Unit 1 Number and place value

Topic 1 2-digit numbers
Student Book pages 2–6

Learning focus

Read, write and model numbers to hundreds using the base-10 place value system

Materials

- a hundred chart
- craft sticks
- rubber bands
- concrete counting materials such as interlocking cubes, craft sticks, rubber bands, 10-frames and counters
- drinking straws
- Unifix cubes
- BLM 1: Sequencing numbers
- BLM 2: Number cards 1–40
- Activity sheet 1: 2-digit numbers (and beyond)

Potential difficulties: Recording numbers

Some students may be able to identify a 2-digit numeral upon hearing it, but may struggle to record the numeral with ones and tens in the correct places.

- Provide opportunities for students to develop the ability to both recognise and write numbers by asking students to read 2-digit numerals aloud. For example, for 36, students point to the part that shows 30 and the part that shows 6 as they say it.
- After students read a number, link the numeral with different representations, such as on a place value chart or with concrete materials.

Daily practice activity

Practise counting back and on from a non-zero starting point in different ways each day. For example, count in quiet voices, count loudly or sing to count. Allow students visual reinforcement in the form of a hundred chart or pictures of each number as they count.

Session 1: Pre-assessment

Students to complete: Pre-test 1, Unit 1, Topic 1, p. 62.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Numbers beyond 20

Revise counting to 20 with students using a hundred chart. Ask students what they notice about the numbers in each of the two top rows of the chart. What’s the same? What’s different? Select 10 students to stand in front of the class. Using cards 21 to 30 from BLM 1: Sequencing numbers, give one card to each of the students and ask them to put themselves in order. Discuss what they have to think about to do this successfully. Compare the numbers the students are holding with the numbers 1 to 20 on the hundred chart. What’s the same? What’s different? What’s the next number after 30? How do students know? Count from 1 to 30 together, using the hundred chart as a prompt. Give cards 31 to 40 to a different set of students and repeat the activity. Discuss the patterns in the sequence.

Starting from 1, hand out the cards from BLM 1 to every student. Ask students to put themselves in order and discuss how they knew where to go. As students become more confident, repeat with sequences that begin at different numbers.

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 2–3. Ask early finishers to practise writing the numbers from 1 to 40 forwards and backwards, and then read them aloud with a partner.

SUPPORT GROUP

Concept exploration and skill development: Revising teen numbers

Many students at this age still confuse numbers that sound similar, such as 15 and 50, so it’s worth taking the time to ensure that their understanding of teen numbers is sound. Model making a bundle of 10 with craft sticks and a rubber band, counting them out before you bundle them. In pairs, have students make their own bundle of 10 sticks. Ask students what number comes after 10, using the hundred chart or counting from one to prompt them if necessary. Have pairs of students make 11 with a bundle of 10 craft sticks and one loose stick. Continue with the same process until each pair has the numbers from 10 to 20 represented in front of them. Ask students to identify things that are similar
and different about all the teen numbers. Discuss the meaning of the suffix “teen” for the numbers 13 to 19.

Ask students to point to 14, making sure you clearly articulate the “teen” part of the word. Repeat with other numbers in the sequence, encouraging students to explain how they knew they had chosen the right number without counting all the sticks. In pairs, students take turns to remove one of the represented numbers while their partner is not looking. The student who was looking away then identifies which number is missing from the sequence. Circulate among the students, ensuring that they’re correctly pronouncing each of the numbers as they go.

Student Book with teacher support
Students to complete: Guided and Independent Practice activities, pp. 2–3. Model the numbers with craft sticks to support students as required.

EXTENSION GROUP

Student Book
Students to complete: Guided and Independent Practice activities, pp. 2–3.

Activity sheet
Students to begin: Activity sheet 1: 2-digit numbers (and beyond).

Session 3: Instruction and consolidation

WHOLE CLASS

Topic exploration: Understanding place value
In mixed-ability pairs, give students a card from BLM 2: Number cards 1–40. Instruct them to make their number using concrete materials. Provide a variety of options, such as interlocking cubes, craft sticks and rubber bands, 10-frames and counters. Allow students the opportunity to share their representations and explain how they know they have the correct number of items.

Model how bundles of 10 can make it faster to make larger numbers. Write a number on the board, such as 32, and ask each pair to make it using craft sticks and rubber bands. How many bundles of 10 will they need? How many loose craft sticks will there be? Repeat with other numbers to give students experience in forming numbers with tens and ones.

AT-STANDARD GROUP

Teacher activity: Comparing numbers
Students can often become confused when comparing the relative size of two numbers if they contain the same digits. Write 35 and 53 on the board and ask students which is larger. How do they know? How could they prove this? Discuss the value of the 3 in each number and the value of the 5 in each number and model the numbers in different ways, such as using interlocking cubes and on a place value chart. You can also investigate numbers where the ones digit is large and the tens digit is smaller, such as 29, compared with numbers where the tens digit is large but the ones digit is smaller, such as 82. Ask students to suggest ways to show which number is larger.

Student Book
Students to complete: Guided and Independent Practice activities, pp. 4–5.

