Quick questions:

- What is double 5?
- What is double 8?
- Why are doubles made from equal groups?
- What equation matches double 7?

Exit Question

'How do doubles help us solve addition problems quickly?'

Feedback

Praise students for recognising equal groups, using doubles facts accurately, and explaining their mathematical thinking clearly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still rely on counting rather than recalling doubles facts.
- Provide additional practice using equal-group models and doubles games.
- Extend confident students with near doubles and mental addition strategies.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations.

Practices

- Memorising doubles to 20

Algebra

Equations and relationships

Practices

- Checking the truth of number sentences and completing open number sentences involving addition using discrete materials

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?

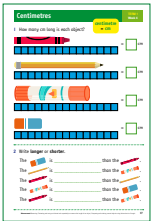
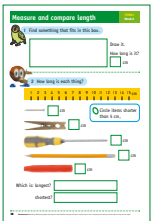
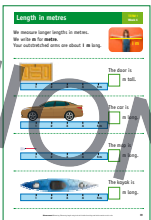
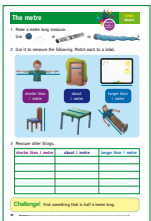
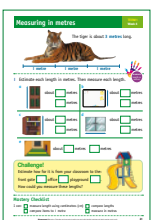
Teaching as Inquiry: Reflection Notes

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> 

DAILY LESSON PLAN Week 4 • Lesson 1**Topic:** Centimetres

In this lesson, students practise measuring and comparing the lengths of everyday objects using centimetres. Students use informal measuring strategies alongside a centimetre scale to estimate, measure, compare and describe objects as longer or shorter.

Learning Intention

Students will understand that centimetres are used to measure and compare length.

Success Criteria

- ✓ I can measure objects using centimetres.
- ✓ I can count centimetre units carefully.
- ✓ I can compare the lengths of objects.
- ✓ I can use the words longer and shorter correctly.
- ✓ I can explain how I measured an object.

Language Focus

Key terms: centimetre, cm, length, measure, longer, shorter, compare, estimate, units

Sentence stems:

- The object is ___ cm long.
- I measured using centimetres.
- ___ is longer than ___.
- ___ is shorter than ___.
- I counted ___ centimetre units.

Launch Activity (5 minutes)

Display several classroom objects of different lengths (e.g. pencil, glue stick, marker, book). Ask students to predict which objects are longer or shorter. Introduce the abbreviation 'cm' and explain that centimetres are units used to measure length. Model how centimetre cubes or a ruler can be lined up carefully from one end of an object to the other.

Assessment for Learning

Ask:

- Which object looks the longest?
- Which object looks the shortest?
- What does cm stand for?

Explicit Instruction (10–12 minutes)**1. Measuring with Centimetre Units**

I Do • Model measuring an object using centimetre cubes or a ruler. Demonstrate starting at zero and placing units carefully with no gaps or overlaps.

Explain: Each centimetre is one equal unit of length.

We Do • Measure several classroom objects together and count the centimetre units aloud.

Ask: 'How many centimetres long is the object? Did we start measuring at zero?'

You Do • Students measure small classroom objects using centimetre cubes or rulers and record the lengths.

Check for understanding: ask students to explain how they counted the centimetres.

2. Comparing Lengths

I Do • Display two objects of different lengths. Model comparing them using the terms longer and shorter.

Think aloud: 'The pencil is longer than the eraser because it measures more centimetres.'

We Do • Compare several pairs of objects together using measurement language.

Ask: 'Which object is longer? Which object is shorter? How do you know?'

You Do • Students work with partners comparing classroom objects and describing them using complete sentences.

3. Estimating and Checking Length

I Do • Choose an object and estimate its length before measuring.

Think aloud: 'I think this marker is about 8 cm long. Now I will measure to check.'

We Do • Estimate and measure several objects together.

Ask: 'Was the actual length longer or shorter than the estimate?'

You Do • Students estimate and then measure objects around the classroom. Check for understanding with quick sharing questions.

Differentiation Tips

Support

- Use larger objects with clear lengths.
- Provide hands-on support with lining up rulers correctly.
- Allow students to use centimetre cubes before introducing rulers.

Extension

- Challenge students to measure objects longer than 20 cm.
- Ask students to order several objects from shortest to longest.
- Encourage students to estimate lengths before measuring accurately.

Teaching as Inquiry

Observe which students can accurately align measuring tools and which students still count inaccurately or skip units.

Hands-On Activity 1 (10 minutes)

Classroom Measurement Hunt

Students search the classroom for objects that match specific lengths (e.g. find something about 10 cm long). They measure objects and record their findings on mini-whiteboards or paper.

Hands-On Activity 2 (10 minutes)

Length Ordering Challenge

Provide groups with several classroom objects of different lengths. Students measure the objects and place them in order from shortest to longest. Encourage students to explain their thinking using measurement vocabulary.

Student Book Practice

Students complete **page 17** of their workbooks: **Centimetres**

Focus: Measure objects using centimetres and compare lengths using longer and shorter.

Mathseeds Online Practice

Lesson: Lesson 84, Measuring length

Focus: Compare and select which is longer or shorter. Measure and compare the lengths of pairs of objects using uniform informal units. Sort objects according to length. Use comparative language: longer, longest, shorter, shortest.

Reflect and Check (5 minutes)

Quick questions:

- What does cm stand for?
- Which is longer: a pencil or an eraser?
- Why is it important to start measuring at zero?
- How can we check if an estimate is correct?

Exit Question

How does measuring in centimetres help us compare objects?

Feedback

Praise students for careful measuring, accurate counting and using measurement vocabulary correctly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who are still misaligning rulers or skipping measurement units.
- Provide additional practice using hands-on measuring materials.
- Extend confident students with longer measurements and ordering tasks.

Curriculum and Planning Links

NZ Curriculum – Measurement

Measuring Knowledge

- Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length.
- When measuring length the measurement units must remain the same and there must be no gaps or overlaps between them.

Practices

- Comparing and ordering several objects using informal units of length
- Estimating and measuring length using tools with labelled markings and whole-number metric units

DAILY LESSON PLAN Week 4 • Lesson 2**Topic:** Measure and compare length

In this lesson, students practise measuring everyday objects using centimetres and comparing lengths. Students estimate, measure, order, and describe objects using the terms longer, shorter, longest and shortest.

Learning Intention

Students will understand how to measure and compare the lengths of objects using centimetres.

Success Criteria

- ✓ I can measure objects using centimetres.
- ✓ I can compare objects by length.
- ✓ I can identify which object is longest or shortest.
- ✓ I can use measurement words correctly.
- ✓ I can explain how I measured an object.

Language Focus

Key terms: centimetre, cm, length, measure, compare, longer, shorter, longest, shortest, estimate

Sentence stems:

- The object is ___ cm long.
- ___ is longer than ___.
- ___ is shorter than ___.
- The longest object is ___.
- The shortest object is ___.

Launch Activity (5 minutes)

Display several classroom objects of different lengths. Ask students to estimate which object is the longest and which is the shortest. Review how to measure carefully using centimetres, starting at zero and counting equal units.

Assessment for Learning

Ask:

- Which object do you think is longest?
Which object looks shortest?
- Why do we use centimetres to measure length?

Explicit Instruction (10–12 minutes)**1. Measuring Objects Accurately**

I Do • Model measuring an object with a ruler or centimetre cubes. Demonstrate lining up the object carefully at zero and counting each centimetre unit.

Explain: Accurate measuring means there are no gaps or overlaps.

We Do • Measure several classroom objects together and record the lengths.

Ask: 'How many centimetres long is the object? Did we start measuring at zero?'

You Do • Students measure classroom objects and record their measurements in centimetres. Check for understanding: ask students to explain how they measured the object.

2. Comparing Lengths

I Do • Measure two objects and compare them using the words longer and shorter.

Think aloud: 'This object measures more centimetres, so it is longer.'

We Do • Compare several objects together and discuss their lengths.

Ask: 'Which object is longer? Which is shorter? How do you know?'

You Do • Students work with partners comparing measured objects and discussing their findings.

3. Ordering Objects by Length

I Do • Model placing several objects in order from shortest to longest using their measurements.

Explain: Measuring helps us compare objects fairly.

We Do • Order several classroom items together from shortest to longest.

Ask: 'Which object should come first? Which object is longest?'

You Do • Students order measured classroom objects from shortest to longest. Check for understanding with partner discussions.

Differentiation Tips

Support

- Use shorter objects with clear measurement lengths.
- Provide rulers with large centimetre markings.
- Support students with counting each unit carefully.

Extension

- Challenge students to estimate lengths before measuring.
- Ask students to compare several objects using difference in centimetres.
- Encourage students to explain why one object is longer or shorter.

Teaching as Inquiry

Observe which students can accurately measure and compare lengths and which students still need support aligning measuring tools correctly.

Hands-On Activity 1 (10 minutes)

Measure and Sort

Provide groups with classroom objects of different lengths. Students measure each object and sort them into categories, such as shorter than 5 cm, longer than 10 cm, between 5 cm and 10 cm.

Hands-On Activity 2 (10 minutes)

Longest Line Challenge

Students use string, cubes or strips of paper to create different lengths. Partners measure each line and decide which is longest and shortest. Students explain how they know using measurement vocabulary.

Student Book Practice

Students complete **page 18** of their workbooks: **Measure and compare length**

Focus: Measure objects using centimetres and compare lengths using longer, shorter, longest and shortest.

Mathseeds Online Practice

Lesson: Lesson 84, Measuring length

Focus: Compare and select which is longer or shorter. Measure and compare the lengths of pairs of objects using uniform informal units. Sort objects according to length. Use comparative language: longer, longest, shorter, shortest.

Reflect and Check (5 minutes)

Quick questions:

- Which object is longer: a pencil or an eraser?
- What does cm stand for?
- Why do we start measuring at zero?
- How can we tell which object is shortest?

Exit Question

How does measuring help us compare objects fairly?

Feedback

Praise students for careful measuring, accurate comparisons and using measurement language confidently.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle with counting centimetre units accurately.
- Provide further practice with measuring and ordering objects.
- Extend confident students with estimating and comparing larger measurements.

Curriculum and Planning Links

NZ Curriculum – Measurement

Measuring Knowledge

- Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length.
- When measuring length the measurement units must remain the same and there must be no gaps or overlaps between them.

Practices

- Comparing and ordering several objects using informal units of length
- Estimating and measuring length using tools with labelled markings and whole-number metric units

DAILY LESSON PLAN Week 4 • Lesson 3**Topic:** Length in metres

In this lesson, students explore measuring longer objects using metres. Students learn that metres are used to measure larger lengths and practise estimating, measuring and comparing objects measured in metres.

Learning Intention

Students will understand that metres are used to measure longer lengths.

Success Criteria

- ✓ I can recognise when to use metres to measure length.
- ✓ I can measure longer objects using metres.
- ✓ I can use the abbreviation 'm' correctly.
- ✓ I can compare lengths measured in metres.
- ✓ I can explain why metres are useful for measuring long objects.

Language Focus

Key terms: metre, m, length, measure, longer, shorter, estimate, compare

Sentence stems:

- The object is ___ m long.
- We use metres to measure longer objects.
- ___ is longer than ___.
- ___ is shorter than ___.
- I estimated the object was ___ m long.

Launch Activity (5 minutes)

Show students a metre ruler, tape measure or a 1 metre strip of paper/string. Ask students to stretch out their arms and notice that an outstretched arm span is about 1 metre. Discuss objects around the classroom that may be about 1 metre long.

Assessment for Learning

Ask:

- What does 'm' stand for?
- Why might we use metres instead of centimetres?
- Can you find something about 1 metre long in the classroom?

Explicit Instruction (10–12 minutes)**1. Introducing Metres**

I Do • Model measuring a longer object using a metre ruler or tape measure. Explain that metres are used for measuring objects that are too long for centimetres to be practical.

Think aloud: 'This table is much longer than 1 centimetre, so metres help us measure more easily.'

We Do • Measure several classroom objects together and identify whether they are about 1 m, shorter than 1 m or longer than 1 m.

Ask: 'Would centimetres or metres be better for measuring this object? Why?'

You Do • Students explore classroom objects and identify items that could be measured in metres.

2. Estimating Lengths in Metres

I Do • Estimate the length of a classroom object before measuring it.

Think aloud: 'I think this desk is about 1 metre long. Let's measure to check.'

We Do • Estimate and measure several larger objects together.

Ask: 'Was the object longer or shorter than your estimate?'

You Do • Students estimate and then measure classroom objects using metre tools. Check for understanding through partner discussions.

3. Comparing Lengths Measured in Metres

I Do • Measure two large objects and compare their lengths using longer and shorter.

Explain: Measuring helps us compare objects accurately.

We Do • Compare classroom objects measured in metres.

Ask: 'Which object is longer? Which is shorter? How do you know?'

You Do • Students work in pairs comparing measured objects and discussing their findings.

Differentiation Tips

Support

- Use clear visual metre models and hands-on measuring tools.
- Measure objects close to 1 metre first.
- Provide guided support with reading metre markings.

Extension

- Challenge students to estimate lengths greater than 2 metres.
- Ask students to compare measurements using both metres and centimetres.
- Encourage students to explain why metres are more efficient for larger objects.

Teaching as Inquiry

Observe which students understand when to use metres instead of centimetres and which students still need support estimating larger lengths.

Hands-On Activity 1 (10 minutes)

1 Metre Hunt

Students use a metre strip or tape measure to find classroom objects that are: about 1 metre, shorter than 1 metre and longer than 1 metre. Students share and compare their findings with partners.

Hands-On Activity 2 (10 minutes)

Giant Measurement Challenge

In small groups, students measure larger classroom items such as tables, doors, whiteboards or mats using metre tools. Groups record and compare which objects are longest and shortest.

Student Book Practice

Students complete **page 19** in their workbooks: **Length in metres**
Focus: Measure and compare longer objects using metres.

Mathseeds Online Practice

Lesson: Lesson 84, Measuring length

Focus: Compare and select which is longer or shorter. Measure and compare the lengths of pairs of objects using uniform informal units. Sort objects according to length. Use comparative language: longer, longest, shorter, shortest.

Reflect and Check (5 minutes)

Quick questions:

- What does m stand for?
- When should we use metres instead of centimetres?
- Which is likely to be longer: a pencil or a door?
- Why do we estimate before measuring?

Exit Question

How do metres help us measure larger objects more easily?

Feedback

Praise students for using metre tools carefully and explaining their measurement thinking clearly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still confuse centimetres and metres.
- Provide additional practice estimating and measuring longer lengths.
- Extend confident students with measurements beyond 2 metres and mixed-unit discussions.

Curriculum and Planning Links

NZ Curriculum – Measurement

Measuring Knowledge

- Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length.
- When measuring length the measurement units must remain the same and there must be no gaps or overlaps between them.

Practices

- Estimating and measuring length using tools with labelled markings and whole-number metric units

DAILY LESSON PLAN Week 4 • Lesson 4**Topic:** The metre

In this lesson, students explore the length of one metre using informal and standard measuring tools. Students estimate, compare and classify objects as shorter than, about or longer than 1 metre.

Learning Intention

Students will understand the size of one metre and use it to compare and measure objects.

Success Criteria

- ✓ I can recognise the length of 1 metre.
- ✓ I can use a metre measure to compare objects.
- ✓ I can identify objects that are shorter than, about or longer than 1 metre.
- ✓ I can estimate and check lengths using metres.
- ✓ I can explain my measurement thinking.

Language Focus

Key terms: metre, m, length, measure, estimate, compare, shorter than, longer than, about equal to

Sentence stems:

- The object is about 1 metre long.
- ___ is shorter than 1 metre.
- ___ is longer than 1 metre.
- I measured the object using metres.
- My estimate was correct because ___.

Launch Activity (5 minutes)

Show students a 1 metre strip, ruler or tape measure. Ask students to stretch their arms out and notice that an arm span is about 1 metre. Compare this with classroom objects, such as tables, doors or whiteboards.

Assessment for Learning

Ask:

- What does 1 metre look like?
Which classroom objects might be about 1 metre long?
- Which objects would be shorter than 1 metre?

Explicit Instruction (10–12 minutes)**1. Exploring the Length of 1 Metre**

I Do • Demonstrate the length of 1 metre using a metre ruler, strip or tape measure. Compare the metre length to classroom objects.

Explain: A metre is a standard unit used to measure longer lengths.

We Do • Compare several classroom objects to the metre measure together.

Ask: 'Is this object shorter than, about or longer than 1 metre?'

You Do • Students use metre strips or tape measures to explore objects around the room. Check for understanding through class discussion.

2. Estimating and Checking

I Do • Choose an object and estimate whether it is shorter than, about or longer than 1 metre before measuring.

Think aloud: 'I think this table is about 1 metre long. Let's check.'

We Do • Estimate and measure several objects together.

Ask: 'Was your estimate accurate? Why or why not?'

You Do • Students estimate and measure classroom objects using metre tools.

3. Classifying Objects by Length

I Do • Model sorting objects into categories: shorter than 1 metre, about 1 metre and longer than 1 metre.

Explain: Measuring helps us compare objects fairly and accurately.

We Do • Sort several classroom objects together into the correct categories.

Ask: 'Why does this object belong in this group?'

You Do • Students work with partners sorting measured objects into categories. Check for understanding with partner explanations.

Differentiation Tips

Support

- Use highly visible metre strips and larger classroom objects.
- Provide guided support with comparing lengths.
- Focus first on identifying shorter and longer objects.

Extension

- Challenge students to estimate measurements before checking.
- Ask students to find objects close to half a metre or 2 metres.
- Encourage students to justify their comparisons using measurement language.