SUPPORT GROUP

Student Book with teacher support
Students to complete: Guided and Independent Practice activities, pp. 4–5. Encourage students to use concrete materials to model the numbers if required.

EXTENSION GROUP

Student Book
Students to complete: Guided and Independent Practice activities, pp. 4–5.

Activity sheet
Students to continue: Activity sheet 1: 2-digit numbers (and beyond).

Session 4: Instruction and consolidation

WHOLE CLASS

Topic exploration: Partitioning numbers
To consolidate students’ understanding of each digit in a 2-digit number, play a game of number mastermind. Draw a tens and ones place value chart on the board. Students must guess a mystery number by partitioning it by place value. For example, they might ask: “Does it have 3 tens and 4 ones?” Write each guess on the chart. If the correct digit is in the correct place, put a tick next to it. If the correct digit is in the wrong place, put a star next to it. If a digit is incorrect, put a cross next to it (see the example below). Students use logic and their knowledge of place value to identify the number.

<table>
<thead>
<tr>
<th>Tens</th>
<th>Ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>
**Topic exploration: Words and numerals**

It's important that students are explicitly taught how to form numbers in words as well as with numerals. Use an online random number generator to generate a number between 1 and 100. Ask students to work in pairs or small groups to write the number in words – you may like to have the number words from 1 to 10 and the tens numbers (20, 30, 40 etc.) on display to help students with spelling. Write the number correctly on the board and discuss with students how it is formed. If the number didn't involve a hyphen, generate a second number to model hyphenating the parts of numbers above 20. Give students practice writing with more examples generated randomly.

Divide students into small teams and generate a new number. Put a time limit on how long the teams can take to write the number in words. Swap the responses and have each team check another team’s answer. If the original team had everything correct, they score a point; if the checking team discovers an error, they score a point. Continue playing for tens numbers, or until a team reaches a designated total.

**AT-STANDARD GROUP**

**Student Book**

Students to complete: Extended Practice activities, p. 6. Early finishers can write some *Who am I?* clues for 2-digit numbers and swap them with a partner to try to identify each other’s numbers.

**SUPPORT GROUP**

**Concept exploration and skill development: Working with 2-digit numbers**

Give each student a drinking straw and some Unifix cubes connected into towers of 10. Have a student throw their straw from a set point and use the blocks to measure how far it went. As a group, support the student to count the groups of 10 and add any single Unifix cubes to find the total distance. In pairs, students take turns to throw their straws and measure and record how far they went. They then compare the numbers to work out who threw their straw the furthest.

**Student Book with teacher support**

Students to complete: Extended Practice activities, p. 6. Use concrete materials such as 10-frames to support the students’ understanding.

**EXTENSION GROUP**

**Student Book**

Students to complete: Extended Practice activities, p. 6.

**Activity sheet**

Students to complete: Activity sheet 1: 2-digit numbers (and beyond).

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**Practice and Mastery Book**

The Practice and Mastery Book can be used as a homework activity or during class time. The Practice activities support the Independent Practice activities in the Student Book; the Challenge activities support the Extended Practice activities in the Student Book; and the Mastery activities allow students to demonstrate their proficiency by applying their knowledge in open-ended and/or real-life problem solving contexts.

**Session 5: Post-assessment**

Students to complete: Post-test 1, Unit 1, Topic 1, p. 63.
Unit 1 Number and place value
Topic 2 Reading and writing numbers
Student Book pages 7–10

Learning focus
Use number names and numerals to represent quantities

Materials
- a selection of counting materials such as craft sticks and rubber bands, and interlocking cubes
- counters
- 10-frames
- BLM 3: Number words
- BLM 4: Number cards 1–100
- Activity sheet 2: Let’s read and write more numbers!

Potential difficulties: Number recognition
Some students may identify and read a numeral displayed in sequential order using their knowledge of the forward counting sequence, rather than their number recognition skills.
- Provide regular opportunities for students to identify and read numerals in non-sequential order, using real-life situations wherever possible.
- Play simple games like Bingo that allow students to practice their number recognition skills.

DAILY PRACTICE ACTIVITY
Each day, allow students to practice writing and representing numbers using different mediums, such as sand, paint, playdough, pencil and paper, string, rope, stamps (potato or digital) and their bodies (individually or in groups).

Session 1: Pre-assessment
Students to complete: Pre-test 1, Unit 1, Topic 2, p. 62.

Session 2: Topic introduction
WHOLE CLASS
Introductory activity: Connecting numerals, words and visual representations
In mixed-ability pairs, allocate students a number between 10 and 100. Their task is to write that number as a numeral and in words, and then draw a representation of the number. Students can also make the number using concrete materials, such as craft sticks and rubber bands, interlocking cubes, or counters and 10-frames. Ask students to line up in order from the largest to the smallest number and discuss how they did this. Display the finished numbers around the room.

AT-STANDARD GROUP
Student Book
Students to complete: Guided and Independent Practice activities, pp. 7–9. Ask early finishers to write five numbers that have a hyphen in them when spelled out. They then use counters to make each number on a 10-frame.

SUPPORT GROUP
Concept exploration and skill development: Exploring number words
In pairs, give students BLM 3: Number words. You may choose to work with just the numbers 1 to 10, or the numbers 10 to 20, 20 to 30, or whatever combination best meets the needs of the students in the group. Give students a specific criterion to look for when you give them their numbers. For example, if working with the numbers 1 to 10, you might ask them to find all the numbers that start with “t” or all the numbers that have three letters. For 10 to 20, you might ask them to find all the numbers that end in “teen” or start with “f”. Ask students to identify which numbers are in the set that they have created to meet your criterion. Repeat with different criteria to allow students to become familiar with reading the words. Encourage them to look at the visual representations of the numbers to support their understanding. Introduce more numbers if students are coping well with your initial selection.

Student Book with teacher support
Students to complete: Guided Practice activities, p. 7. Support students to read the number words and represent them with concrete materials such as 10-frames and counters.

EXTENSION GROUP
Student Book
Students to complete: Guided and Independent Practice activities, pp. 7–9.

Activity sheet
Students to begin: Activity sheet 2: Let’s read and write more numbers!
Session 3: Instruction and consolidation

WHOLE CLASS

**Topic exploration: Writing numbers in words**

Provide explicit instruction in the conventions of writing numbers in words. Brainstorm with students what they know about writing numbers in words. Write a set of numbers on the board, such as 16, 21, 60 and 49. In mixed-ability pairs, ask students to write the numbers in words. Compare their responses to compile a list of common errors, such as leaving out hyphens and misspelling words, e.g. “fourty” instead of “forty”. Use this to create a “Things to remember” reference list for students.

AT-STANDARD GROUP

**Teacher activity: Understanding numeral representations**

One way to help students understand what the separate digits in a number represent is with two sets of digit cards. Make two copies of the numbers 30 to 50 from BLM 4: Number cards 1–100. Students sit in a circle with one set of the numbers in the middle. Choose a card from the second set and display it so that the tens digit is covered and only the ones is visible. Ask students to identify which of the numbers on the floor could be the one in your hand. How can they tell? Repeat with other numbers, hiding the tens or the ones each time. Extend students’ thinking by asking them to identify the number before and the number after the revealed number.

Student Book

Students to complete: Extended Practice activities, p. 10.

SUPPORT GROUP

**Student Book with teacher support**

Students to complete: Independent and Extended Practice activities, pp. 8–10. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, allowing them to refer to any relevant resources for the correct spelling of the words.

EXTENSION GROUP

**Student Book**

Students to complete: Extended Practice activities, p. 10.

**Activity sheet**

Students to complete: Activity sheet 2: Let’s read and write more numbers!

Practice and Mastery Book

See page 4 for information about how to use the Practice and Mastery Book activities.

Session 4: Post-assessment

Students to complete: Post-test 1, Unit 1, Topic 2, p. 63.
Unit 1 Number and place value

Topic 3 Ordering numbers

Student Book pages 11–14

Learning focus

Compare and order cardinal numbers up to 100

Materials

• class hundred chart
• a selection of counting materials such as counters, 10-frames and Unifix cubes
• number sequence resources such as rulers and number lines
• a long piece of string or rope, pegs
• a game of Snakes and ladders (or similar games with counting sequences), dice
• BLM 4: Number cards 1–100
• Activity sheet 3: Finding order

Potential difficulties:

Backwards counting sequences

Students are often far more familiar with forward counting sequences than with counting back. It can be difficult for students to conceptualise that a number that comes after a particular number actually comes before it when counting back.

• Give students opportunities to identify the number before and after while counting on and back, using a number chart for reinforcement.
• Practise counting back in small segments so that students concentrate on and articulate the numbers, rather than racing through a large sequence of numbers without thinking.

DAILY PRACTICE ACTIVITY

Count on and back using a hundred chart within a given range from a different starting point. Cover one number in the sequence and ask students to identify what it is and explain how they know.

Session 1: Pre-assessment

Students to complete: Pre-test 1, Unit 1, Topic 3, p. 62.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Counting from a non-zero starting point

In mixed-ability pairs, ask students to choose a number between 0 and 100, or allocate a number to each pair. Students write the number on a piece of paper and draw or make a visual representation of it. Pairs practise counting on from the number and back from the number, orally and on paper. Provide time for pairs to team up with another pair, share their numbers, and count on and back together.

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 11–13. Ask early finishers to write their own “Colour the number between” clues and options, similar to those on p. 12, question 1.

SUPPORT GROUP

Concept exploration and skill development: Bigger than and smaller than

Start with 1 to 10 or 1 to 20, depending on how confident students are with number sequences. Give students a range of number sequence and counting resources, e.g. rulers, number lines, counters, 10-frames and Unifix cubes. Write a series of challenges within their focus range on the whiteboard, such as:
• Find a number that is smaller than 6.
• Find a number that is larger than 10.
• Find a number larger than 15 but smaller than 20.