Teaching as Inquiry

Observe which students can visualise 1 metre and which students still rely heavily on direct measuring tools.

Hands-On Activity 1 (10 minutes)

Metre Makers

Students use string, paper strips, cubes or ribbon to create their own 1 metre measure. They compare their metre model with a real metre ruler or tape measure to check accuracy.

Hands-On Activity 2 (10 minutes)

Measure and Sort Hunt

Students move around the classroom measuring objects and recording them in categories: shorter than 1 metre, about 1 metre and longer than 1 metre. They share their findings with partners or small groups.

Student Book Practice

Students complete **page 20** of their workbooks: **The metre**
Focus: Compare and classify objects as shorter than, about or longer than 1 metre.

Mathseeds Online Practice

Lesson: Lesson 84, Measuring length

Focus: Compare and select which is longer or shorter. Measure and compare the lengths of pairs of objects using uniform informal units. Sort objects according to length. Use comparative language: longer, longest, shorter, shortest.

Reflect and Check (5 minutes)

Quick questions:

- What does m stand for?
- What objects are about 1 metre long?
- Which is longer: a chair or a door?
- Why do we estimate before measuring?

Exit Question

How does knowing the size of 1 metre help us measure everyday objects?

Feedback

Praise students for careful estimating, measuring and explaining their thinking using measurement vocabulary.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to visualise the size of 1 metre.
- Provide additional opportunities for estimating and checking measurements.
- Extend confident students with comparisons involving half metres or multiple metres.

Curriculum and Planning Links

NZ Curriculum – Measurement

Measuring

Knowledge

- Measuring tools are usually marked with standard units to ensure consistent measurements of properties such as length.
- When measuring length the measurement units must remain the same and there must be no gaps or overlaps between them.

Practices

- Comparing and ordering several objects using informal units of length
- Estimating and measuring length using tools with labelled markings and whole-number metric units

DAILY LESSON PLAN Week 4 • Lesson 5**Topic:** Measuring in metres

In this lesson, students estimate and measure longer lengths using metres. Students practise comparing estimates with actual measurements and apply metre measurement to real-world objects and spaces.

Learning Intention

Students will understand how to estimate and measure lengths using metres.

Success Criteria

- ✓ I can estimate lengths in metres.
- ✓ I can measure objects using metres.
- ✓ I can compare my estimate with the actual measurement.
- ✓ I can use metres to measure longer distances and objects.
- ✓ I can explain my measurement thinking.

Language Focus

Key terms: metre, m, estimate, measure, length, compare, longer, shorter, actual measurement

Sentence stems:

- I estimate the object is ___ metres long.
- The actual measurement is ___ metres.
- My estimate was close because ___.
- ___ is longer than ___.
- We use metres to measure longer lengths.

Launch Activity (5 minutes)

Display a metre ruler, tape measure or metre strip. Show several large classroom objects or spaces (e.g. door, whiteboard, mat, bookshelf). Ask students to estimate which objects are about 1 metre, 2 metres or longer.

Assessment for Learning

Ask:

- What types of objects are best measured in metres?
Why do we estimate before measuring?
- Which classroom object do you think is about 2 metres long?

Explicit Instruction (10–12 minutes)**1. Estimating Lengths in Metres**

I Do • Model estimating the length of a large classroom object before measuring it.

Think aloud: I think this whiteboard is about 2 metres long because it is longer than a table.

We Do • Estimate the lengths of several classroom objects together.

Ask: 'Is your estimate more or less than 1 metre? Why?'

You Do • Students estimate the lengths of classroom objects and record their predictions.

2. Measuring Longer Lengths

I Do • Demonstrate measuring a large object using a metre ruler, tape measure or metre strip.

Explain: We measure carefully from one end point to the other end point.

We Do • Measure several objects together and compare the measurements with the estimates.

Ask: 'Was the actual measurement longer or shorter than the estimate?'

You Do • Students measure classroom objects and compare their measurements with their estimates. Check for understanding through partner discussion.

3. Comparing and Discussing Measurements

I Do • Compare two measured objects and explain which is longer or shorter. Model using measurement language clearly.

We Do • Discuss and compare measured classroom objects together.

Ask: 'Which object was the longest? Which was shortest?'

You Do • Students work with partners comparing their measured objects and discussing their findings.

Differentiation Tips

Support

- Use objects close to 1 metre first.
- Provide visual metre references and guided measuring support.
- Allow students to work in pairs during measuring tasks.

Extension

- Challenge students to estimate measurements greater than 3 metres.
- Ask students to measure outdoor spaces or longer classroom areas.
- Encourage students to explain how accurate their estimates were.

Teaching as Inquiry

Observe which students can estimate reasonable metre lengths and which students still need support using measuring tools accurately.

Problem Solving and Reasoning

Discuss

- Why is estimating useful before measuring?
- What strategies help make better estimates?
- Why are metres more useful than centimetres for large objects?
- How can measuring help us solve real-life problems?

Encourage students to explain their thinking using measurement language, such as metre, m, estimate, measure, compare, longer, shorter, actual measurement.

Hands-On Activity 1 (10 minutes)

Estimate and Measure Challenge

Students estimate the lengths of classroom objects or spaces before measuring them using metre tools. They compare their estimates with the actual measurements and discuss which estimates were closest.

Hands-On Activity 2 (10 minutes)

Classroom Distance Hunt

Students work in pairs measuring larger classroom distances, such as door to desk, whiteboard width, mat length and bookshelf height. They record and compare their measurements using metres.

Student Book Practice

Students complete **page 21** in their workbooks: **Measuring in metres**

Focus: Estimate and measure lengths using metres and compare estimates with actual measurements.

Mathseeds Online Practice

Lesson: Lesson 84, Measuring length

Focus: Compare and select which is longer or shorter. Measure and compare the lengths of pairs of objects using uniform informal units. Sort objects according to length. Use comparative language: longer, longest, shorter, shortest.

Reflect and Check (5 minutes)

Quick questions:

- What does m stand for?
- Why do we estimate before measuring?
- Which objects are best measured in metres?
- What helps make an accurate estimate?

Exit Question

How does measuring in metres help us understand the size of large objects and spaces?

Feedback

Praise students for thoughtful estimating, careful measuring and clear explanations using measurement language.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need further support estimating realistic metre lengths.
- Provide additional opportunities to measure large classroom spaces.
- Extend confident students with longer distances and outdoor measurement challenges.

Curriculum and Planning Links

NZ Curriculum – Measurement

Measuring

Knowledge

- When measuring length, the measurement units must remain the same and there must be no gaps or overlaps between them.

Practices

- Estimating and using an informal unit repeatedly to measure the length

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?




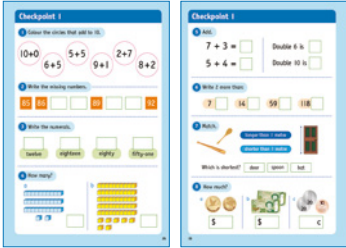
Teaching as Inquiry: Reflection Notes

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> 

DAILY LESSON PLAN Week 5 • Lesson 1**Topic:** Coins

In this lesson, students recognise New Zealand coin denominations, read and write coin values in cents and combine coins to make a particular value. Students explore different ways to make 50 cents and begin to reason about how coin values can be grouped.

Learning Intention

Students will understand that New Zealand coins have different values and can be combined in different ways to make the same amount.

Success Criteria

- ✓ I can recognise New Zealand coins
- ✓ I can name coin values in cents
- ✓ I can write coin values using c and cents
- ✓ I can combine coins to make 50c
- ✓ I can make the same amount in more than one way
- ✓ I can explain the total value of a group of coins

Explicit Instruction (10–12 minutes)**1. Recognising Coin Values**

I Do • Display a 10c, 20c and 50c coin.

Explain: New Zealand coins have different values. The number on the coin tells us how many cents it is worth. Model with 10c, 20c and 50c coins.

Explain: We can write c for cents.

We Do • Look at coin images together and name each value.

Ask: What number is on the coin? How many cents is it worth? How do we write this value using c? How do we write this value in words?

You Do • Students match coin images to their value in c and in words. Check for understanding: ask students to explain how they know a coin is worth 20 cents.

2. Combining Coins to Make 50c

I Do • Show three coins that make 50c, for example: $20c + 20c + 10c = 50c$

Explain: We can combine coin values to make a total. Counting in 10s can help us check the value.

Model counting: 20, 40, 50

Say: 'These three coins make 50c.'

We Do • Make 50c together using different coin combinations, e.g. $10c + 10c + 30c$ is not possible with one coin, so we need to think about the coins we have.

$$10c + 20c + 20c = 50c$$

$$10c + 10c + 10c + 20c = 50c$$

$$10c + 10c + 10c + 10c + 10c = 50c$$

Language Focus

Key terms: coin, cents, c, value, denomination, total, combine, make, same value, 10c, 20c, 50c

Sentence stems:

- This coin is worth ___ cents.
- I write ___ cents as ___c.
- I made 50c using ___, ___ and ___.
- These coins total ___ cents.
- I know the total is ___ because ___.

Launch Activity (5 minutes)

Display New Zealand coin images: 10c, 20c and 50c.

Ask: 'What coins can you see and what are they worth?'

Then say: 'Let's count together in 10s from 10c to 100c.'

Repeat backwards: 'Now let's count backwards in 10s from 100c to 10c.'

Assessment for Learning

Ask: 'What is the value of this coin? What does the word denomination mean? How can we combine coins to make a total? Can 50c be made in more than one way?'

Ask: How many coins are we using? What is the value of each coin? What is the total? How can we count to check?

You Do • Students use play coins to make 50c using 3 coins, 4 coins and 5 coins. Check for understanding: ask students to show one way to make 50c and explain the total.

3. Finding Different Ways to Make the Same Amount

I Do • Show that the same amount can be made in different ways.

$$\text{Model: } 50c = 50c$$

$$50c = 20c + 20c + 10c$$

$$50c = 10c + 10c + 10c + 10c + 10c$$

Explain: Different groups of coins can have the same total value.

We Do • Work together to list ways to make \$1 using coins.

Ask: How many cents are in \$1? Could we use two 50c coins? Could we use five 20c coins? Could we use ten 10c coins? How can we check each total?

You Do • Students find and record different ways to make a target amount using play coins or drawings. Check for understanding: ask students to explain why two 50c coins make \$1.

Differentiation Tips

Support

- Provide real or play New Zealand coins
- Support students with coin value cards and counting strips in 10s
- Focus on recognising 10c, 20c and 50c coins then reading and writing values in cents
- Count coin totals in 10s and 20s

Extension

- Provide ‘How many ways?’ coin investigations
- Put additional restrictions to challenge such as ‘use exactly 4 coins’
- Use comparison tasks with different coin groups, e.g. Make \$1 in three different ways. Explain how you know each way equals \$1.

Teaching as Inquiry

Observe which students recognise New Zealand coin denominations; read and write coin values using c and cents; combine coins to make 50c; count coin totals accurately; find more than one way to make the same value; explain totals using addition or skip-counting

Hands-On Activity 1 (10 minutes)

Coin Match

Students match New Zealand coin images or play coins to value cards.

Coin	Symbol	Words
10c	10c	ten cents
20c	20c	twenty cents
50c	50c	fifty cents

Ask: ‘What is this coin worth? How do we write its value? How do we say its value in words?’

Hands-On Activity 2 (10 minutes)

Make 50c

Students use play coins to make 50c in different ways.

Prompts: Make 50c using 3 coins. Make 50c using 4 coins. Make 50c using 5 coins.

Students record their combinations by drawing coins or writing equations, e.g.:

Number of Coins	Combination	Total
3	20c + 20c + 10c	50c
4	20c + 10c + 10c + 10c	50c
5	10c + 10c + 10c + 10c + 10c	50c

Ask: ‘How did you make 50c? How did you check the total? Did someone make 50c in a different way?’

Student Book Practice

Students complete p.22 of their workbook: **Coins**.

Focus: Recognising New Zealand coin values, writing coin values using c and cents, matching number values to word values, making 50c using 3, 4 and 5 coins, investigating ways to make \$1

Mathseeds Online Practice

Lesson: Lesson 83, Money (2)

Focus: Solve addition problems involving money. Identify coins and notes. Match money to symbols: \$, c. Compare the cost of items. Use different denominations of notes and coins to make amounts. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What does c stand for?
- What is the value of a 20c coin?
- How can you make 50c using 3 coins?
- How many 10c coins make 50c?
- How many 50c coins make \$1?

Exit Question

How can knowing coin values help us make the same amount in different ways?

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce recognising 10c, 20c and 50c coins and writing coin values using c and cents
- Finding more than one way to make the same amount
- Encourage students to check coin totals by counting carefully in 10s, 20s or 50s and comparing the total with the target amount
- Extend confident students by asking them to find all possible ways to make \$1 using 10c, 20c and 50c coins

Curriculum and Planning Links

NZ Curriculum – Number

Financial mathematics

Knowledge

- New Zealand currency is a decimal system of dollars made up of 100 cents.

Practices

- Recognising and ordering New Zealand denominations according to their value, making groups of ‘like’ denominations, and calculating their value.
- Combining denominations of currency to make a particular value.

DAILY LESSON PLAN Week 5 • Lesson 2**Topic:** New Zealand dollars

In this lesson, students recognise New Zealand dollar coins and notes, write their values, and calculate totals by combining dollars. They connect coins and notes to their dollar values and practise adding groups of like and mixed denominations.

Learning Intention

Students will understand that New Zealand coins and notes have different dollar values and can be combined to find a total amount.

Success Criteria

- ✓ I can recognise New Zealand dollar coins and notes
- ✓ I can write dollar values using the \$ symbol
- ✓ I can identify \$1, \$2, \$5, \$10, \$20, \$50 and \$100
- ✓ I can add notes and coins to find a total
- ✓ I can explain the value of a group of dollars

Language Focus

Key terms: dollar, dollars, coin, note, value, denomination, total, combine, New Zealand dollars, \$ symbol

Sentence stems:

- This coin/note is worth ___ dollars.
- I write ___ dollars as \$___.
- The total is \$___.
- I know the value is \$___ because ___.
- I combined ___ and ___ to make \$___.

Launch Activity (5 minutes)

- Display New Zealand dollar denominations: \$1, \$2, \$5, \$10, \$20, \$50, \$100.
- Ask: 'What dollar amounts can you see? Let's count together in dollars from \$1 to \$10.'
- Repeat with notes: 'Now let's count by tens: \$10, \$20, \$30, \$40, \$50.'
- Ask: 'What symbol do we use for dollars? Which values are coins? Which values are notes? Which has the greater value: \$10 or \$20? How can we find the total value of more than one coin or note?'

Assessment for Learning

Ask: 'What is the value of this coin or note? What does the \$ symbol mean? How can we combine dollar amounts to find a total?'

Explicit Instruction (10–12 minutes)**1. Recognising New Zealand Dollar Denominations**

I Do • Display New Zealand dollar coins and notes: \$1, \$2, \$5, \$10, \$20, \$50 and \$100.

Think aloud: 'New Zealand dollars can be shown using coins and notes. Each coin or note has a value. The dollar symbol \$ shows that the amount is in dollars.'

We Do • Name the values of coins and notes together.

Ask: 'What number can you see? Is it a coin or a note? How many dollars is it worth? How do we write this value using the \$ symbol?'

You Do • Students match images of New Zealand coins and notes to their dollar values. Check for understanding: ask students to explain how they know a note is worth \$20.

2. Writing Missing Dollar Values

I Do • Show a \$5 note.

Think aloud: 'The number on the note tells us the number of dollars. We write this using the dollar symbol.'

We Do • Work through values together: \$1 coin, \$2 coin, \$10 note, \$20 note, \$50 note, \$100 note.

Ask: 'What is the value? Where do we write the dollar symbol? Is this value larger or smaller than \$10? How do we say this amount in words?'

You Do • Students write missing values for dollar coins and notes using the \$ symbol. Check for understanding: ask students to write ten dollars using the dollar symbol.

3. Combining Dollars to Find a Total

I Do • Display a \$2 coin and a \$1 coin.

Explain: To find how many dollars altogether, we add the values.

Model: $\$2 + \$1 = \$3$

Then show $\$10 + \5 .

Model: $\$10 + \$5 = \$15$

We Do • Add groups of coins and notes together: $\$10 + \5 , $\$10 + \20 , $\$2 + \5 , $\$10 + \1 , $\$2 + \20

Ask: 'What is the value of each coin or note? What are we adding? What is the total? How can we check the answer?'

You Do • Students use play money or images to combine dollar coins and notes and record the total. Check for understanding: ask students to explain how they know $\$10 + \$20 = \$30$.

Differentiation

Support

- Provide play New Zealand money
- Use coin and note value cards with matching cards with symbols and words
- Use totals limited to \$20 before extending

Extension

- Provide combinations involving \$50 and \$100
- Use 'make the same amount' challenges
- Order denominations from least to greatest

Teaching as Inquiry

Observe which students recognise New Zealand dollar coins and notes, write dollar amounts using the \$ symbol, identify the value of each denomination, combine values to find a total, count totals accurately, and confuse cents and dollars when recording values

Hands-On Activity 1 (10 minutes)

Dollar Match

Students match dollar coins and notes to value cards.

Coin or Note	Symbol	Words
\$1 coin	\$1	one dollar
\$2 coin	\$2	two dollars
\$5 note	\$5	five dollars
\$10 note	\$10	ten dollars

Ask: 'What is this worth? Is it a coin or a note? How do we write the value? Which has the greater value?'

Hands-On Activity 2 (10 minutes)

How Many Dollars?

Students use play money to make and add dollar amounts, e.g.:

Money Shown	Total
\$2 + \$1	\$3
\$10 + \$5	\$15
\$10 + \$20	\$30
\$2 + \$5	\$7

Ask: 'What is each coin or note worth? What is the total? How did you add the amounts? Can you make the same total another way?'

Student Book Practice

Students complete **p.23** of their workbook: **New Zealand dollars**.

Focus: Recognising New Zealand coin and note values, writing missing dollar values using the \$ symbol, adding notes and coins to find total dollar amounts, reflecting on recognising coins and notes and adding notes and coins

Mathseeds Online Practice

Lesson: Lesson 83, Money (2)

Focus: Solve addition problems involving money. Identify coins and notes. Match money to symbols: \$, c. Compare the cost of items. Use different denominations of notes and coins to make amounts. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What symbol do we use for dollars?
- How do we write five dollars?
- What is the value of a \$2 coin?
- What is \$10 + \$5?
- What is \$20 + \$10?

Exit Question

'How can knowing the value of coins and notes help us find a total amount of money?'

Next Steps for Teacher (Teaching as Inquiry)

- Reinforce recognising New Zealand dollar coins and notes
- Adding dollar values to find totals and explaining how totals were calculated
- Extend confident students by asking them to make the same dollar amount in different ways and compare the values of different groups of money.

Curriculum and Planning Links

NZ Curriculum – Number

Financial mathematics

Knowledge

- New Zealand currency is a decimal system of dollars made up of 100 cents.
- Finding the total cost with money involves addition and subtraction.

Practices

- Recognising New Zealand denominations according to their value, making groups of 'like' denominations, and calculating their value

DAILY LESSON PLAN Week 5 • Lesson 3**Topic:** Money

In this lesson, students recognise New Zealand coins and notes, match them to item prices, and compare values to identify the least expensive and most expensive items.

Learning Intention

Students will understand that New Zealand coins and notes have different values and can be matched to prices.

Success Criteria

- ✓ I can recognise New Zealand coins and notes
- ✓ I can match money values to prices
- ✓ I can identify the value of coins and notes
- ✓ I can compare prices
- ✓ I can find the least expensive item
- ✓ I can find the most expensive item

Language Focus

Key terms: money, coin, note, dollars, cents, price, value, cost, expensive, least expensive, most expensive, match, compare

Sentence stems:

- This coin/note is worth ____.
- The ____ costs ____.
- I matched ____ to ____ because ____.
- The least expensive item is ____.
- The most expensive item is ____.
- ____ costs more than ____.

Launch Activity (5 minutes)

Display New Zealand coin and note values: 10c, 20c, 50c, \$1, \$2, \$5, \$10, \$20, \$50, \$100.

Ask: 'Which amounts are cents and which amounts are dollars?'

Ask: 'What symbol shows cents? What symbol shows dollars? Which value is greater: 50c or \$1? Which note has the greatest value? How can we compare prices?'

Assessment for Learning

Ask: 'How do you know whether an amount is cents or dollars? How can ordering money values help us compare prices?'

Explicit Instruction (10–12 minutes)**1. Recognising Coins, Notes and Values**

I Do • Display New Zealand coins and notes: 10c, 20c, 50c, \$1, \$2, \$5, \$10, \$20, \$50 and \$100.

Explain: New Zealand coins and notes have different values. Some are cents and some are dollars.

Point out the symbols: c means cents, \$ means dollars.

We Do • Name values together using coin and note cards.

Ask: 'What number can you see? Is it cents or dollars? Is it a coin or a note? How do we write this value?'

You Do • Students match coin and note cards to value cards.

Check for understanding: ask students to explain the difference between 50c and \$50.

2. Matching Prices to Items

I Do • Display a simple item and price, such as an ice cream labelled \$1.

Explain: The price tells us how much money the item costs.

Think aloud: 'The ice cream costs \$1, so I match it to the \$1 coin.'

Then display an item labelled 20c. Model matching it to the 20c coin.'

We Do • Match several prices and items together, such as 10c worm, 50c cupcake, \$2 bananas, \$5 cushion, \$10 bucket, \$20 backpack

Ask: 'What is the price? Which coin or note has the same value? How do you know they match? Is this amount in cents or dollars?'

You Do • Students match item prices to the correct New Zealand coin or note value. Check for understanding: ask students to match \$20 to the correct note and explain how they know.

3. Comparing Prices

I Do • Display two item prices, such as 10c and \$5.

Think aloud: 'We can compare prices by looking at their values. The least expensive item costs the smallest amount. The most expensive item costs the greatest amount.'

Model: 10c is less than \$5, so the 10c item is less expensive.

We Do • Compare prices together.

Ask: 'Which price is smaller? Which price is greater? Which item is least expensive? Which item is most expensive? How do you know?'

You Do • Students identify the least expensive and most expensive items from a set of priced items. Check for understanding: ask students to explain why 10c is less expensive than \$1.

Problem Solving and Reasoning

Discuss:

- Why is \$1 greater than 50c?
- How do we know \$100 is greater than \$20?
- Can an item with a smaller-looking coin still cost more?
- Why do we need to look carefully at the symbol?
- How can we order prices from least to greatest?

Encourage students to explain using financial mathematics language such as coin, note, cents, dollars, value, price, least expensive, most expensive, compare

Differentiation Tips

Support

- Provide real or play New Zealand money, coin and note value cards, item-price matching cards, separate groups for cents and dollars
- Focus on recognising cents and dollars, matching identical values and understanding that prices show cost

Extension

- Organise mixed price ordering from least to greatest
- Create 'make the price' challenges using coins or notes
- Ask questions comparing cents and dollars
- Develop item-price cards where students create their own shop, e.g. Order these prices from least to greatest: 50c, \$2, \$10, 20c, \$1. Explain how you know.

Teaching as Inquiry

Observe which students recognise New Zealand coins and notes; distinguish between cents and dollars; match prices to coin and note values; compare money values accurately; identify least expensive and most expensive items; explain comparisons using value language; confuse 50c and \$50 or 20c and \$20

Hands-On Activity 1 (10 minutes)

Money Match

Students match New Zealand money cards to price cards.

Money	Price Card
10c coin	10c
50c coin	50c
\$1 coin	\$1
\$5 note	\$5
\$20 note	\$20

Ask: 'What is this money worth? Which price card matches? Is it cents or dollars? How do you know?'

Hands-On Activity 2 (10 minutes)

Class Shop: Least and Most Expensive

Set up item cards with prices, such as worm: 10c, cupcake: 50c, ice cream: \$1, bananas: \$2, cushion: \$5, bucket: \$10, backpack: \$20, present: \$50, fridge/large item: \$100

Students sort or order the items by price.

Ask: 'Which item is least expensive? Which item is most expensive? Which items cost less than \$5? Which items cost more than \$20?'

Student Book Practice

Students complete **p.24** of their workbook: **Money**.

Focus: Matching New Zealand coins and notes to item prices, recognising cents and dollar values, comparing item prices, circling the least expensive item, crossing out the most expensive item

Mathseeds Online Practice

Lesson: Lesson 83, Money (2)

Focus: Solve addition problems involving money. Identify coins and notes. Match money to symbols: \$, c. Compare the cost of items. Use different denominations of notes and coins to make amounts. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What does c stand for?
- What does \$ stand for?
- Which is worth more: 20c or 50c?
- Which is worth more: \$10 or \$20?
- Which is the greatest value: \$5, \$20 or \$100?

Exit Question

How can recognising money values help us compare prices?

Next Steps for Teacher (Teaching as Inquiry)

- Praise students for using reasoning vocabulary such as coin, note, cents, dollars, value, price, least expensive, most expensive and compare.
- Encourage students to check money values carefully by looking at both the number and the symbol.
- Reinforce recognising New Zealand coins and notes, distinguishing cents from dollars and matching prices to money values to compare prices.
- Extend confident students by asking them to order a set of prices from least to greatest and explain their reasoning.

Curriculum and Planning Links

NZ Curriculum – Number

Financial mathematics

Knowledge

- New Zealand currency is a decimal system of dollars made up of 100 cents.

Practices

- Recognising New Zealand denominations according to their value, making groups of 'like' denominations, and calculating their value

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		

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?

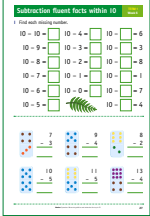
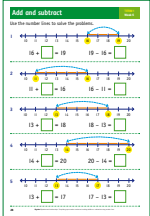
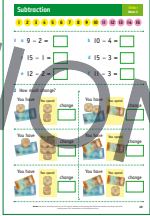
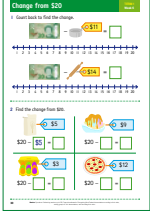
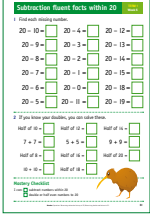
Teaching as Inquiry: Reflection Notes

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

Term 1 Week 6 Overview **Number: Operations: Subtract to 20**

Lesson & Topic	Learning Intention	Success Criteria	Main Activities	Student Book Practice
<p>1 Subtraction fluent facts within 10</p>	<p>Students will solve subtraction facts within 10 and find missing numbers in subtraction equations.</p>	<ul style="list-style-type: none"> ✓ Find missing numbers in subtraction equations ✓ Use dots, fingers or counters to help subtract ✓ Solve subtraction facts accurately 	<ul style="list-style-type: none"> – Practise subtraction facts from 10 – Find missing numbers in subtraction equations – Mathseeds lesson 93: Number facts families 	<p>Page 27: Find missing numbers in subtraction and solve subtraction equations using visual supports.</p> 
<p>2 Add and subtract</p>	<p>Students will use number lines to solve addition and subtraction problems.</p>	<ul style="list-style-type: none"> ✓ Use a number line to count forwards and backwards ✓ Find missing numbers in addition and subtraction equations ✓ Explain how addition and subtraction are connected 	<ul style="list-style-type: none"> – Use number lines to count on or jump back – Complete related addition and subtraction equations – Match number lines to equations – Mathseeds Lesson 96: Bridging to ten 	<p>Page 28: Use number lines to solve addition and subtraction problems and complete missing numbers.</p> 
<p>3 Subtraction</p>	<p>Students will solve subtraction problems and find change in money situations.</p>	<ul style="list-style-type: none"> ✓ Count back to solve subtraction problems ✓ Use money pictures to find change ✓ Work out how much is left after spending 	<ul style="list-style-type: none"> – Use New Zealand coins and notes to find change – Match money pictures to subtraction equations – Mathseeds lesson 92: Change from \$100 	<p>Page 29: Subtract numbers up to 15 and calculate change using New Zealand money contexts.</p> 
<p>4 Change from \$20</p>	<p>Students will calculate change from \$20 using subtraction and number lines.</p>	<ul style="list-style-type: none"> ✓ Subtract the amount spent by counting back on a number line ✓ Find the change from \$20 ✓ Explain how the change was found 	<ul style="list-style-type: none"> – Count back from 20 on a number line – Subtract prices from \$20 	<p>Page 30: Count back to find change from \$20 and complete subtraction equations.</p> 
<p>5 Subtraction fluent facts within 20</p>	<p>Students will solve subtraction facts within 20.</p>	<ul style="list-style-type: none"> ✓ Subtract numbers within 20 ✓ Recall doubles to 20 ✓ Identify half of even numbers to 20 	<ul style="list-style-type: none"> – Practise subtraction facts from 20 – Find missing numbers in subtraction equations – Match doubles and halves facts – Mathseeds lesson 100: Subtracting unknown numbers 	<p>Page 31: Find missing numbers in subtraction facts within 20, recall doubles and identify halves to 20.</p> 

DAILY LESSON PLAN Week 6 • Lesson 1**Topic:** Subtraction fluent facts within 10

In this lesson, students practise subtraction facts within 10. Students find missing numbers in subtraction equations, subtract from 10, and use domino-style pictures to solve subtraction problems.

Learning Intention

Students will solve subtraction facts within 10 and find missing numbers in subtraction equations.

Success Criteria

- ✓ I can subtract from 10.
- ✓ I can find the missing number in a subtraction equation.
- ✓ I can use dots or pictures to help me subtract.
- ✓ I can solve subtraction facts accurately.
- ✓ I can explain how I found my answer.

Language Focus

Key terms: subtract, minus, equals, missing number, take away, left, subtraction fact

Sentence stems:

- 10 minus ___ equals ___.
- I started with ___ and took away ___.
- The missing number is ___ because ___.
- There are ___ left.
- I know ___ - ___ = ___.

Launch Activity (5 minutes)

Write these facts on the board: $10 - 1 =$, $10 - 2 =$, $10 - 3 =$

Ask students to solve each fact.

Discuss: What do you notice about the answers? How are the answers changing? What happens when we subtract from 10?

Explain that today students will practise subtraction facts and missing numbers.

Assessment for Learning

Ask: 'What is $10 - 4$? What is $10 - 8$? If $10 - \underline{\quad} = 6$, what number is missing? How did you work it out?'

Explicit Instruction (10 minutes)**1. Subtracting from 10**

I Do • Write: $10 - 4 = 6$

Explain: We start with 10. We take away 4. There are 6 left.

Think aloud: 'I know 10 minus 4 equals 6 because if I count back 4 from 10, I land on 6.'

We Do • Solve together: $10 - 3 =$, $10 - 8 =$, $10 - 10 =$

Ask:

- What number did we start with?
- How many did we take away?
- How many are left?

You Do • Students solve subtraction facts from 10 using fingers, counters or mental strategies. Check for understanding: ask students to explain one subtraction fact to a partner.

2. Finding the Missing Number

I Do • Write: $10 - \underline{\quad} = 6$

Explain: We need to find what number was taken away from 10 to leave 6.

Count back from 10 to 6: 10, 9, 8, 7, 6

Say: 'We counted back 4, so the missing number is 4. $10 - 4 = 6$ '

We Do • Complete together: $10 - \underline{\quad} = 3$, $10 - \underline{\quad} = 8$, $10 - \underline{\quad} = 1$

Ask: 'What number was taken away? How can we check?'

You Do • Students complete missing-number subtraction facts independently or with a partner.

3. Using Dot Pictures to Subtract

I Do • Show a domino-style picture. Model: $7 - 3 = 4$

Explain: The first number tells how many there are. The second number tells how many are taken away. The answer tells how many are left.

We Do • Solve one or two dot-picture subtraction facts together.

Ask:

- How many dots are there altogether?
- How many are taken away?
- How many are left?

You Do • Students use the pictures in the workbook to complete subtraction equations.

Differentiation Tips

Support

- Use counters, ten-frames, fingers or number lines.
- Focus on subtraction facts from 10 first.
- Read each equation aloud with students.
- Allow students to physically remove objects to show subtraction.

Extension

- Solve facts mentally without materials.
- Write related subtraction facts.
- Create missing-number subtraction equations for a partner.
- Explain patterns in subtraction facts from 10.

Teaching as Inquiry

Observe which students can solve subtraction facts fluently and which students still need to count back or use concrete materials. Notice whether students understand that the missing number is the amount being taken away.

Hands-On Activity 1 (10 minutes)

Make and Take Away

Students use counters or cubes.

Say: 'Start with 10. Take away 5. How many are left?'

Students build, remove, count and say the subtraction fact aloud.

Examples: $10 - 5 = 5$, $10 - 6 = 4$, $10 - 1 = 9$, $10 - 0 = 10$

Hands-On Activity 2 (10 minutes)

Missing Number Match

Give students subtraction cards, such as $10 - \underline{\quad} = 6$, $10 - \underline{\quad} = 3$, $10 - \underline{\quad} = 8$. Students use counters or fingers to find the missing number. Partners check each other's answers and explain their thinking.

Student Book Practice

Students complete **page 27: Subtraction fluent facts within 10**

Focus: Find missing numbers in subtraction facts, solve subtraction facts from 10 and use domino-style dot pictures to complete subtraction equations.

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 number 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 is $10 - 5$?
- What is $10 - 0$?
- If $10 - \underline{\quad} = 7$, what number is missing?
- How can dots help us subtract?

Exit Question

'What strategy helped you find the missing number?'

Feedback

Praise students for using mathematical language such as subtract, minus, equals, missing number, take away and left when explaining their thinking.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need more practice subtracting from 10.
- Provide additional small-group support using counters and ten-frames.
- Revisit missing-number subtraction equations.
- Extend confident students with subtraction facts beyond 10.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be subtracted using representations, mental strategies, known facts and place value.

Practices

- Memorising subtraction facts up to 20
- Subtracting numbers up to 100

DAILY LESSON PLAN Week 6 • Lesson 2**Topic:** Add and subtract

In this lesson, students use number lines to solve related addition and subtraction problems. Students identify the missing number in addition equations and use the same number-line jump to complete matching subtraction equations.

Learning Intention

Students will use number lines to solve addition and subtraction problems.

Success Criteria

- ✓ I can use a number line to count forwards.
- ✓ I can use a number line to count backwards.
- ✓ I can find a missing number in an addition equation.
- ✓ I can find the answer to a subtraction equation.
- ✓ I can explain how addition and subtraction are connected.

Language Focus

Key terms: add, subtract, plus, minus, equals, number line, jump, count on, count back, difference, missing number

Sentence stems:

- I started at ___ and counted on to ___.
- The jump from ___ to ___ is ___.
- ___ plus ___ equals ___.
- ___ minus ___ equals ___.
- Addition and subtraction are connected because ___.

Launch Activity (5 minutes)

Draw a number line from 10 to 20 on the board. Circle 16 and 19.

Ask students:

- How many jumps are there from 16 to 19?
- What addition fact can we write?
- What subtraction fact can we write?