In pairs, students identify a number that meets each requirement and, using their choice of the materials provided, report back to the group to show how they know they made a good choice. If appropriate, extend the number range and repeat the activity.

Student Book with teacher support

Students to complete: Guided Practice, p. 11. Use a number line or metre ruler to give students a visual reference for the number sequences as required.

EXTENSION GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 11–12.
**Activity sheet**

Students to begin: Activity sheet 3: Finding order.

### Session 3: Instruction and consolidation

**WHOLE CLASS**

**Topic exploration: Conceptualising number sequences**

Stretch a piece of string or rope across the front of the room and peg a sequence of number cards (from BLM 4: Number cards 1–100) on it, such as 30 to 45. Think of a mystery number and ask students to guess what it is. Each time a number is incorrectly guessed, remove it from the line. Are students able to guess within the range? Repeat with different ranges and numbers, allowing students to choose the mystery number. As students gain confidence, allow them to ask questions (such as “Is the number larger than the number I guessed?”) and stop removing the cards, guiding students to remember and visualise the numbers in the sequence that have already been guessed.

**AT-STANDARD GROUP**

**Teacher activity: Sequencing numbers**

To give students hands-on experience with sequencing numbers and then counting, give each pair of students a different range of numbers from BLM 4. For example, one pair might have 21 to 33 and another 46 to 57. Ask students to arrange them in a forwards or backwards sequence as stepping stones on the floor. Can students walk along the “stepping stones” and say the numbers in order? Give students different sequences of numbers to practise with, ensuring they’re confident with the changeover between tens both forwards and backwards.

**Student Book**


**SUPPORT GROUP**

**Student Book with teacher support**

Students to complete: Independent Practice activities, pp. 12–13. Check in with students as they work through the Independent Practice activities, discussing any difficulties.

**EXTENSION GROUP**

**Student Book**

Students to complete: Independent Practice, p. 13.

**Activity sheet**

Students to continue: Activity sheet 3: Finding order.

### Session 4: Instruction and consolidation

**WHOLE CLASS**

**Topic exploration: Number line sequences**

Creating a number line is a good way to check students’ understanding of a range of number concepts. On the board, draw an empty number line with arrows at both ends. Add a start number (such as 30) on the left. Explain that you want your number line to go from 30 to 40 so you add 10 to the right-hand end of the number line. Ask students how they might work out where the other numbers go. Encourage them to think about ideas such as the middle number between 30 and 40 and the amount of space that will need to go between each number. In mixed-ability pairs, students draw and label their own number lines. Depending on their level of understanding, you might specify the same range for the whole class, give enabling prompts to students who are struggling (such as allocating lower numbers and writing in the start and end numbers for them), or provide extending prompts with larger numbers or bigger ranges of numbers. Encourage pairs to discuss how to place the numbers, and allow time for whole class sharing at the end.

**AT-STANDARD GROUP**

**Student Book**

Students to complete: Extended Practice activities, p. 14. Ask early finishers to find a partner and play a game of Snakes and ladders, or a similar game that involves the counting sequence to 100.

**SUPPORT GROUP**

**Concept exploration and skill development: Number before and number after**

Explicitly teach that the “number after” and the “number before” can refer to only the forwards counting sequence. Choose about 10 students to stand in a line and give each student one of the cards from BLM 4: Number cards 1–100 in a given range (such as 44 to 53). Write a number from the sequence on the board and ask students to suggest what comes before and what comes after it. The students holding those cards can step forward as a visual check of the answers. Repeat with other sequences and numbers.

**Student Book with teacher support**

Students to complete: Extended Practice activities, p. 14. Use concrete materials such as 10-frames to support the students’ understanding.

**EXTENSION GROUP**

**Student Book**

Students to complete: Extended Practice, p. 14.

**Activity sheet**

Students to complete: Activity sheet 3: Finding order.

**Practice and Mastery Book**

See page 4 for information about how to use the Practice and Mastery Book activities.

### Session 5: Post-assessment

**Student Book**

Students to complete: Post-test 1, Unit 1, Topic 3, p. 63.
Unit 1 Number and place value

Topic 4 Counting on

Student Book pages 15–18

Learning focus

Model addition using counting on to solve simple problems.

Materials

- 6-sided dice
- Unifix cubes (optional)
- Counters
- 10-sided dice
- BLM 6: 10-frames
- Activity sheet 4: Numbers and pictures

Potential difficulties:

Miscounting

Some students may count on incorrectly. For example, in their counting tally, some students may include the number they’re counting on from, resulting in the response that 4 + 5 = 8 because they counted 4, 5, 6, 7, 8.

- Use visual representations, such as number charts and concrete materials, to help students learn that they’re not counting the numbers but the increments of one.
- Model counting on using a number line. Focus on counting the jumps between the numbers, rather than the numbers themselves.

DAILY PRACTICE ACTIVITY

Each day, conduct a simple choral counting on activity. For example, write a number such as 16 on the board and lead students to verbally count on 5. They can use their fingers to keep track of how many they’ve counted on, if necessary.