Record: $16 + 3 = 19$, $19 - 16 = 3$. Explain that today students will use number lines to solve addition and subtraction problems.

Assessment for Learning

Ask:

- What number do we start on?
- Which way do we move when we add?
- Which way do we move when we subtract?

Explicit Instruction (10 minutes)**1. Counting On Using a Number Line**

I Do • Display: $16 + \underline{\quad} = 19$. Show 16 and 19 on the number line.

Explain: We start at 16. We count on until we reach 19. The number of jumps tells us the missing number.

Count: 17, 18, 19. There are 3 jumps. $16 + 3 = 19$

We Do • Solve together: $11 + \underline{\quad} = 16$, $13 + \underline{\quad} = 18$

Ask:

- Where do we start?
- Where do we finish?
- How many jumps did we make?

You Do • Students practise counting on along a number line to find the missing number.

2. Connecting Addition and Subtraction

I Do • Use the same number line example: $16 + 3 = 19$

Write the related subtraction equation: $19 - 16 = \underline{\quad}$

Explain: The jump from 16 to 19 is 3. So 19 minus 16 equals 3. $19 - 16 = 3$

We Do • Complete together: $16 - 11 = \underline{\quad}$, $18 - 13 = \underline{\quad}$

Ask: 'What jump did we already find? How does it help us solve the subtraction fact?'

You Do • Students complete the matching subtraction equations using the number-line jumps.

3. Reading Number-Line Problems

I Do • Show a number line with two highlighted numbers.

Think aloud: 'I look at the first circled number. I look at the second circled number. I count the jumps between them. That jump tells me the missing number.'

We Do • Look at another example together.

Ask:

- What numbers are circled?
- How many jumps are shown?
- What addition equation can we write?
- What subtraction equation can we write?

You Do • Students complete number-line addition and subtraction problems independently.

Differentiation Tips

Support

- Use a large floor number line.
- Have students physically jump from one number to another.
- Focus on counting each jump carefully.
- Pair students with a partner to check jumps.
- Provide counters or cubes to match each jump.

Extension

- Ask students to write related fact families.
- Create their own number-line problems.
- Solve without counting every tick mark.
- Explain the relationship between addition and subtraction using inverse operations.

Teaching as Inquiry

Observe whether students can accurately count the jumps between two numbers. Notice whether students understand that the same jump can be used for both the addition and subtraction equation.

Hands-On Activity 1 (10 minutes)

Human Number Line

Create a floor number line from 10 to 20.

Call out: 'Start at 14. Jump to 20. How many jumps did you make?'

Students write: $14 + 6 = 20$, $20 - 14 = 6$. Repeat with other examples from the workbook.

Hands-On Activity 2 (10 minutes)

Jump and Match

Provide number-line cards and equation cards. Students match each number line to the correct addition and subtraction equations.

Example: number line shows 13 to 17; students match: $13 + 4 = 17$, $17 - 13 = 4$

Partners explain how they know the equations match the number line.

Student Book Practice

Students complete **page 28: Add and subtract**

Focus: Use number lines to solve addition and subtraction problems, complete missing numbers and connect addition and subtraction facts.

Mathseeds Online Practice

Lesson: Lesson 96, Bridging to ten

Focus: Solve addition problems using the bridge to ten strategy. Solve addition problems using a number line. Write equations to solve addition problems. Understand the equals sign. Work out if addition equations are true or false. Use comparative language: larger, smaller. Solve addition problems using the jump strategy. Add multiples of ten to a two-digit number.

Reflect and Check (5 minutes)

Quick questions:

- How many jumps from 16 to 19?
- What is $11 + \underline{\quad} = 16$?
- What is $20 - 14$?
- Which way do we move on a number line when we add?
- Which way do we move when we subtract?

Exit Question

'How are addition and subtraction connected?'

Feedback

Praise students for using mathematical language when explaining their thinking, such as number line, jump, count on, subtract, minus and missing number.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need more practice counting jumps accurately.
- Provide additional support using floor number lines and physical movement.
- Revisit the connection between addition and subtraction facts.
- Extend confident students with related fact families and missing-number equations.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Addition and subtraction are inverse operations.
- Numbers can be added and subtracted using representations, mental strategies, known facts and place value.

Practices

- Memorising addition and subtraction facts up to 20

Algebra

Equations and relationships

- Checking the truth of number sentences and completing open number sentences involving addition, subtraction using tens frames, discrete materials or number lines

DAILY LESSON PLAN Week 6 • Lesson 3**Topic:** Subtraction

In this lesson, students practise subtracting numbers up to 15 and finding change in simple money situations. Students solve subtraction equations and use New Zealand coins and notes to work out how much money is left after spending.

Learning Intention

Students will solve subtraction problems and find change in money situations.

Success Criteria

- ✓ I can subtract numbers up to 15.
- ✓ I can count back to solve subtraction problems.
- ✓ I can use money pictures to find change.
- ✓ I can work out how much is left after spending.
- ✓ I can explain my subtraction strategy.

Language Focus

Key terms: subtract, minus, equals, change, spend, left, coins, notes, dollars, take away

Sentence stems:

- ___ minus ___ equals .
- I started with ___ and took away .
- I have \$ and spend \$.
- The change is \$___.
- I know this because ___ is left.

Launch Activity (5 minutes)

Show students a \$10 note and a \$2 coin.

Ask: 'If I have \$10 and spend \$2, how much change will I get? How could we work it out?'

Record: $10 - 2 = 8$

Explain that subtraction can help us find how much is left, including when we are working with money.

Assessment for Learning

Ask: 'If I have \$10 and spend \$4, how much change do I get? How did you work it out?'

Explicit Instruction (10 minutes)**1. Subtracting Numbers**

I Do • Write: $9 - 2 = 7$

Explain: We start with 9. We take away 2. There are 7 left.

Think aloud: 'I can count back 2 from 9. 9, 8, 7, so $9 - 2 = 7$.'

We Do • Solve together: $10 - 4 =$, $15 - 1 =$, $12 - 2 =$

Ask:

- What number do we start with?
- How many do we take away?
- How many are left?

You Do • Students solve subtraction facts using counting back, fingers, counters or a number line.

2. Finding Change

I Do • Display a money problem: You have \$10. You spend \$4.

How much change?

Write: $10 - 4 = 6$

Explain: The money I have is the starting amount. The money I spend is the amount taken away. The change is what is left.

Think aloud: 'I start with 10 and take away 4. That leaves 6. So the change is \$6.'

We Do • Solve together: You have \$15. You spend \$5. How much change?

Ask:

- How much money do we have?
- How much do we spend?
- What subtraction equation can we write?

You Do • Students use money pictures to find the change.

3. Using Coins and Notes to Check

I Do • Show play money or pictures.

Example: You have \$10 and spend \$2. Remove \$2.

Explain: What is left is the change.

We Do • Practise with play money: $\$10 - \$5 =$, $\$15 - \$2 =$, $\$12 - \$4 =$

Ask:

- What did we spend?
- What is left?
- How can we check?

You Do • Students use money images or play money to check their answers.

Differentiation Tips

Support

- Use counters, number lines or play money.
- Focus on smaller amounts first.
- Read each money problem aloud.
- Physically remove the amount spent to show change.
- Match the money picture to a subtraction equation.

Extension

- Ask students to write their own money subtraction problems.
- Use larger amounts up to \$20.
- Encourage students to solve mentally.
- Ask students to write the matching subtraction equation for each change problem.

Teaching as Inquiry

Observe whether students can connect subtraction with finding change. Notice which students need concrete materials to remove the spent amount and which students can solve using mental strategies.

Hands-On Activity 1 (10 minutes)

Shop and Change

Set up a simple class shop with items priced from \$1 to \$5. Students choose an item and use play money to work out their change.

Example: I have \$10. I spend \$3. My change is \$7.

Students say or record the subtraction equation: $10 - 3 = 7$

Hands-On Activity 2 (10 minutes)

Money Match

Provide money picture cards and subtraction equation cards. Students match the money situation to the correct equation and change amount.

Example: You have \$15. You spend \$5.

Matches: $15 - 5 = 10$, Change = \$10

Partners explain how they found the change.

Student Book Practice

Students complete **page 29: Subtraction**

Focus: Subtract numbers up to 15, recognise New Zealand coins and notes and calculate change using 10-cent and \$1 denominations.

Mathseeds Online Practice

Lesson: Lesson 92, Change from \$100

Focus: Solve addition problems involving money. Identify coins and notes. Match money using symbols: \$, c. Compare the cost of items. Use different denominations of notes and coins to make amounts. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What is $9 - 2$?
- What is $15 - 3$?
- If you have \$10 and spend \$5, how much change do you get?
- What does change mean?
- How can subtraction help us with money?

Exit Question

'What strategy did you use to find the change?'

Feedback

Praise students for using mathematical language when explaining their thinking, such as subtract, minus, spend, change, left, coins and notes.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need more practice subtracting within 15.
- Provide additional support using play money and number lines.
- Revisit the idea that change means money left after spending.
- Extend confident students with larger money amounts and their own shop problems.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be subtracted using representations, mental strategies, known facts and place value.

Practices

- Subtracting one-digit numbers up to 20

Financial mathematics

Knowledge

- New Zealand coins and notes can be ordered and grouped to find the total value.

Practices

- Recognising and ordering New Zealand denominations according to their value, making groups of 'like' denominations and calculating their value

DAILY LESSON PLAN Week 6 • Lesson 4**Topic:** Change from \$20

In this lesson, students use subtraction to find change from \$20. Students count back on number lines, read simple price tags, and calculate how much money is left after spending.

Learning Intention

Students will calculate change from \$20 using subtraction and number lines.

Success Criteria

- ✓ I can start with \$20.
- ✓ I can subtract the amount spent.
- ✓ I can count back on a number line.
- ✓ I can find the change from \$20.
- ✓ I can explain how I worked out the change.

Language Focus

Key terms: change, subtract, minus, spend, cost, price, left, dollars, number line, count back

Sentence stems:

- I have \$20 and spend \$.
- \$20 minus \$ equals \$.
- I counted back from 20 to .
- The change is \$.
- I know this because .

Launch Activity (5 minutes)

Show students a \$20 note and a price tag for \$5.

Ask: 'If I have \$20 and spend \$5, how much change will I get? How could we work it out?'

Record: $\$20 - \$5 = \$15$

Explain that today students will use subtraction and number lines to find change from \$20.

Assessment for Learning

Ask:

- What does change mean?
- What number do we start with when finding change from \$20?
- How can a number line help us?

Explicit Instruction (10 minutes)**1. Counting Back from \$20**

I Do • Display: $\$20 - \$11 = \underline{\quad}$. Use a number line from 1 to 20.

Explain: We start at 20. We count back 11 spaces. Where we land is the change.

Count back carefully: 20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9

So: $\$20 - \$11 = \$9$

We Do • Solve together: $\$20 - \$14 = \underline{\quad}$

Ask:

- Where do we start?
- How many do we count back?
- What number do we land on?

You Do • Students practise counting back on number lines to find the change.

2. Reading Price Tags

I Do • Show a picture with a price tag: Price: \$5

Write: $\$20 - \$5 = \underline{\quad}$

Explain: The \$20 is the money we have. The price tag shows what we spend. The answer is the change.

$\$20 - \$5 = \$15$

We Do • Solve together: $\$20 - \$9 = \underline{\quad}$, $\$20 - \$3 = \underline{\quad}$

Ask:

- What is the price?
- What amount are we subtracting?
- How much change is left?

You Do • Students read price tags and complete the subtraction equations.

3. Checking with Counting Back

I Do • Model checking the answer: for $\$20 - \12 , start at 20 and count back 12.

20, 19, 18, 17, 16, 15, 14, 13, 12, 11, 10, 9, 8

The change is \$8.

We Do • Check: $\$20 - \$5 = \underline{\quad}$, $\$20 - \$9 = \underline{\quad}$

You Do • Students check one answer with a partner by counting back.

Differentiation Tips

Support

- Use a printed number line from 1–20.
- Use play money to physically remove the amount spent.
- Focus on prices under \$10 first.
- Count back together as a group.
- Circle the starting number 20 before solving.

Extension

- Solve change problems mentally.
- Write matching word problems.
- Create price tags for a class shop.
- Find two different items that cost less than \$20 and work out the change.

Teaching as Inquiry

Observe which students can count back accurately from 20 and which students lose track when counting backwards. Notice whether students understand that the price tag shows the amount spent and the answer is the change.

Hands-On Activity 1 (10 minutes)

Class Shop: Change from \$20

Set up a small class shop with items priced from \$1 to \$15. Each student starts with a pretend \$20 note. Students choose one item and calculate their change.

Example: I have \$20. I spend \$8. My change is \$12.

Students record: $\$20 - \$8 = \$12$

Hands-On Activity 2 (10 minutes)

Price Tag Match

Provide cards showing items with price tags. Students match each item to the correct change card.

Example: Item costs \$9. Change from \$20 is \$11.

Equation: $\$20 - \$9 = \$11$

Partners explain how they found the change.

Student Book Practice

Students complete **page 30: Change from \$20**

Focus: Count back to find change, subtract prices from \$20, recognise New Zealand denominations and calculate change using \$1 denominations.

Mathseeds Online Practice

Lesson: Lesson 92, Change from \$100

Focus: Solve addition problems involving money. Identify coins and notes. Match money using symbols: \$, c. Compare the cost of items. Use different denominations of notes and coins to make amounts. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What is $\$20 - \5 ?
- What is $\$20 - \10 ?
- What is $\$20 - \14 ?
- What does the price tag tell us?
- What does the answer tell us?

Exit Question

'Was it easier to count back or use a known fact?'

Feedback

Praise students for using mathematical language when explaining their thinking, such as change, spend, price, subtract, minus, left and count back.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need more practice counting backwards from 20.
- Provide additional support using play money and number lines.
- Revisit the meaning of change as money left after spending.
- Extend confident students with two-item purchases and mental subtraction from \$20.

Curriculum and Planning Links

NZ Curriculum – Number

Operations Knowledge

- Numbers can be subtracted using representations, mental strategies, known facts and place value.

Practices

- Subtracting one- and two-digit numbers up to 20

Financial mathematics

Knowledge

- New Zealand coins and notes can be ordered and grouped to find the total value.

Practices

- Recognising and ordering New Zealand denominations according to their value, making groups of 'like' denominations and calculating their value

DAILY LESSON PLAN Week 6 • Lesson 5**Topic:** Subtraction fluent facts within 20

In this lesson, students practise subtraction facts within 20 and use doubles and halves to solve related number facts. Students find missing numbers in subtraction equations, recall doubles and identify halves of even numbers to 20.

Learning Intention

Students will solve subtraction facts within 20 and use doubles and halves to support number fluency.

Success Criteria

- ✓ I can subtract numbers within 20.
- ✓ I can find missing numbers in subtraction equations.
- ✓ I can recall doubles to 20.
- ✓ I can identify half of even numbers to 20.
- ✓ I can explain how doubles and halves help me solve problems.

Language Focus

Key terms: subtract, minus, equals, missing number, double, half, halve, fact, fluent, within 20

Sentence stems:

- 20 minus ___ equals ___.
- I started with 20 and took away ___.
- The missing number is ___.

- Double ___ is ___.
- Half of ___ is ___.
- I know this because ___.

Launch Activity (5 minutes)

Write on the board: $20 - 0 =$, $20 - 1 =$, $20 - 2 =$

Ask:

- What do you notice about the answers?
- How are the answers changing?
- What happens when we subtract from 20?

Then ask: 'What is double 5? What is half of 10?'

Explain that today students will practise subtraction facts within 20 and use doubles and halves to solve related facts.

Assessment for Learning

Ask:

- What is double 7?
- What is half of 12?
- How can doubles help us find halves?

Explicit Instruction (10 minutes)**1. Subtracting from 20**

I Do • Write: $20 - 4 = 16$

Explain: We start with 20. We take away 4. There are 16 left.

Think aloud: 'I know 20 minus 4 equals 16 because I can count back 4 from 20.'

20, 19, 18, 17, 16

So: $20 - 4 = 16$

We Do • Solve together: $20 - 3 =$, $20 - 8 =$, $20 - 12 =$

Ask: 'What number do we start with? How many do we take away? How many are left?'

You Do • Students solve subtraction facts from 20 using mental strategies, fingers, counters or number lines.

2. Finding Missing Numbers

I Do • Write: $20 - \underline{\quad} = 11$

Explain: We need to find what number was taken away from 20 to leave 11. Count back from 20 to 11: 20, 19, 18, 17, 16, 15, 14, 13, 12, 11. We counted back 9.

So: $20 - 9 = 11$

We Do • Complete together: $20 - \underline{\quad} = 15$, $20 - \underline{\quad} = 8$,
 $20 - \underline{\quad} = 1$

Ask: 'What number was taken away? How can we check?'

You Do • Students complete missing-number subtraction facts independently or with a partner.

3. Using Doubles and Halves

I Do • Write: $7 + 7 = 14$

Explain: This is a double. Double 7 is 14.

Then write: Half of 14 = 7

Explain: Halving is the opposite of doubling. If double 7 is 14, then half of 14 is 7.

We Do • Solve together: half of 10 =, $5 + 5 =$, half of 16 =, $9 + 9 =$

Ask: 'How can a double help us find a half? How can a half help us check a double?'

You Do • Students complete doubles and halves facts to 20.

Differentiation Tips

Support

- Use counters, ten-frames, twenty-frames or number lines.
- Focus on subtraction from 20 using small numbers first.
- Practise doubles with pairs of counters.
- Show halves by sharing objects into two equal groups.
- Read each equation aloud with students.

Extension

- Solve subtraction facts mentally without materials.
- Create related subtraction equations from doubles and halves.
- Find all doubles that make totals to 20.
- Explain the relationship between doubles and halves.
- Create missing-number subtraction equations for a partner.

Teaching as Inquiry

Observe which students can subtract fluently within 20 and which students still need to count back using a number line or materials. Notice whether students understand that doubles and halves are connected facts.

Hands-On Activity 1 (10 minutes)

Twenty Take Away

Students use twenty counters or a twenty-frame.

Say: 'Start with 20. Take away 6. How many are left?'

Students build, remove, count and say the subtraction fact aloud.

Examples: $20 - 6 = 14$, $20 - 8 = 12$, $20 - 11 = 9$, $20 - 15 = 5$

Hands-On Activity 2 (10 minutes)

Double and Half Match

Provide cards showing doubles and halves.

Examples: $7 + 7 = \underline{\quad}$, half of 14 = $\underline{\quad}$, $10 + 10 = \underline{\quad}$, half of 20 = $\underline{\quad}$

Students match each double fact to its related half fact. Partners explain the connection.

Example: $7 + 7 = 14$, half of 14 = 7

Student Book Practice

Students complete **page 31: Subtraction fluent facts within 20**

Focus: Find missing numbers in subtraction facts within 20, recall doubles to 20 and identify halves of even numbers to 20.

Mathseeds Online Practice

Lesson: Lesson 100, Subtracting Unknown Numbers

Focus: Find the unknown number in a subtraction equation. Solve problems using the commutative property of addition. Fluently add to 10. Recognise different number combinations that make number fact families. Solve subtraction problems by using the count on strategy. Solve subtraction problems requiring change.

Reflect and Check (5 minutes)

Quick questions:

- What is $20 - 5$?
- What is $20 - 12$?
- What is double 8?
- What is half of 18?
- How are doubles and halves connected?

Exit Question

'How can knowing doubles help you find halves?'

Feedback

Praise students for using mathematical language when explaining their thinking, such as subtract, minus, missing number, double, half, equals and fluent.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who need more practice subtracting within 20.
- Provide additional support using twenty-frames and number lines.
- Revisit doubles and halves with concrete materials.
- Extend confident students with related facts and mental strategies.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Addition and subtraction are inverse operations.

Practices

- Memorising addition and subtraction facts up to 20
- Memorising doubles and halves to 20

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

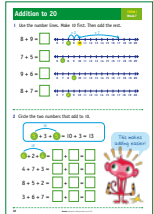
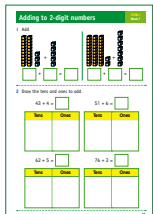
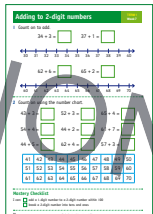
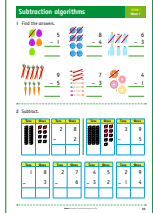
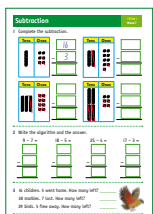
Reflection Prompts

- 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> 

DAILY LESSON PLAN Week 7 • Lesson 1**Topic:** Addition to 20

In this lesson, students solve addition problems within 20. They use number lines to make 10 first, then add the rest. Students also identify pairs of numbers that add to 10 to make addition easier.

Learning Intention

Students will solve addition problems within 20 by making 10 first.

Success Criteria

- ✓ I can use a number line to add within 20
- ✓ I can make 10 first
- ✓ I can add the rest
- ✓ I can find two numbers that add to 10
- ✓ I can record an addition equation
- ✓ I can explain how I know

Language Focus

Key terms: add, addition, equals, equation, number line, count on, make 10, part, whole

Sentence stems:

- I start at ___ and count on ___.
- I make 10 by adding ___.

Explicit Instruction (10–12 minutes)**1. Using a Number Line to Add within 20**

I Do • Model: $8 + 9 = \underline{\quad}$

Say: 'I start at 8. I need to add 9. First, I add 2 to make 10. Then I add the rest, which is 7.'

Record:

$$8 + 2 = 10$$

$$10 + 7 = 17$$

$$8 + 9 = 17$$

We Do • Solve together: $7 + 5 = \underline{\quad}$

Ask: 'Where do we start? How many more to make 10?'

Record:

$$7 + 3 = 10$$

$$10 + 2 = 12$$

$$7 + 5 = 12$$

You Do • Students use a number line to solve: $9 + 6 = \underline{\quad}$. Ask students to explain how they made 10 first.

2. Splitting the Second Number to Make 10

I Do • Model: $8 + 7 = \underline{\quad}$

Say: '8 needs 2 more to make 10. I split 7 into 2 and 5. I add 2 first, then add 5.'

Record:

$$8 + 7 = 8 + 2 + 5$$

$$8 + 2 = 10$$

$$10 + 5 = 15$$

$$8 + 7 = 15$$

- Then I add the rest.
- ___ and ___ make 10.
- ___ plus ___ equals ___.
- I know because ___.

Launch Activity (5 minutes)

Display a number line from 6 to 20. Write: $8 + 9 = \underline{\quad}$

Ask: 'What number do we start at? How can we make 10 first?'

Then: 'How much more do we add after 10? What is the total?'

Show: $8 + 2 = 10$, $10 + 7 = 17$

Record: $8 + 9 = 17$

Assessment for Learning

- Listen for students who can count on using a number line to make 10 first by splitting a number into parts and then adding the rest after making 10.
- Ask: 'How can making 10 help you add?'

We Do • Solve together: $9 + 8 = \underline{\quad}$

Ask: 'How many more does 9 need to make 10? How can we split 8? What do we add after we make 10?'

Record:

$$9 + 8 = 9 + 1 + 7$$

$$9 + 1 = 10$$

$$10 + 7 = 17$$

$$9 + 8 = 17$$

You Do • Students solve: $7 + 6 = \underline{\quad}$

Ask: 'Which part made 10 and which part was added after?'

3. Finding Two Numbers that Add to 10

I Do • Write: $5 + 3 + 5 = \underline{\quad}$

Say: 'I can find two numbers that add to 10. 5 and 5 make 10. Then I add 3.'

Record: $5 + 5 + 3 = 10 + 3 = 13$

We Do • Solve together: $6 + 2 + 4 = \underline{\quad}$

Ask: 'Which two numbers add to 10? What number is left? What is 10 plus the number left?'

Record: $6 + 4 + 2 = 10 + 2 = 12$

You Do • Students solve:

$$4 + 7 + 3 = \underline{\quad}$$

$$8 + 5 + 2 = \underline{\quad}$$

Ask: 'Circle the two numbers that make 10 and then add the rest.'

Problem Solving and Reasoning

Discuss:

- Why is making 10 helpful?
- How does a number line help us add within 20?
- How can we split a number to make 10 first?
- Which two numbers add to 10 in $3 + 6 + 7$?
- How can we check our answer?

Encourage students to use add, equals, equation, number line, count on, make 10, part, whole language

Differentiation Tips

Support

Provide:

- number lines to 20
- ten frames
- counters
- number cards that make 10
- teacher-guided counting on

Extension

Provide:

- addition equations without number lines
- three-number addition equations
- students creating their own make-10 problems
- totals within 20 and beyond 20 when ready

Teaching as Inquiry

Observe which students can use a number line to add within 20 and explain their strategy.

Hands-On Activity 1 (10 minutes)

Make 10 on a Number Line

Students use number lines to solve addition problems within 20, e.g. $8 + 9$, $7 + 5$, $9 + 6$, $8 + 7$. Students start at the first number, jump to 10, then add the rest and record the equation.

Ask: 'Where do you start? How many more to make 10? How many are left to add? What is the total?'

Hands-On Activity 2 (10 minutes)

Circle Numbers that Add to 10

Students solve three-number addition equations by finding two numbers that add to 10, e.g. $6 + 2 + 4$, $4 + 7 + 3$, $8 + 5 + 2$, $3 + 6 + 7$. Students circle the pair that adds to 10, then add the rest.

Ask: 'Which two numbers add to 10? What number is left? What is the total?'

Student Book Practice

Students complete **page 32—Addition to 20**.

Focus: Using number lines to add within 20, making 10 first then adding the rest, recording addition equations.

Mathseeds Online Practice

Lesson: Lesson 96, Bridging to 10

Focus: Solve addition problems using the bridge to ten strategy. Solve addition problems using a number line. Write equations to solve addition problems. Understand the equals sign. Work out if addition equations are true or false. Use comparative language: larger, smaller. Solve addition problems using the jump strategy. Add multiples of ten to a two-digit number.

Reflect and Check (5 minutes)

Quick questions:

- Which two numbers add to 10 in $6 + 2 + 4$?
- Which two numbers add to 10 in $8 + 5 + 2$?

Exit Question

How does making 10 first help us add within 20?

Next Steps for Teacher

- Reinforce using number lines to add within 20
- Support students making 10 first
- Continue finding pairs that add to 10
- Model recording equations correctly
- Extend confident students by asking them to solve addition problems within 20 mentally and explain how they made 10 first.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations, mental strategies, known facts and place value.

Practices

- Adding numbers up to 100

DAILY LESSON PLAN Week 7 • Lesson 2**Topic:** Adding to 2-digit numbers

In this lesson, students add a one-digit number to a two-digit number. They use base-10 structure, tens and ones, and place value to represent and solve addition equations.

Learning Intention

Students will add a one-digit number to a two-digit number using tens and ones.

Success Criteria

- ✓ I can recognise tens and ones in a two-digit number
- ✓ I can add ones to a two-digit number
- ✓ I can represent addition using base-10 structure
- ✓ I can draw tens and ones to show addition
- ✓ I can record an addition equation
- ✓ I can explain how I know

Language Focus

Key terms: add, addition, equals, equation, two-digit number, tens, ones, base-10, place value, whole number, represent

Sentence stems:

- ___ has ___ tens and ___ ones.
- I add ___ ones.
- Now there are ___ tens and ___ ones.
- ___ plus ___ equals ___.
- I know because ___.

Launch Activity (5 minutes)

Show 4 tens and 3 ones using base-10 materials.

Ask: 'What number is represented? How many tens are there? How many ones are there?'

Add 4 more ones.

Then ask: 'How many ones are there now? What number do we have now? What addition equation can we record?'

Record: $43 + 4 = 47$

Assessment for Learning

Ask: 'How many tens are in the number? How many ones are in the number? When you add, what changes and what stays the same?'

Explicit Instruction (10–12 minutes)**1. Adding Ones to a Two-Digit Number**

I Do • Model with base-10 materials: $43 + 4 =$ ___

Say: '43 has 4 tens and 3 ones. I add 4 ones. Now I have 4 tens and 7 ones.'

Record: $43 + 4 = 47$

We Do • Solve together: $51 + 6 =$ ___

Ask: 'How many tens are in 51? How many ones are in 51? How many ones do we add? What number do we have now?'

Record: $51 + 6 = 57$

You Do • Students use base-10 materials to solve: $62 + 5 =$ ___

Ask: 'How many tens and ones in the answer?'

2. Drawing Tens and Ones to Add

I Do • Draw a place value chart with tens and ones. Model: $76 + 3 =$ ___

Draw 7 tens and 6 ones. Add 3 more ones.

Say: '76 has 7 tens and 6 ones. I add 3 ones. Now there are 7 tens and 9 ones.'

Record: $76 + 3 = 79$

We Do • Solve together: $43 + 4 =$ ___

Ask: 'What do we draw in the tens column? What do we draw in the ones column? What ones do we add? What is the total?'

Record: $43 + 4 = 47$

You Do • Students draw tens and ones to solve: $51 + 6 =$ ___

3. Connecting Base-10 Representations to Equations

I Do • Show base-10 materials for: $32 + 5 =$ ___

Say: 'I can see 3 tens and 2 ones. I add 5 ones. That makes 3 tens and 7 ones.'

Record: $32 + 5 = 37$

We Do • Use materials or a drawing to solve: $24 + 5 =$ ___

Ask: 'What number is represented first? What number is added? What equation matches? What is the total?'

Record: $24 + 5 = 29$

You Do • Students choose materials or a drawing to solve:

$61 + 6 =$ ___

Students record the equation and explain the total using tens and ones.

Problem Solving and Reasoning

Discuss:

- Why do the tens stay the same in $43 + 4$?
- How do tens and ones help us add?
- How can base-10 materials help us check?
- How can a drawing show the same equation?

Encourage students to use add, equals, equation, tens, ones, base-10, place value language

Differentiation Tips

Support

- Use base-10 materials and place value charts
- Focus on recognising tens and ones as well as adding ones to ones
- Record the total with matching materials to equations

Extension

- Provide larger two-digit numbers
- Use equations where students explain without materials
- Ask students to create their own two-digit plus one-digit equations

Teaching as Inquiry

Observe which students can identify tens and ones in a two-digit number; add ones to a two-digit number; use base-10 structure; draw tens and ones accurately; connect representations to equations; record equations correctly; explain using place value.

Hands-On Activity 1 (10 minutes)

Build and Add

Students use base-10 materials to build and solve addition equations: $43 + 4$, $51 + 6$, $62 + 5$, $76 + 3$. Students build the first number, add the ones, then record the equation.

Ask: 'How many tens? How many ones? How many ones did you add? What is the total?'

Hands-On Activity 2 (10 minutes)

Draw Tens and Ones

Students use a place value chart to draw tens and ones to solve equations. Students draw the two-digit number, add the ones and record the total.

Ask: 'What did you draw in the tens column? What did you draw in the ones column? What changed? What stayed the same?'

Student Book Practice

Students complete **page 33 — Adding to 2-digit numbers**.

Focus: Adding a one-digit number to a two-digit number using base-10 structure, drawing tens and ones, recording addition equations, explaining totals using tens and ones

Mathseeds Online Practice

Lesson: Lesson 95, Add within 100

Focus: Add a two-digit number and a one-digit number. Use strategies based on place value. Add two-digit numbers requiring sometimes to compose a ten. Add on a number line. Order numbers on a number chart. Solve addition problems using counting on as a strategy. Solve word problems using addition. Add multiples of ten to a two-digit number. Recognise different number combinations that make number fact families.

Reflect and Check (5 minutes)

Quick questions:

- What happens to the tens when we add ones and do not make a new ten?

Exit Question

How can tens and ones help us add to a two-digit number?

Next Steps for Teacher

- Reinforce recognising tens and ones
- Support adding ones to a two-digit number
- Use base-10 structure and drawing tens and ones to record equations correctly
- Extend confident students by asking them to solve similar equations mentally and explain how place value helps them.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures, Operations

Knowledge

- The base-10 number system is organised by place value (hundreds, tens and ones for three-digit numbers).
- The place value of digits helps with comparing and ordering.
- Numbers can be added using representations and place value.

Practices

- Reading and writing whole numbers up to 120 and representing them using base-10 structure
- Recognising the place value of each digit in a two-digit number
- Adding numbers up to 100

DAILY LESSON PLAN Week 7 • Lesson 3**Topic:** Adding to 2-digit numbers

In this lesson, students add a one-digit number to a two-digit number by counting on. They use number lines and a number chart to solve addition equations within 100.

Learning Intention

Students will add a one-digit number to a two-digit number by counting on.

Success Criteria

- ✓ I can add a one-digit number to a two-digit number
- ✓ I can count on using a number line
- ✓ I can count on using a number chart
- ✓ I can record an addition equation
- ✓ I can explain how I know

Language Focus

Key terms: add, addition, equals, equation, two-digit number, one-digit number, number line, number chart, count on, whole number, tens, ones

Explicit Instruction (10–12 minutes)**1. Counting On Using a Number Line**

I Do • Model: $34 + 3 = \underline{\quad}$

Say: 'I start at 34. I count on 3: 35, 36, 37. I land on 37.'

Record: $34 + 3 = 37$

We Do • Solve together: $37 + 1 = \underline{\quad}$

Ask: 'Where do we start? How many do we count on? What number do we land on?'

Record: $37 + 1 = 38$

You Do • Students use a number line to solve: $62 + 6 = \underline{\quad}$

Ask: 'Where did you start? How many did you count on?'

2. Counting On Using a Number Chart

I Do • Display a number chart from 41 to 70. Model: $43 + 3 = \underline{\quad}$

Say: 'I start at 43. I count on 3 numbers: 44, 45, 46. I land on 46.'

Record: $43 + 3 = 46$

We Do • Solve together: $52 + 3 = \underline{\quad}$

Ask: 'What number do we start at? How many do we count on? What numbers do we say? What number do we land on?'

Record: $52 + 3 = 55$

You Do • Students use the number chart to solve: $65 + 4 = \underline{\quad}$

Ask: 'Show me how you counted on.'

Sentence stems:

- I start at $\underline{\quad}$ and count on $\underline{\quad}$.
- I counted on $\underline{\quad}$ spaces.
- $\underline{\quad}$ plus $\underline{\quad}$ equals $\underline{\quad}$.
- I used the number chart by $\underline{\quad}$.
- I know because $\underline{\quad}$.

Launch Activity (5 minutes)

Display a number line from 30 to 40. Write: $34 + 3 = \underline{\quad}$

Ask: 'What number do we start at? How many do we count on? What number do we land on? What addition equation can we record?'

Count on together: 35, 36, 37

Record: $34 + 3 = 37$

Assessment for Learning

Ask: 'What number do you start at? How many do you count on? What number do you land on? How can the number chart help?'

3. Choosing a Strategy to Count On

I Do • Model: $54 + 4 = \underline{\quad}$

Say: 'I can count on using a number line or a number chart. I start at 54 and count on 4: 55, 56, 57, 58.'