Session 1: Pre-assessment

Students to complete: Pre-test 2, Unit 1, Topic 4, p. 64.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Counting on to a target number

Put students in mixed-ability pairs and provide them with a 6-sided dice and some Unifix cubes or 10-frames and counters. Write a target number on the board, such as 37. Students take turns to roll the dice and collect that number of counters or cubes. Students repeat the process, counting on the cubes or counters each time until someone reaches the target number. Encourage students to articulate the process of counting on, e.g. “27 and another 2 is 28, 29”.

Discuss counting on as a mental strategy students can use to add two numbers. When do students think it might be an appropriate strategy to use?

Repeat the activity with a new target number, this time asking students to estimate the sum of the two numbers before counting on each time. Allow time for students to share their estimation strategies. How does estimating first help them to be sure that they have found the right answer?

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 15–17. Ask early finishers to find a partner to practise counting on with. Students should each roll a 10-sided dice. The student with the larger number counts on to find the sum of the two numbers. If the numbers are the same, students can count on together.

SUPPORT GROUP

Concept exploration and skill development: Trusting the count

To count on successfully, students need a solid understanding of counting sequences, and should be able to trust the count, e.g. if they’re counting on 2 more from 4, they should be able to trust counting on from 4 without having to count all the items. Put five counters of one colour on one of the frames in BLM 6: 10-frames and invite one student to count them using one-to-one correspondence. Ask the group if they agree that there are five, and allow anyone who is not sure to physically count the items. Show students three more counters of a different colour and tell them that you are going to add them to the 10-frame by counting on. Verbalise the process for students: “I have five counters and I am going to count on 3 more – 6, 7, 8”. Invite students to check your answer by counting on together as you point to each of the three counters. Ask students if you need to count the five counters again, and encourage them to articulate why not. Repeat with one or more further examples to consolidate students’ understanding.

In pairs, give students BLM 6 and write a number less than 10 on the board, such as 6. Ask students...
to put six counters of the same colour on one of the 10-frames. How do they know that they have placed the correct number? Allow pairs to check each other’s frames so they’re sure that everyone has six counters. Instruct each pair to add two counters of another colour to the 10-frame by counting on, verbalising the count as a group. How many counters do they have now? Repeat with other numbers of counters to give students the opportunity to count on without counting all.

**Student Book with teacher support**  
Students to complete: Guided Practice activities, p. 15. Support students to read the number words and represent them with concrete materials such as 10-frames and counters as required.

**Extension Group**  
**Student Book**  
Students to complete: Guided and Independent Practice activities, pp. 15–17.

**Activity sheet**  
Students to begin: Activity sheet 4: Numbers and pictures.

**Session 3: Instruction and consolidation**

**Whole Class**  
**Topic exploration: Counting on from the larger number**  
Counting on from the larger number is a much faster and more effective strategy than counting on from the smaller number. Present students with a problem that involves one larger and one smaller number, such as 26 + 4. Choose one student to solve the problem by counting on aloud from 4, while another student tries to solve it by counting on from 26 at the same time. Ask the class to predict which student will finish counting first and why. Conduct the experiment and discuss the results. Repeat with other combinations of smaller and larger numbers. When most students seem to understand the concept, present a number problem with the smaller number first, such as 3 + 32, and ask for a volunteer to solve it using a counting on strategy. Ask the student to nominate which number they will count on from and why, and invite other students to suggest whether they think this is the best choice. Allow the student to solve the problem and discuss the strategy’s effectiveness. Complete a few more examples as a class, inviting one student to suggest which of the numbers you should start from, but conducting the verbal count to find the answer all together.

**Topic exploration: Language of addition**  
Discuss with students the idea that when they are counting on, they are adding. Invite students to suggest what it means to add. Do you end up with more or less than the number you started with? Ask students if they know any other words that can be used to describe adding, and introduce the terms plus and sum if they are not already aware of them. Write a simple addition problem on the board, such as 5 and 7 is 12, and then model it using the other terms.

In pairs, have students choose a 2-digit number and a 1-digit number to add together. Ask students to use your model to write their addition problem and answer in as many ways as they can. Students should also include a visual representation of their problem, using 10-frames, a number line or any other method that they find useful. Display their finished work to reinforce the vocabulary.

**At-Standard Group**  
**Teacher activity: Counting on with skip counting**  
To consolidate understanding of counting on using a visual method, ask five students to stand in front of the class. The first four students display 10 fingers and the fifth displays four fingers. Instruct students to count the tens and then the ones – 10, 20, 30, 40, 41, 42, 43, 44. Discuss the fact that each time you are counting on from the last number, rather than starting from one again. Choose four different students to replace the group at the front, and ask the first three students to hold up 10 fingers and the fourth to hold up three fingers. Invite a student to use skip counting to count how many fingers are on display. Repeat with other combinations of numbers, e.g. you may have four students each hold up five fingers and a fifth student hold up two. Encourage students to verbalise their counts, reinforcing the idea that you don’t have to count each item individually.