Record: $54 + 4 = 58$

We Do • Solve together: $44 + 2 = \underline{\quad}$

Ask: 'Which tool can we use? Where do we start? How many do we count on? What is the answer?'

Record: $44 + 2 = 46$

You Do • Students choose a number line or number chart to solve: $61 + 7 = \underline{\quad}$, $57 + 3 = \underline{\quad}$

Ask: 'Which tool did you use and how did you count on?'

Problem Solving and Reasoning

Discuss:

- Why do we start at the two-digit number?
- Why do we count on and not start counting from 1?
- How can a number line help us add?
- How can a number chart help us add?
- How do we know when to stop counting?

Encourage students to use add, equals, equation, number line, number chart, count on language

Differentiation

Support

- Use number lines, number charts and counters to support counting on
- Guide counting on from two-digit numbers
- Explain recording the equation

Extension

- Write equations without a number line or number chart
- Use larger two-digit numbers within 100
- Students create and solve their own count-on equations
- Explain how ones change when counting on

Teaching as Inquiry

Observe which students can add a one-digit number to a two-digit number using counting on from the two-digit number with a number line accurately or a number chart.

Hands-On Activity 1 (10 minutes)

Count On with Number Lines

Students use number lines to solve addition equations by starting at the two-digit number, count on and record the answer.

Ask: 'Where do you start? How many do you count on? What number do you land on?'

Hands-On Activity 2 (10 minutes)

Count On with a Number Chart

Students use a number chart to solve addition equations. Students point to the starting number, count on and record the answer.

Student Book Practice

Students complete **page 34 – Adding to 2-digit numbers**.

Focus: Adding a one-digit number to a two-digit number using a number line and number chart as well as recording addition equations

Mathseeds Online Practice

Lesson: Lesson 95, Add within 100

Focus: Add a two-digit number and a one-digit number. Use strategies based on place value. Add two-digit numbers requiring sometimes to compose a ten. Add on a number line. Order numbers on a number chart. Solve addition problems using counting on as a strategy. Solve word problems using addition. Add multiples of ten to a two-digit number. Recognise different number combinations that make number fact families.

Reflect and Check (5 minutes)

Quick questions:

- $34 + 3 = \underline{\quad}$
- $37 + 1 = \underline{\quad}$
- $43 + 3 = \underline{\quad}$
- $52 + 3 = \underline{\quad}$
- $61 + 7 = \underline{\quad}$

Exit Question

How does counting on help us add a one-digit number to a two-digit number?

Next Steps for Teacher

- Reinforce starting at the two-digit number and counting on accurately using number lines and number charts
- Support students to record equations correctly
- Ask students to explain how they counted on
- Extend confident students by asking them to solve addition problems mentally and explain how the ones change

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be added using representations, mental strategies, known facts and place value.

Practices

- Adding numbers up to 100

DAILY LESSON PLAN Week 7 • Lesson 4

Topic: Subtraction algorithms

In this lesson, students subtract one-digit and two-digit numbers using pictures, base-10 structure, tens and ones, and written equations. Students recognise the tens and ones in two-digit numbers and subtract ones or tens and ones.

Learning Intention

Students will subtract numbers using pictures, tens and ones and written equations.

Success Criteria

- ✓ I can subtract using pictures
- ✓ I can recognise tens and ones in a two-digit number
- ✓ I can subtract ones from a two-digit number
- ✓ I can subtract tens and ones from a two-digit number
- ✓ I can record a subtraction equation
- ✓ I can explain how I know

Language Focus

Key terms: subtract, subtraction, equals, equation, tens, ones, base-10, place value, whole number, part, represent

Sentence stems:

- ___ minus ___ equals ___.
- ___ has ___ tens and ___ ones.

- I subtract ___ ones.
- I subtract ___ tens and ___ ones.
- Now there are ___ tens and ___ ones.
- I know because ___.

Launch Activity (5 minutes)

Show 8 pictures or counters. Cross out 4.

Ask: 'How many were there to start with? How many were subtracted? How many are left? What subtraction equation can we record?'

Record: $8 - 4 = 4$

Now show 2 tens and 8 ones.

Ask: 'What number is represented? How many tens? How many ones?'

Remove 5 ones.

Ask: 'How many were there to start with? How many were subtracted? How many are left? What subtraction equation can we record?'

Record: $28 - 5 = 23$

Assessment for Learning

Ask: 'How can we use base-10 materials to help with subtraction?'

Explicit Instruction (10–12 minutes)

1. Subtracting Using Pictures

I Do • Model: $9 - 2 = \underline{\quad}$

Show 9 pictures or counters.

Say: 'We start with 9. (Remove a counter) I subtract 2. I count what is left.'

Record: $9 - 2 = 7$

We Do • Solve together: $6 - 4 = \underline{\quad}$

Ask: 'How many do I start with? How many do I subtract? How many are left?'

Record: $6 - 4 = 2$

You Do • Students solve using pictures or counters: $7 - 5 = \underline{\quad}$

Ask students to say the equation and answer aloud.

2. Subtracting Ones in a Tens-and-Ones Table

I Do • Model with base-10 materials or a tens-and-ones table: $37 - 6 = \underline{\quad}$

Say: '37 has 3 tens and 7 ones. I subtract 6 ones from the ones column. The tens stay the same.'

Record in the table:

Tens	Ones
3	7
-	6
3	1

We Do • Solve together: $48 - 5 = \underline{\quad}$

Ask: 'How many tens are in 48? How many ones are in 48? Which column do we subtract from? What stays the same?'

Tens	Ones
4	8
-	5
4	3

You Do • Students solve: $29 - 3 = \underline{\quad}$

Ask: 'Why do the tens stay the same?'

3. Using the Subtraction Algorithm with Tens and Ones

I Do • Model the written algorithm: $56 - 22 = \underline{\quad}$

Write the numbers in a tens-and-ones table.

Say: 'I subtract the ones first. 6 ones minus 2 ones equals 4 ones. Then I subtract the tens. 5 tens minus 2 tens equals 3 tens.'

Record:

Tens	Ones
5	6
- 2	2
3	4

We Do • Solve together: $35 - 14 = \underline{\quad}$

Ask: 'What do we subtract first? What is 5 ones minus 4 ones? What is 3 tens minus 1 ten? What number is left?'

Record:

Tens	Ones
3	5
- 1	4
2	1

You Do • Students solve using a tens-and-ones table:

$$27 - 16 = \underline{\quad}$$
 and $59 - 24 = \underline{\quad}$

Ask students to explain the algorithm using the language, 'subtract the ones, then subtract the tens.'

Problem Solving and Reasoning

Discuss:

- How do pictures help us subtract?
- How do tens and ones help us subtract?
- What changes when we subtract ones?
- What stays the same when we subtract only ones?
- How can we check our answer?

Differentiation Tips

Support

- Provide counters, picture cards, base-10 materials and place value charts
- Encourage physical crossing out or removing items
- Focus on identifying the whole number (using tens and ones) and then subtracting in two parts

Extension

- Write two-digit subtraction equations using tens and ones without pictures
- Ask students to create their own subtraction equations
- Challenge students to use related addition facts to check answers

Teaching as Inquiry

Observe which students can recognise tens and ones in two-digit numbers and then subtract using pictures, crossing out the correct number and subtract tens and ones using place value

Hands-On Activity 1 (10 minutes)

Base-10 Subtraction

Students work in pairs with place value charts and base-10 materials to solve subtraction equations. Call out subtractions for students to set up (e.g. $28 - 2$, $39 - 5$, $18 - 3$, $27 - 6$, $45 - 32$, $29 - 14$) with the base-10 materials and then record the answer.

Ask: 'How many are left?'

Student Book Practice

Students complete **page 35 — Subtraction algorithms**.

Focus: Subtracting one-digit number from a two-digit number using a place value chart well as recording subtraction equations

Reflect and Check (5 minutes)

Quick questions:

- $5 - 1 = \underline{\quad}$
- $8 - 4 = \underline{\quad}$
- $9 - 5 = \underline{\quad}$
- $28 - 2 = \underline{\quad}$
- $39 - 5 = \underline{\quad}$
- $45 - 32 = \underline{\quad}$

Exit Question

How can tens and ones help us subtract?

Next Steps for Teacher

- Reinforce subtracting using pictures and place value charts
- Accurately record subtraction equations
- Extend confident students by asking them to solve two-digit subtraction equations and check using related addition facts

Curriculum and Planning Links

NZ Curriculum – Number

Operations

Knowledge

- Numbers can be subtracted using representations, mental strategies, known facts and place value.

Practices

- Subtracting numbers up to 100

DAILY LESSON PLAN Week 7 • Lesson 5

Topic: Subtraction

In this lesson, students complete subtraction equations using pictures, tens and ones and written algorithms. Students subtract ones from ones and tens from tens and solve subtraction word problems.

Learning Intention

Students will use tens and ones to complete subtraction algorithms.

Success Criteria

- ✓ I can subtract using pictures
- ✓ I can recognise tens and ones in a two-digit number
- ✓ I can subtract ones from ones
- ✓ I can subtract tens from tens
- ✓ I can record a subtraction algorithm
- ✓ I can solve subtraction word problems

Language Focus

Key terms: subtract, subtraction, equals, equation, algorithm, tens, ones, base-10, place value, whole number, part

Explicit Instruction (10–12 minutes)

1. Completing a Subtraction Algorithm from Pictures

I Do • Show 3 ten and 7 ones.

Cross out 6 ones.

Say: '37 has 3 tens and 7 ones. I subtract 6 ones. The tens stay the same. There are 3 tens and 1 one left.'

Record as an algorithm:

$$\begin{array}{r} 37 \\ - 6 \\ \hline 31 \end{array}$$

We Do • Show 2 tens and 4 ones. Cross out 2 ones.

Solve together: $24 - 2 = \underline{\quad}$

Ask: 'How many tens do we start with? How many ones do we start with? How many ones are subtracted? How many ones are left? What answer do we record?'

You Do • Students use pictures, base-10 materials or a place value chart to solve: $28 - 6 = \underline{\quad}$

2. Subtracting Ones in a Tens-and-Ones Algorithm

I Do • Write: $15 - 4 = \underline{\quad}$. Set it out in tens and ones using base-10 blocks.

Say: '15 has 1 ten and 5 ones. I subtract 4 ones from the ones column. 5 ones minus 4 ones equals 1 one. The 1 ten stay the same.'

Record:

$$\begin{array}{r} 15 \\ - 4 \\ \hline 11 \end{array}$$

Sentence stems:

- $\underline{\quad}$ minus $\underline{\quad}$ equals $\underline{\quad}$.
- $\underline{\quad}$ has $\underline{\quad}$ tens and $\underline{\quad}$ ones.
- I subtract $\underline{\quad}$ ones.
- I subtract $\underline{\quad}$ tens.
- Now there are $\underline{\quad}$ tens and $\underline{\quad}$ ones.
- I know because $\underline{\quad}$.

Launch Activity (5 minutes)

Show 4 ten and 8 ones using base-10 materials.

Ask: 'What number is represented? How many tens are there? How many ones are there?'

Cross out or remove 6 ones.

Then ask: 'What part did we subtract? How many ones are left? What subtraction equation can we record?'

Record: $48 - 6 = 42$

Assessment for Learning

Ask: 'What number do we start with? What number do we subtract? Which column do we subtract from first? How many tens are left? How many ones are left?'

We Do • Solve together: $19 - 6 = \underline{\quad}$

Ask: 'What is the whole number? How many tens are there? How many ones are there? What do we subtract from the ones column? What number is left?'

Record:

$$\begin{array}{r} 19 \\ - 6 \\ \hline 14 \end{array}$$

You Do • Students solve: $24 - 3 = \underline{\quad}$ $29 - 7 = \underline{\quad}$

Ask: What was subtracted? What number was left?

3. Subtracting Tens and Ones in an Algorithm

I Do • Model with a tens-and-ones table: $27 - 16 = \underline{\quad}$

Say: '27 has 2 tens and 7 ones. 27 has 2 tens and 7 ones. I subtract the ones first. 7 ones minus 6 ones equals 1 one. Then I subtract the tens. 2 tens minus 1 ten equals 1 ten.'

Record:

$$\begin{array}{r} 27 \\ - 16 \\ \hline 11 \end{array}$$

We Do • Solve together: $35 - 13 = \underline{\quad}$

Ask: What do we subtract first? What is 5 ones minus 3 ones? What is 3 tens minus 1 ten? What number is left?

Record: $35 - 13 = 22$

You Do • Students use a tens-and-ones table or written algorithm to solve: $25 - 12 = \underline{\quad}$

Ask students to explain the steps using language of tens and ones.

Problem Solving and Reasoning

Discuss:

- Why do we subtract the ones first?
- What stays the same when we subtract only ones?
- How do tens and ones help us complete an algorithm?
- How can pictures help us check the answer?
- How can a subtraction equation match a word problem?

Differentiation

Support

- Provide counters, picture cards, base-10 materials, place value charts, tens-and-ones tables
- Focus on recognising tens and ones and recording digits in the correct place
- Match pictures to subtraction equations

Extension

- Provide two-digit subtraction equations without pictures
- Ask students to create their own algorithms to solve
- Use related addition facts to check subtraction

Teaching as Inquiry

Observe which students can use pictures to show subtraction, recognise tens and ones in two-digit numbers, set out subtraction algorithms correctly, and record answers in the correct place

Hands-On Activity 1 (10 minutes)

Build, Cross Out and Record

Students use base-10 materials or drawings to solve subtraction problems. They build or draw the whole number, cross out or remove the part subtracted, count what is left and record the subtraction algorithm.

Ask: 'What is the whole number? What part did you subtract? How many tens are left? How many ones are left?'

Hands-On Activity 2 (10 minutes)

Write the Algorithm

Students complete subtraction algorithms using tens-and-ones tables. Use: $9 - 7$, $18 - 5$, $25 - 4$, $17 - 3$, $38 - 7$, $29 - 14$. Students record the numbers in the correct places and solve.

Ask: 'Which digit goes in the tens place? Which digit goes in the ones place? What do you subtract first? What is the answer?'

Student Book Practice

Students complete **page 36 — Subtraction**.

Focus: Subtracting one- and two-digit numbers from a two-digit number using a place value chart well as recording subtraction equations and completing simple word problems involving subtraction

Mathseeds Online Practice

Lesson: Lesson 85, Find the difference (2)

Focus: Solve subtraction problems using find the difference. Represent objects with a written numeral to solve subtraction problems. Solve subtraction problems using a number line. Represent a written numeral with objects to solve subtraction problems. Work out the unknown number in a subtraction equation.

Reflect and Check (5 minutes)

Quick questions:

- 17 balloons. 5 floated away. How many are left?
- 26 cats. 4 ran away. How many are left?
- 18 sweets. 7 got eaten. How many are left?

Exit Question

How do tens and ones help us complete a subtraction algorithm?

Next Steps for Teacher

- Reinforce recognising tens and ones and subtracting
- Support setting out subtraction algorithms correctly
- Recording answers in the correct place
- Solving subtraction word problems
- Extend confident students by asking them to solve two-digit subtraction algorithms and check using related addition facts.

Curriculum and Planning Links

NZ Curriculum – Number

Operations

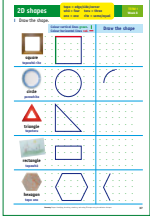
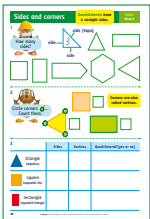
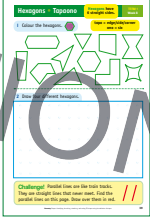
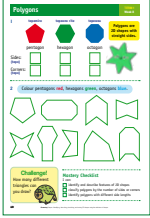
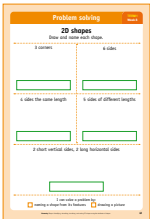
Knowledge

- Numbers can be subtracted using representations, mental strategies, known facts and place value.

Practices

- Subtracting numbers up to 100

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> 

DAILY LESSON PLAN Week 8 • Lesson 1

Topic: 2D shapes

In this lesson, students identify, describe and draw common 2D shapes. Students explore the features of shapes, including sides, corners and curved lines, and practise recognising shapes in different orientations and sizes.

Learning Intention

Students will understand that 2D shapes can be identified and described by their features.

Success Criteria

- ✓ I can identify common 2D shapes.
- ✓ I can describe shapes using sides and corners.
- ✓ I can draw 2D shapes.
- ✓ I can recognise shapes in different sizes and positions.
- ✓ I can explain how I know what shape it is.

Language Focus

Key terms: 2D shape, square, circle, triangle, rectangle, hexagon, side, corner, curved line, straight line

Sentence stems:

- This shape is a ____.
- It has ____ sides.
- It has ____ corners.
- The shape has curved/straight lines.
- I know it is a ____ because ____.

Launch Activity (5 minutes)

Display several large 2D shape cards around the classroom. Ask students to name the shapes and discuss what they notice about each one. Encourage students to describe the shapes using mathematical language such as sides, corners and curved lines.

Assessment for Learning

Ask:

- Which shape has no corners?
- Which shapes have straight sides?
- How can you tell a square and rectangle are different?

Explicit Instruction (10–12 minutes)

1. Identifying 2D Shapes

I Do • Display common 2D shapes and model naming each shape while describing its features.

Explain: Shapes can be identified by the number of sides and corners they have.

We Do • Identify and describe several shapes together.

Ask: 'How many sides does this shape have? Does it have curved or straight lines?'

You Do • Students identify shape cards and describe their features with a partner. Check for understanding through oral questioning.

2. Describing Shape Features

I Do • Model counting the sides and corners of different shapes carefully.

Think aloud: 'This triangle has 3 straight sides and 3 corners.'

We Do • Count and discuss the features of several shapes together.

Ask: 'Which shape has the most sides? Which shape has no corners?'

You Do • Students sort shapes by features such as number of sides or corners.

3. Drawing 2D Shapes

I Do • Demonstrate drawing common 2D shapes carefully on grid paper or a whiteboard.

Explain: Straight sides and clear corners help make accurate shapes.

We Do • Draw several shapes together step-by-step.

Ask: 'What shape are we drawing? How many sides will it need?'

You Do • Students draw and label common 2D shapes independently.

Check for understanding by asking students to explain how they drew the shapes.

Differentiation Tips

Support

- Use large visual shape cards and tracing activities.
- Focus first on circles, squares, triangles and rectangles.
- Provide guided support counting sides and corners.

Extension

- Challenge students to identify shapes in the classroom environment.
- Ask students to compare similarities and differences between shapes.
- Encourage students to draw more complex shapes such as hexagons.

Teaching as Inquiry

Observe which students can confidently describe shape features and which students still confuse sides and corners.

Hands-On Activity 1 (10 minutes)

Shape Hunt

Students search the classroom for real-life examples of 2D shapes. They record or draw objects they find and identify the matching shape.

Hands-On Activity 2 (10 minutes)

Build a Shape

Students use craft sticks, string or geoboards to create different 2D shapes. They describe the features of each shape they build.

Student Book Practice

Students complete **page 37** in their workbooks: **2D Shapes**

Focus: Identify, describe and draw common 2D shapes.

Mathseeds Online Practice

Lesson: Lesson 52, Sorting and Grouping 2D Shapes

Focus: Recognise and classify familiar two-dimensional shapes. Compose two-dimensional shapes. Match two-dimensional shapes to their names. Identify shapes as two-dimensional or three-dimensional.

Reflect and Check (5 minutes)

Quick questions:

- Which shape has 3 sides?
- Which shape has no corners?
- How many sides does a hexagon have?
- What makes a square different from a rectangle?

Exit Question

How do sides and corners help us recognise shapes?

Feedback

Praise students for carefully describing and drawing shapes using correct geometry vocabulary.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still confuse shape names or features.
- Provide additional practice counting sides and corners.
- Extend confident students with shape comparisons and real-world shape identification.

Curriculum and Planning Links

NZ Curriculum – Geometry

Shapes

Knowledge

- Te reo Māori supports identifying shape attributes (e.g. triangle/tapatoru, square/tapawhā rite, same/ōrite, different/rerekē).

Practices

- Identifying, describing, visualising and sorting 2D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), using the attributes of shapes

DAILY LESSON PLAN Week 8 • Lesson 2**Topic:** Sides and corners

In this lesson, students identify and describe the sides and corners of 2D shapes. They explore how shapes can be sorted and classified by their attributes, including recognising quadrilaterals as shapes with 4 straight sides.

Learning Intention

Students will understand that 2D shapes can be described and classified by their sides and corners.

Success Criteria

- ✓ I can identify the sides and corners of 2D shapes.
- ✓ I can count the sides and corners of shapes accurately.
- ✓ I can describe shapes using mathematical language.
- ✓ I can recognise quadrilaterals.
- ✓ I can explain how I know what shape it is.

Language Focus

Key terms: side, corner, vertex, vertices, quadrilateral, triangle, square, rectangle, hexagon

Sentence stems:

- The shape has ___ sides.
- The shape has ___ corners/vertices.
- A quadrilateral has ___ sides.
- I know this shape is a ___ because ___.
- The sides are straight/curved.

Launch Activity (5 minutes)

Display several large 2D shapes around the classroom. Review the words 'side' and 'corner/vertex'. Count the sides and corners of a triangle together. Introduce the word 'quadrilateral' and explain that quadrilaterals have 4 straight sides.

Assessment for Learning

Ask:

- How many sides does a triangle have?
What is another word for corner?
- Which shapes have 4 straight sides?

Explicit Instruction (10–12 minutes)**1. Identifying Sides and Corners**

I Do • Display different 2D shapes and model counting the sides and corners carefully.

Explain: Sides are the straight edges of a shape and corners are where the sides meet.

We Do • Count the sides and corners of several shapes together.

Ask: 'How many sides does this shape have? How many corners?'

You Do • Students work with partners identifying and counting sides and corners on shape cards. Check for understanding through oral questioning.

2. Exploring Quadrilaterals

I Do • Display examples of quadrilaterals such as squares and rectangles.

Think aloud: 'These shapes are quadrilaterals because they each have 4 straight sides.'

We Do • Sort several shapes together into quadrilaterals and non-quadrilaterals.

Ask: 'Does this shape have 4 straight sides?'

You Do • Students sort shape cards into groups and explain their reasoning.

3. Describing and Comparing Shapes

I Do • Model describing a shape using the number of sides and corners, e.g. 'This hexagon has 6 sides and 6 corners.'

We Do • Compare several shapes together using geometry vocabulary.

Ask: 'Which shape has the most sides? Which shapes have the same number of corners?'

You Do • Students describe shapes to a partner who guesses the shape. Check for understanding through partner discussions.

Differentiation Tips

Support

- Use large hands-on shape models.
- Focus first on common shapes such as triangles, squares and rectangles.
- Provide guided support counting sides and corners.

Extension

- Challenge students to identify shapes with more than 4 sides.
- Ask students to explain similarities and differences between quadrilaterals.
- Encourage students to find quadrilaterals in the classroom environment.

Teaching as Inquiry

Observe which students confidently identify sides and corners and which students still confuse the two attributes.

Hands-On Activity 1 (10 minutes)

Shape Sorting Challenge

Students sort shape cards into groups based on the number of sides or corners. They explain how they decided where each shape belongs.

Hands-On Activity 2 (10 minutes)

Build and Count

Students use craft sticks, pipe-cleaners or geoboards to create different 2D shapes. They count and record the number of sides and corners for each shape they build.

Student Book Practice

Students complete **page 38** of their workbooks: **Sides and corners**
Focus: Identify and count sides and corners of 2D shapes and recognise quadrilaterals.

Mathseeds Online Practice

Lesson: Lesson 52, Sorting and Grouping 2D Shapes

Focus: Recognise and classify familiar two-dimensional shapes. Compose two-dimensional shapes. Match two-dimensional shapes to their names. Identify shapes as two-dimensional or three-dimensional.

Reflect and Check (5 minutes)

Quick questions:

- How many sides does a square have?
- What is another word for corner?
- Which shapes are quadrilaterals?
- Why is a circle different from other shapes?

Exit Question

How do sides and corners help us describe and sort shapes?

Feedback

Praise students for carefully counting sides and corners and using geometry vocabulary accurately.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still confuse sides and corners.
- Provide additional practice sorting and describing shapes.
- Extend confident students with more complex polygons and shape comparisons.

Curriculum and Planning Links

NZ Curriculum – Geometry

Shapes

Knowledge

- Te reo Māori supports identifying shape attributes (e.g. triangle/tapatoru, square/tapawhā rite, same/ōrite, different/rerekē).

Practices

- Identifying, describing, visualising and sorting 2D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), using the attributes of shapes

DAILY LESSON PLAN Week 8 • Lesson 3**Topic:** Hexagons

In this lesson, students identify, describe and draw hexagons. Students explore the features of hexagons, including their 6 straight sides and 6 corners and compare hexagons with other 2D shapes.

Learning Intention

Students will understand that hexagons are 2D shapes with 6 straight sides.

Success Criteria

- ✓ I can identify a hexagon.
- ✓ I can describe the features of a hexagon.
- ✓ I can count the sides and corners of a hexagon.
- ✓ I can draw different hexagons.
- ✓ I can compare hexagons with other shapes.

Language Focus

Key terms: hexagon, side, corner, vertex, straight line, parallel lines, 2D shape

Sentence stems:

- A hexagon has ___ sides.
- A hexagon has ___ corners.
- The sides are straight/curved.
- This shape is/is not a hexagon because ___.
- I know this is a hexagon because ___.

Launch Activity (5 minutes)

Display several 2D shapes, including hexagons and non-hexagons. Ask students to identify which shapes are hexagons and explain their reasoning. Review that hexagons have 6 straight sides.

Assessment for Learning

Ask:

- How many sides does a hexagon have?
- Does a hexagon have curved sides?
- Can hexagons look different but still be hexagons?

Explicit Instruction (10–12 minutes)**1. Identifying Hexagons**

I Do • Display several shapes and model identifying which are hexagons by counting the sides carefully.

Explain: A hexagon must have 6 straight sides.

We Do • Count the sides and corners of several shapes together.

Ask: 'Does this shape have 6 straight sides? Is it a hexagon?'

You Do • Students sort shape cards into hexagons and non-hexagons. Check for understanding through partner discussion.

2. Describing Hexagon Features

I Do • Model describing a hexagon using geometry vocabulary.

Think aloud: 'This shape has 6 straight sides and 6 corners, so it is a hexagon.'

We Do • Compare hexagons with triangles, squares and rectangles.

Ask: 'What is different about a hexagon? Which shapes have fewer sides?'

You Do • Students describe shapes to a partner using mathematical language.

3. Drawing Hexagons

I Do • Demonstrate drawing a hexagon carefully on dot paper or a whiteboard.

Explain: Hexagons can look different, but they must always have 6 straight sides.

We Do • Draw a hexagon together step-by-step.

Ask: 'How many sides have we drawn so far?'

You Do • Students draw different hexagons independently on dot paper or mini-whiteboards. Check for understanding by asking students to explain why their shape is a hexagon.

Differentiation Tips

Support

- Use large visual examples of hexagons.
- Provide guided counting of sides and corners.
- Use tracing activities before independent drawing.

Extension

- Challenge students to draw irregular hexagons.
- Ask students to identify parallel sides within hexagons.
- Encourage students to compare hexagons with other polygons.

Teaching as Inquiry

Observe which students can accurately identify 6 straight sides and which students still confuse curved and straight edges.

Hands-On Activity 1 (10 minutes)

Hexagon Hunt

Students search the classroom or outdoor area for objects or patterns that include hexagon shapes. They draw or record the hexagons they find and describe their features.

Hands-On Activity 2 (10 minutes)

Build Different Hexagons

Students use craft sticks, geoboards, string or pipe-cleaners to create different hexagons. They compare their hexagons and discuss how the shapes are similar or different.

Student Book Practice

Students complete **page 39** of their workbooks: **Hexagons**

Focus: Identify, describe and draw hexagons with 6 straight sides.

Mathseeds Online Practice

Lesson: Lesson 52, Sorting and Grouping 2D Shapes

Focus: Recognise and classify familiar two-dimensional shapes.

Compose two-dimensional shapes. Match two-dimensional shapes to their names. Identify shapes as two-dimensional or three-dimensional.

Reflect and Check (5 minutes)

Quick questions:

- How many sides does a hexagon have?
- Does a hexagon have straight or curved sides?
- Can hexagons look different sizes?
- What helps us identify a hexagon?

Exit Question

How do sides and corners help us know a shape is a hexagon?

Feedback

Praise students for carefully identifying and drawing hexagons and using geometry vocabulary correctly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to count sides accurately.
- Provide additional practice comparing polygons.
- Extend confident students with irregular hexagons and parallel side investigations.

Curriculum and Planning Links

NZ Curriculum – Geometry

Shapes

Knowledge

- Te reo Māori supports identifying shape attributes (e.g. triangle/ tapatoru, square/tapawhā rite, same/ōrite, different/rerekē).

Practices

- Identifying, describing, visualising and sorting 2D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), using the attributes of shapes

DAILY LESSON PLAN Week 8 • Lesson 4

Topic: Polygons

In this lesson, students identify and describe polygons by their sides and corners. They explore pentagons, hexagons and octagons and classify shapes according to their attributes.

Learning Intention

Students will understand that polygons are 2D shapes with straight sides.

Success Criteria

- ✓ I can identify polygons.
- ✓ I can count the sides and corners of polygons.
- ✓ I can describe polygons using mathematical language.
- ✓ I can sort polygons by their features.
- ✓ I can explain how I know what polygon it is.

Language Focus

Key terms: polygon, pentagon, hexagon, octagon, side, corner, vertex, straight sides

Sentence stems:

- A polygon has ___ sides.
- This shape is a ___.
- The shape has ___ corners.
- I know it is a polygon because ___.
- The sides are straight.

Launch Activity (5 minutes)

Display several 2D shapes including polygons and non-polygons. Discuss what students notice about the shapes. Introduce the word 'polygon' and explain that polygons are closed 2D shapes with straight sides.

Assessment for Learning

Ask:

- What makes a shape a polygon?
Does a polygon have curved sides?
- Which polygon has 8 sides?

Explicit Instruction (10–12 minutes)

1. Identifying Polygons

I Do • Display a variety of shapes and model identifying polygons by checking for straight sides.

Explain: Polygons are closed shapes made only from straight sides.

We Do • Sort shapes together into polygons and non-polygons.

Ask: 'Does this shape have straight sides? Is it closed?'

You Do • Students sort shape cards into groups and explain their choices. Check for understanding through class discussion.

2. Exploring Polygon Features

I Do • Model counting the sides and corners of a pentagon, hexagon and octagon.

Think aloud: 'This octagon has 8 sides and 8 corners.'

We Do • Count and compare the sides and corners of several polygons together.

Ask: 'Which polygon has the most sides? Which polygons have fewer than 6 sides?'

You Do • Students identify and describe polygons with a partner using mathematical vocabulary.

3. Classifying Polygons

I Do • Demonstrate sorting polygons by the number of sides.

Explain: The number of sides helps us name and classify polygons.

We Do • Sort several polygons into groups together.

Ask: 'Which shapes belong in the hexagon group? Why?'

You Do • Students classify polygons into groups such as pentagons, hexagons and octagons. Check for understanding through partner explanations.

Differentiation Tips

Support

- Use large visual polygon cards.
- Focus first on identifying straight sides.
- Provide guided support counting sides and corners.

Extension

- Challenge students to draw their own polygons.
- Ask students to compare polygons with different numbers of sides.
- Encourage students to identify polygons in the environment.

Teaching as Inquiry

Observe which students can confidently identify polygons and which students still confuse polygons with curved shapes.

Hands-On Activity 1 (10 minutes)

Polygon Hunt

Students search the classroom or outdoor environment for examples of polygons. They draw or record the polygons they find and identify how many sides each shape has.

Hands-On Activity 2 (10 minutes)

Create a Polygon

Students use craft sticks, geoboards, string or pipe-cleaners to build different polygons. They count and label the sides and corners of each polygon they create.

Student Book Practice

Students complete **page 40** of their workbooks: **Polygons**

Focus: Identify, describe and classify polygons by the number of sides and corners.

Mathseeds Online Practice

Lesson: Lesson 52, Sorting and Grouping 2D Shapes

Focus: Recognise and classify familiar two-dimensional shapes. Compose two-dimensional shapes. Match two-dimensional shapes to their names. Identify shapes as two-dimensional or three-dimensional.

Reflect and Check (5 minutes)

Quick questions:

- What makes a shape a polygon?
- How many sides does a pentagon have?
- Which polygon has 8 sides?
- Can a polygon have curved sides?

Exit Question

How do sides and corners help us classify polygons?

Feedback

Praise students for carefully identifying and describing polygons using geometry vocabulary.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to count polygon sides accurately.
- Provide additional practice sorting polygons by attributes.
- Extend confident students with more complex polygons and drawing challenges.

Curriculum and Planning Links

NZ Curriculum – Geometry

Shapes

Knowledge

- Te reo Māori supports identifying shape attributes (e.g. triangle/ tapatoru, square/tapawhā rite, same/ōrite, different/rerekē).

Practices

- Identifying, describing, visualising and sorting 2D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), using the attributes of shapes

DAILY LESSON PLAN Week 8 • Lesson 5**Topic:** Problem solving: 2D shapes

In this lesson, students apply their understanding of 2D shapes to solve geometry problems. They identify, describe, compare and draw shapes using attributes such as sides, corners and side lengths.

Learning Intention

Students will understand how to use shape features to solve problems about 2D shapes.

Success Criteria

- ✓ I can identify 2D shapes using their features.
- ✓ I can describe shapes by their sides and corners.
- ✓ I can draw shapes that match given clues.
- ✓ I can compare shapes using mathematical language.
- ✓ I can explain my reasoning when solving shape problems.

Language Focus

Key terms: 2D shape, polygon, side, corner, vertex, square, rectangle, triangle, pentagon, hexagon, equal sides

Sentence stems:

- This shape has ___ sides.
- This shape has ___ corners.
- I know the shape is a ___ because ___.
- The sides are equal/different lengths.
- I used the clues to draw the shape.

Launch Activity (5 minutes)

Display several 2D shapes with some features hidden. Suggested clues: *This shape has 3 corners. This shape has 4 equal sides. This shape has 6 sides.* Students guess and explain which shape matches the clues.

Assessment for Learning

Ask:

- Which shape has 3 corners?
Which shape has 6 sides?
- What makes a square different from a rectangle?

Explicit Instruction (10–12 minutes)**1. Using Shape Clues**

I Do • Model reading shape clues and identifying the matching shape.

Think aloud: 'A shape with 6 sides is a hexagon.'

We Do • Solve several shape clue problems together.

Ask: 'Which clue helps us identify the shape?'

You Do • Students identify shapes from spoken or written clues. Check for understanding through class discussion.