**Student Book**  
Students to complete: Extended Practice activities, p. 18.

**Support Group**  
**Student Book with teacher support**  
Students to complete: Independent and Extended Practice activities, pp. 16–18. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, prompting them to find the larger number in each pair and using visual supports such as number lines if needed.

**Extension Group**  
**Student Book**  
Students to complete: Extended Practice activities, p. 18.

**Activity sheet**  
Students to complete: Activity sheet 4: Numbers and pictures.

**Practice and Mastery Book**  
See page 4 for information about how to use the Practice and Mastery Book activities.

**Session 4: Post-assessment**  
Students to complete: Post-test 2, Unit 1, Topic 4, p. 65.
Learning focus

Explore whole-part relationships of 1- and 2-digit numbers

Materials

- hoops, small beanbags
- counters in two different colours
- 5c, 10c, 20c and 50c coins or play money
- Unifix cubes, 6-sided dice
- BLM 6: 10-frames
- BLM 8: Number lines to 20
- Activity sheet 5: Partitioning jelly beans

Potential difficulties: Manipulating numbers

Some students have difficulty with the concept of breaking down numbers to make adding easier.

- Give students opportunities to manipulate concrete materials on 10-frames so they can visualise how bridging to 10 is an effective strategy.
- Build students’ fluency with number bonds to 10 through activities such as handling out digit cards and asking students to pair up with someone so that their cards total 10.

DAILY PRACTICE ACTIVITY

To build on the whole-class introductory activity below, display a different number of counters each day and ask students to suggest and model different ways to partition or share the objects between two people. List the options that they find, and discuss how you might know if they have found all the possible combinations.

Session 1: Pre-assessment

Students to complete: Pre-test 2, Unit 1, Topic 5, p. 64.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Exploring partitioning options

Divide students into small groups and give each group two hoops and 12 small beanbags. Ask students to find different ways to share the beanbags between the hoops, recording their combinations. For example, they might come up with 12 and 0, 11 and 1, and 10 and 2. Can students find all the partitions? Share the results, asking students to explain the strategies they used to find combinations. Repeat with other numbers of beanbags.

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 19–20. Ask early finishers to collect eight counters and explore and record different ways to partition them into three groups.

SUPPORT GROUP

Concept exploration and skill development: Partitioning to ten

Being fluent with number bonds to 10 lays a solid foundation for using partitioning in addition and subtraction with larger numbers. Give each student a copy of BLM 6: 10-frames and counters of two different colours. Ask them to fill one 10-frame with counters of one colour. How many are there? How do they know? Direct students to remove a specific number of counters (such as two) and replace them with a different colour. How many counters do students have altogether now? Discuss how the two different colours represent addends to 10 and how this is useful for addition. Repeat with other combinations and invite students to suggest other pairs of numbers that add up to 10.

If students are ready, extend to using two 10-frames to explore the number bonds to 20.

Student Book with teacher support

Students to complete: Guided Practice activities, p. 19. Support students to use their knowledge of 10-frames to trust the count, rather than counting each item on the 10-frames individually.

EXTENSION GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 19–20.

Activity sheet

Students to begin: Activity sheet 5.

Session 3: Instruction and consolidation

WHOLE CLASS

Topic exploration: Finding complements

Give each student between one and nine counters. Instruct them to find a partner so that their combined
counters add up to 10. Repeat, with students finding a combined total of 12. Alter the activity to suit the needs of the students by allowing three or more addends to make a target number or by giving out larger numbers of counters to work with. Record some of the students’ combinations and invite them to show and explain how they knew they had reached the correct total.

AT-STANDARD GROUP

Teacher activity: Partitioning with money
Money is a useful tool for partitioning because it gives students a real-life context, but the denominations limit students’ explorations to a manageable level. Put out four different denominations of coins. Invite students to suggest ways to make the largest denomination using combinations of the other coins. Record their successful combinations. In pairs, ask students to find combinations for other totals. Have students record their answers or use an empty number line on the whiteboard to talk through their solutions.

Student Book
Students to complete: Independent Practice, p. 21.

SUPPORT GROUP

Student Book with teacher support
Students to complete: Independent Practice activities, pp. 20–21. Check in with students, discussing any difficulties and supporting them, using concrete materials such as 10-frames and counters to model the partitions as needed.

EXTENSION GROUP

Student Book
Students to complete: Independent Practice, p. 21.

Activity sheet
Students to continue: Activity sheet 5.

Session 4: Instruction and consolidation

WHOLE CLASS

Topic exploration: Partitioning on a number line
A number line gives students an alternative way to visualise partitioning. Draw a number line to 10 on the board, or use an interactive whiteboard program. Mark in the partitioning jumps of 5.

Beneath the number line, write “10 is the same as 5 and 5.” Tell students you are going to show them another way to partition 10, and in a different colour mark in a jump to 2 and another from 2 to 10. Write “10 is the same as” and ask students to suggest which two numbers the new jumps are showing make 10. Invite students to give you other combinations and model them on the number line.

In mixed-ability pairs, give students BLM 8: Number lines to 20 and ask them to explore different jumps that can be used to partition 20. Students draw arrows to show their jumps, then write a “20 is the same as” sentence for each one on a separate piece of paper. As a class, discuss students’ findings. Did any pairs think they found all the possible combinations? How would they know?