2. Drawing Shapes from Descriptions

I Do • Demonstrate drawing a shape using given clues about sides and corners.

Explain: We can use shape features to help draw accurately.

We Do • Draw several shapes together using clues such as number of sides or equal lengths.

Ask: 'How many sides should this shape have?'

You Do • Students draw shapes that match different descriptions.

3. Explaining Shape Reasoning

I Do • Model explaining why a shape matches a clue using geometry vocabulary, e.g. 'This is a rectangle because it has 4 sides and opposite sides are equal.'

We Do • Discuss and explain several shape examples together.

Ask: 'How do you know your answer is correct?'

You Do • Students explain their shape choices and drawings to a partner. Check for understanding through partner explanations.

Differentiation Tips

Support

- Use shape cards and visual prompts.
- Focus first on common shapes such as triangles, squares and rectangles.
- Provide guided support reading shape clues.

Extension

- Challenge students to create their own shape riddles.
- Ask students to draw irregular polygons.
- Encourage students to compare shapes with similar features.

Teaching as Inquiry

Observe which students can use shape features confidently to solve problems and which students still rely on visual recognition only.

Problem Solving and Reasoning

Discuss

- How do clues about sides and corners help identify shapes?
- Why can different-looking shapes still belong to the same group?
- How do equal sides help identify a square?
- Why is it important to explain your reasoning?

Encourage students to explain their thinking using geometry language, such as: 2D shape, polygon, side, corner, vertex, equal sides, square, rectangle, triangle, pentagon, hexagon

Hands-On Activity 1 (10 minutes)

Shape Riddle Cards

Students work in pairs creating and solving shape riddles using clues about sides, corners and side lengths. They explain how they identified each shape.

Hands-On Activity 2 (10 minutes)

Build the Shape

Students use craft sticks, geoboards or string to build shapes that match teacher-given clues. Example clues: *4 equal sides*, *6 sides*, *3 corners*. Students explain how their shape matches the clues.

Student Book Practice

Students complete **page 41** of their workbooks: **Problem solving: 2D shapes**

Focus: Solve problems involving shape features, sides, corners and equal side lengths.

Mathseeds Online Practice

Lesson: Lesson 52, Sorting and Grouping 2D Shapes

Focus: Recognise and classify familiar two-dimensional shapes. Compose two-dimensional shapes. Match two-dimensional shapes to their names. Identify shapes as two-dimensional or three-dimensional.

Reflect and Check (5 minutes)

Quick questions:

- Which shape has 5 sides?
- What shape has 4 equal sides?
- How many corners does a triangle have?
- Why is a hexagon different from a pentagon?

Exit Question

How do shape clues help us solve geometry problems?

Feedback

Praise students for using shape features carefully and explaining their reasoning clearly using geometry vocabulary.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to connect shape names with attributes.
- Provide further practice with shape clues and classification tasks.
- Extend confident students with more complex polygon investigations and shape riddles.

Curriculum and Planning Links

NZ Curriculum – Geometry

Shapes

Knowledge

- Te reo Māori supports identifying shape attributes (e.g. triangle/ tapatoru, square/tapawhā rite, same/ōrite, different/rerekē).

Practices

- Identifying, describing, visualising and sorting 2D shapes, including ovals, semicircles, polygons (e.g. hexagons, pentagons), using the attributes of shapes

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

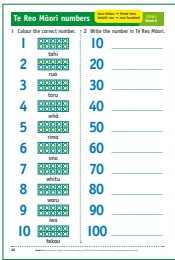
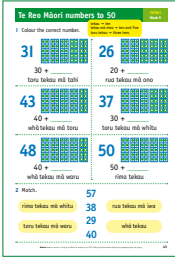
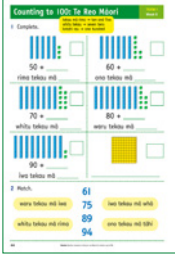
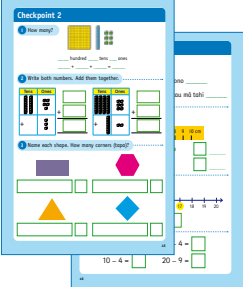
Reflection Prompts

- 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> 

DAILY LESSON PLAN Week 9 • Lesson 1**Topic:** Te Reo Māori numbers

In this lesson, students explore and use te reo Māori number names for numbers to 10 and multiples of ten to 100. Students connect numerals, quantities and te reo Māori number words through counting, matching, reading and writing activities.

Learning Intention

Students will understand that numbers can be represented using te reo Māori number names.

Success Criteria

- ✓ I can recognise te reo Māori numbers to 10.
- ✓ I can match numerals to te reo Māori number names.
- ✓ I can read and write multiples of ten in te reo Māori.
- ✓ I can connect quantities with number words.
- ✓ I can explain how numerals and number names match.

Language Focus

Key terms: tahi, rua, toru, whā, rima, ono, whitu, waru, iwa, tekau, numeral, quantity, number word

Sentence stems:

- The number ___ is called ___.
- ___ means ___.
- I matched the numeral to the number word.
- There are ___ objects.
- The te reo Māori number for ___ is ___.

Launch Activity (5 minutes)

Display number cards from 1–10 alongside te reo Māori number words. Count together aloud in te reo Māori from 1–10. Encourage students to repeat the pronunciation and match the number words to the numerals.

Assessment for Learning

Ask:

- What is the te reo Māori word for 3?
- Which numeral matches rima?
- How do we say 10 in te reo Māori?

Explicit Instruction (10–12 minutes)**1. Matching Numerals and Te Reo Māori Number Words**

I Do • Model matching numerals to te reo Māori number words using number cards and quantities.

Explain: Number words represent quantities and numerals.

We Do • Match several numerals and number words together as a class.

Ask: 'Which number word matches this numeral?'

You Do • Students work with partners matching numeral cards, quantities and te reo Māori number words. Check for understanding through oral questioning.

2. Reading and Saying Te Reo Māori Numbers

I Do • Model reading te reo Māori number words clearly and counting aloud.

Think aloud: 'Toru means 3, so I can match it to the numeral 3.'

We Do • Practise reading and saying numbers together from 1–10 and multiples of ten.

Ask: 'What number does waru represent?'

You Do • Students practise reading number cards aloud with a partner.

3. Writing Multiples of Ten in Te Reo Māori

I Do • Demonstrate writing multiples of ten in te reo Māori.

Explain: 'Tekau' means ten and larger numbers can be grouped by tens.

We Do • Write several multiples of ten together.

Ask: 'How would we write 30 in te reo Māori?'

You Do • Students practise writing multiples of ten from 10–100 in te reo Māori. Check for understanding through partner sharing.

Differentiation Tips

Support

- Use visual number cards with quantities.
- Practise orally before written tasks.
- Focus first on numbers 1–5 before extending to 10 and beyond.

Extension

- Challenge students to count forwards and backwards in te reo Māori.
- Ask students to identify patterns in multiples of ten.
- Encourage students to use te reo Māori numbers during classroom routines.

Teaching as Inquiry

Observe which students confidently connect te reo Māori number words with numerals and which students still rely heavily on visual supports.

Hands-On Activity 1 (10 minutes)

Te Reo Māori Counting Circle

Students sit or stand in a circle and pass a soft ball or counter around while counting aloud in te reo Māori.

Challenge students to count forwards from different starting numbers, count backwards from 10, stop on a chosen number word and say the matching numeral when holding the object. Encourage students to support each other with pronunciation and number sequencing.

Hands-On Activity 2 (10 minutes)

Number Word Relay

Place numeral cards and te reo Māori number cards around the room. Students move around the classroom matching the correct numeral and number word pairs.

Student Book Practice

Students complete **page 42** of their workbooks: **Te Reo Māori numbers**

Focus: Match numerals and quantities to te reo Māori number words and write multiples of ten.

Reflect and Check (5 minutes)

Quick questions:

- What is the te reo Māori word for 5?
- Which numeral matches 'ono'?
- How do we say 10 in te reo Māori?
- What pattern do you notice in multiples of ten?

Exit Question

'How do number words help us understand and represent numbers?'

Feedback

Praise students for confidently using te reo Māori number words and matching them accurately to numerals and quantities.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still confuse te reo Māori number words and numerals.
- Provide additional oral counting practice and matching activities.
- Extend confident students with larger numbers and counting patterns.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- Arranging objects into groups can help when finding their total.

Practices

- Using te reo Māori for numbers up to 100
- Finding the total number of objects up to 120 by separating them into groups

DAILY LESSON PLAN Week 9 • Lesson 2**Topic:** Te reo Māori numbers to 50

In this lesson, students explore te reo Māori numbers to 50 by connecting numerals, tens, ones and number words. Students practise reading, matching, building and representing numbers using place value understanding.

Learning Intention

Students will understand how te reo Māori number words represent tens and ones to 50.

Success Criteria

- ✓ I can recognise te reo Māori numbers to 50.
- ✓ I can match te reo Māori number words to numerals.
- ✓ I can identify tens and ones in a number.
- ✓ I can read and build numbers to 50.
- ✓ I can explain how a number is made using tens and ones.

Language Focus

Key terms: tekau, mā, numeral, tens, ones, quantity, place value

Te reo Māori numbers: tahi, rua, toru, whā, rima, ono, whitu, waru, iwa, tekau

Sentence stems:

- The number ___ is ___.
- This number has ___ tens and ___ ones.
- ___ tekau means ___ tens.
- I matched the number word to the numeral because ___.
- The numeral ___ is made from ___ tens and ___ ones.

Launch Activity (5 minutes)

Display several numbers using tens frames or bundled sticks (e.g. 26, 31, 43). Review that 'tekau' means ten and discuss how larger numbers are built using tens and ones. Count several examples together in te reo Māori.

Assessment for Learning

Ask:

- What does tekau mean?
- How many tens are in 30?
- What number is toru tekau mā whitu?

Explicit Instruction (10–12 minutes)**1. Building Numbers with Tens and Ones**

I Do • Model building a number using tens frames, bundles or place value blocks.

Think aloud: '47 has 4 tens and 7 ones, so in te reo Māori it is whā tekau mā whitu.'

We Do • Build several numbers together using tens and ones materials.

Ask: 'How many tens? How many ones?'

You Do • Students build numbers to 50 using place value materials and explain the tens and ones. Check for understanding through partner discussions.

2. Reading and Matching Te Reo Māori Numbers

I Do • Model matching te reo Māori number words to numerals.

Explain: The tens tell us how many groups of ten there are.

We Do • Match several numerals and number words together as a class.

Ask: 'Which numeral matches whā tekau mā toru?'

You Do • Students practise matching number cards with te reo Māori number words.

3. Representing Numbers to 50

I Do • Demonstrate representing numbers using drawings, ten frames or place value blocks.

Explain: Numbers can be shown using groups of tens and ones.

We Do • Represent several numbers together and discuss the place value.

Ask: 'What does the digit in the tens place tell us?'

You Do • Students represent numbers to 50 using materials or drawings.

Check for understanding through sharing explanations.

Differentiation Tips

Support

- Use visual tens frames and concrete materials.
- Focus first on numbers to 30 before extending to 50.
- Provide oral repetition of te reo Māori number patterns.

Extension

- Challenge students to count forwards and backwards by tens in te reo Māori.
- Ask students to build and read numbers greater than 50.
- Encourage students to identify patterns in tens and ones.

Teaching as Inquiry

Observe which students can confidently connect te reo Māori number words with place value and which students still rely heavily on visual supports.

Problem Solving and Reasoning

Discuss:

- How do tens help us build larger numbers?
- Why is place value important when reading numbers?
- How can we use patterns to help read te reo Māori numbers?
- Why do we group objects into tens?

Encourage students to explain their thinking using mathematical and te reo Māori language, such as tekau, mā, tens, ones, numeral, quantity, place value

Hands-On Activity 1 (10 minutes)

Build the Number

Students use place value blocks, counters or bundled sticks to build numbers called out in te reo Māori. They explain how many tens and ones are in each number.

Hands-On Activity 2 (10 minutes)

Te Reo Māori Number Walk

Place numeral cards and te reo Māori number cards around the classroom. Students walk around the room finding matching pairs and recording the matching numeral and number word in their books or on mini whiteboards.

Student Book Practice

Students complete **page 43** of their workbooks: **Te reo Māori Numbers to 50**

Focus: Match te reo Māori number words to numerals and identify tens and ones in numbers to 50.

Reflect and Check (5 minutes)

Quick questions:

- What does 'rua tekau' mean?
- How many tens are in 40?
- What number is 'toru tekau mā waru'?
- How many ones are in 26?

Exit Question

'How do tens and ones help us understand larger numbers?'

Feedback

Praise students for confidently using te reo Māori number words and explaining place value clearly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to connect tens and ones with te reo Māori number words.
- Provide additional practice building and reading numbers to 50.
- Extend confident students with larger numbers and skip-counting patterns.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- Arranging objects into groups can help when finding their total.

Practices

- Using te reo Māori for numbers up to 100
- Finding the total number of objects up to 120 by separating them into groups

DAILY LESSON PLAN Week 9 • Lesson 3**Topic: Money**

In this lesson, students practise reading, building and representing numbers to 100 using te reo Māori number words and place value understanding. Students connect tens and ones to numerals, quantities and number names.

Learning Intention

Students will understand how te reo Māori number words represent numbers to 100 using tens and ones.

Success Criteria

- ✓ I can read te reo Māori numbers to 100.
- ✓ I can identify tens and ones in a number.
- ✓ I can match numerals to te reo Māori number words.
- ✓ I can represent numbers using place value materials.
- ✓ I can explain how numbers are built using tens and ones.

Language Focus

Key terms: tekau, mā, kotahi rau, tens, ones, numeral, quantity, place value

Te reo Māori numbers: tahi, rua, toru, whā, rima, ono, whitu, waru, iwa, tekau, kotahi rau

Sentence stems:

- The number ___ is ___.
- This number has ___ tens and ___ ones.
- ___ tekau means ___ tens.
- The numeral ___ matches ___.
- I used tens and ones to build the number.

Launch Activity (5 minutes)

Display place value blocks or tens frames showing numbers such as 61, 75 and 89. Review that 'tekau' means ten and discuss how larger numbers are built from groups of tens and ones. Count several examples together in te reo Māori.

Assessment for Learning

Ask:

- How many tens are in 70?
- What does kotahi rau mean?
- What number is ono tekau mā tahi?

Explicit Instruction (10–12 minutes)**1. Building Numbers to 100**

I Do • Model building a number using tens rods and ones cubes. Think aloud: '65 has 6 tens and 5 ones, so it is ono tekau mā rima.'

We Do • Build several numbers together using place value materials.

Ask: 'How many tens? How many ones?'

You Do • Students build numbers to 100 using place value blocks or drawings. Check for understanding through oral explanations.

2. Reading and Matching Te Reo Māori Numbers

I Do • Model reading te reo Māori number words and matching them to numerals.

Explain: The tens part tells us how many groups of ten there are.

We Do • Match several te reo Māori numbers to numerals together.

Ask: 'Which numeral matches iwa tekau mā whā?'

You Do • Students practise reading and matching number cards with a partner.

3. Representing Numbers with Tens and Ones

I Do • Demonstrate representing a number using place value drawings or materials.

Explain: Numbers can be shown using groups of tens and single ones.

We Do • Represent several numbers together and discuss their place value.

Ask: 'What does the tens digit tell us? What does the ones digit tell us?'

You Do • Students draw or build numbers to 100 using tens and ones. Check for understanding through partner sharing.

Differentiation Tips

Support

- Use place value blocks and visual tens models.
- Focus first on multiples of ten before adding ones.
- Provide repeated oral practice with te reo Māori number patterns.

Extension

- Challenge students to count forwards and backwards by tens in te reo Māori.
- Ask students to represent numbers beyond 100.
- Encourage students to identify patterns in the tens and ones structure.

Teaching as Inquiry

Observe which students confidently connect te reo Māori number words with place value and which students still rely on counting all objects individually.

Problem Solving and Reasoning

Discuss

- Why do we group numbers into tens and ones?
- How do tens help us count larger numbers more efficiently?
- How can patterns help us read te reo Māori numbers?
- Why is place value important when representing numbers?

Encourage students to explain their thinking using mathematical and te reo Māori language, such as tekau, mā, kotahi rau, tens, ones, numeral, quantity, place value

Hands-On Activity 1 (10 minutes)

Build and Say the Number

Students use place value blocks or bundled sticks to build numbers called out in te reo Māori. They explain how many tens and ones are in each number.

Hands-On Activity 2 (10 minutes)

Place Value Scoop

Prepare cards with numbers to 100 written in numerals and te reo Māori. Students take turns selecting a card and building the number using place value materials, then reading the number aloud in te reo Māori.

Student Book Practice

Students complete **page 44** in their workbooks: **Counting to 100: te reo Māori**

Focus: Represent, match and read numbers to 100 using te reo Māori number words and place value understanding.

Reflect and Check (5 minutes)

Quick questions:

- What does 'kotahi rau' mean?
- How many tens are in 80?
- What number is 'waru tekau mā iwa'?
- How many ones are in 61?

Exit Question

'How do tens and ones help us understand numbers to 100?'

Feedback

Praise students for confidently using te reo Māori number words and explaining place value clearly.

Next Steps for Teacher (Teaching as Inquiry)

- Identify students who still struggle to connect place value with te reo Māori number words.
- Provide additional practice building and representing numbers to 100.
- Extend confident students with larger numbers and skip-counting challenges.

Curriculum and Planning Links

NZ Curriculum – Number

Number structures

Knowledge

- Arranging objects into groups can help when finding their total.

Practices

- Using te reo Māori for numbers up to 100

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		

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