AT-STANDARD GROUP

Student Book
Students to complete: Extended Practice activities, p. 22. Ask early finishers to work with a partner to try to find all the ways to partition 28 into two parts.

SUPPORT GROUP

Concept exploration and skill development: Consolidating partitioning
To give students experience with partitioning a variety of numbers in multiple ways, make a tower from nine Unifix cubes. Invite a student to roll a 6-sided dice and to break that number of cubes off the tower. How many are left? Record the partition on the board, e.g. “6 and 3 is 9.” Ask pairs of students to make their own tower of nine cubes and to roll a 6-sided dice. Invite the pairs to share how 9 was partitioned by their roll of the dice, and record the different combinations on the board.

Repeat with different starting numbers. As students become more confident, invite them to guess what the matching number in the partition will be before physically breaking the tower apart and checking.

Student Book with teacher support
Students to complete: Extended Practice activities, p. 22. Use 10-frames, counters and Unifix cubes to model the partitions as needed.

EXTENSION GROUP

Student Book
Students to complete: Extended Practice, p. 22.

Activity sheet
Students to complete: Activity sheet 5.

Practice and Mastery Book
See page 4 for information about how to use the Practice and Mastery Book activities.

Session 5: Post-assessment
Students to complete: Post-test 2, Unit 1, Topic 5, p. 65.
Unit 1 Number and place value
Topic 6 Counting back
Student Book pages 23–26

Learning focus
Model subtraction using counting back to solve simple subtraction problems

Materials
• online version of Snakes and ladders
• Unifix cubes
• 6-sided dice (one between two students)
• playing cards (with the face cards removed)
• large blocks or skittles
• small balls
• random number generator
• poster paper
• BLM 12: Count back number lines
• Activity sheet 6: Letters from numbers

Potential difficulties:
Number recognition
Students may experience difficulty with the count back strategy if they’re not fluent with the backward counting sequence.

• Encourage students to use visual aids (such as a hundred chart) when counting back to reinforce their knowledge of the concept.
• Regularly practise counting back with students by playing counting games such as Buzz. Lead students in choral counting, making it interesting by doing it softly, loudly or in different voices such as high or low.

DAILY PRACTICE ACTIVITY
Play games that involve counting backwards with students each day. Try an online version of Snakes and ladders. As students go down the snakes, ask them to count back from the number they started on to the number they finished up at.

Session 1: Pre-assessment
Students to complete: Pre-test 3, Unit 1, Topic 6, p. 66.

Session 2: Topic introduction

WHOLE CLASS
Introductory activity: Practising the count back strategy
To introduce students to counting back as a mental subtraction strategy, play a counting back game. It’s useful to first model the game with you playing against a student. Tell students that you will both have a start number of 37 and invite one student to make 37 using Unifix cubes. Discuss how they might do this to make the cubes easier to count. Model making three towers of 10 cubes and one of seven to make your own start number. The student then rolls the dice and takes that number away from their start number, counting back out loud, e.g. “37, 36, 35”. Take your turn and do the same thing, again modelling the count back aloud. Repeat until either you or the student reaches exactly zero to win the game. As you count back across the decade, discuss how this is often tricky to do and allow students to suggest ways to remember what number comes next in the backward counting sequence.

In pairs, students collect 37 Unifix cubes each and one 6-sided dice between them. Students play the same game, counting back out loud. Vary the game by setting different start numbers. As a class, discuss how the game used taking away by counting back.

AT-STANDARD GROUP
Student Book
Students to complete: Guided and Independent Practice activities, pp. 23–25. Ask early finishers to find a partner. Pairs use a deck of cards with the face cards removed and a 6-sided dice. Player 1 takes two cards from the deck to make a 2-digit number, then rolls the dice and counts back to take that number away. Player 2 checks the answer. Students then reverse roles.

SUPPORT GROUP
Concept exploration and skill development: Exploring count backs
Students need lots of experience with counting back in different contexts and with different materials. Divide students into small groups and give each group 10 large blocks or skittles and a ball. Show students how to arrange the blocks for bowling, with one in the front, two in the next row and so on. Students take turns at bowling the ball and counting back the “pins” that have fallen to find how many are
left. For example, if the student knocks down four pins, they would count back, “10, 9, 8, 7, 6”. They replace the pins and swap turns. Encourage students to think about their counting back as a take away problem, e.g. “10 take away 4 leaves 6”. Students can also draw one of their take away problems and write a simple number sentence to go with it, which they can model on a sentence that you have written on the board (such as “10 take away 2 is 8”).

**Student Book with teacher support**

Students to complete: Guided Practice activities, p. 23. Support students with concrete materials (such as Unifix cubes) to model the problems as required.

**EXTENSION GROUP**

**Student Book**

Students to complete: Guided and Independent Practice activities, pp. 23–25.

**Activity sheet**

Students to begin: Activity sheet 6: Letters from numbers.

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**Session 3: Instruction and consolidation**

**WHOLE CLASS**

**Topic exploration: Vertical number line count back**

Vertical number lines can help support students’ conceptualisation of the relative size of numbers and are a useful visual support for the counting back strategy. Model counting back from 17 by 5 on an empty vertical number line, marking in each of the numbers as you count back, and writing “less than” statements as shown below.

![Vertical number line](image)

In mixed-ability pairs, ask students to make their own “five less” poster, using a start number from a random number generator. Alternatively, allocate a start number based on students’ current levels of understanding. The posters should include a vertical number line with “less than” statements and any other visuals or statements that they would like to include. Allow time for pairs to share their work with other groups before putting the posters on display.

**Topic exploration: Language of subtraction**

Discuss with students the idea that when they are counting back, they are subtracting. Invite students to suggest what it means to subtract. Do you end up with more or less than the number you started with? Ask students if they know any other words that can be used to describe subtracting, and introduce the terms minus and take away if they are not already aware of them. Write a simple subtraction problem on the board, such as 9 from 16 is 7, and then model it using the other terms.

In pairs, have students choose a 2-digit number and a 1-digit number to subtract from it. Ask students to use your model to write their subtraction problem and answer in as many ways as they can. Students should also include a visual representation of their problem, using 10-frames, a number line or any other method that they find useful. Display their finished work to reinforce the vocabulary.

**AT-STANDARD GROUP**

**Teacher activity: Counting back from larger numbers**

A number line provides good support for exploring the counting back strategy as it provides a visual prompt without overwhelming students with too many numbers or materials. Enlarge a copy of BLM 12: Count back number lines or use an interactive whiteboard to model counting back in response to a subtraction problem, such as 53 take away 4. Talk students through the process of finding 53 and then counting back by ones to 49 on the number line. Then model the problem using Unifix cubes to show students that you still get the same answer, but it’s faster on the number line.

In pairs, give students BLM 12 and write a similar subtraction problem as a number sentence on the board, such as 54 take away 8. Ask one student in the pair to solve it using the number line and the other to model it with Unifix cubes. Which strategy was faster? Did both students get the same answers?

Write a different number problem on the board to go with the second number line, such as 58 take away 16. Again, have one student in each pair solve it on the number line and one use Unifix cubes. Discuss how students solved the problem. Did they take away 10 then 6? Did they count back by twos?

For the final number line, challenge pairs to find a quicker way to count back for a problem such as 55...
take away 32 using the number line. Share students’ responses to ensure they got the same answer, and to help them start to consider more efficient ways to count back.

**Student Book**

Students to complete: Extended Practice activities, p. 26.

**SUPPORT GROUP**

**Student Book with teacher support**

Students to complete: Independent and Extended Practice activities, pp. 24–26. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, helping them to point to and physically count back on the number chart as needed.

**EXTENSION GROUP**

**Student Book**

Students to complete: Extended Practice activities, p. 26.

**Activity sheet**

Students to complete: Activity sheet 6: Letters from numbers.

**Practice and Mastery Book**

See page 4 for information about how to use the Practice and Mastery Book activities.

**Session 4: Post-assessment**

Students to complete: Post-test 3, Unit 1, Topic 6, p. 67.
Unit 1 Number and place value

Topic 7 Difference between

Student Book pages 27–30

Learning focus

Explore difference between using counting up and counting back strategies

Materials

• Unifix cubes
• counters
• chalk
• 10-sided dice
• playing cards (with the face cards removed – one deck between two students)
• 10-frames
• counters
• BLM 8: Number lines to 20
• Activity sheet 7: Finding the difference

Potential difficulties:

Addition and subtraction

Students for whom the concepts of addition and subtraction are not well established will struggle with conceptualising difference between.

• Spend extra time reviewing and consolidating addition and subtraction of small numbers, using concrete materials to support this.
• Provide opportunities to physically compare sets of numbers for addition and subtraction, and extend this to introducing difference between.

DAILY PRACTICE ACTIVITY

Each day, discuss examples of difference between from classroom life, both in a general sense and in a mathematical sense. Invite students to nominate whether each example is using the mathematical meaning.

Session 1: Pre-assessment

Students to complete: Pre-test 3, Unit 1, Topic 7, p. 66.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Understanding difference between

Difference between can be a difficult concept for students to grasp so it’s important to be explicit about what it means. Show students two objects that they can compare (such as an apple and a ruler) and ask them to talk to a partner about what the difference between the two items is. Share the responses as a class, reinforcing the general concept of difference.

Write the number 1 and the number 3 on the board. Ask students what the difference between the two numbers is. Encourage students to think of as many answers as possible, including observations such as 1 is straight and 3 is curvy. Explain that when you are talking about difference between in mathematics, it has a special meaning. Show students one Unifix cube next to three Unifix cubes and tell them that difference between in mathematics is about how much bigger or smaller one number is than another. Use the cubes to demonstrate that the difference between 3 and 1 is 2.

Put students into pairs and give each group some Unifix cubes. Nominate a pair of numbers that you would like students to find the difference between, such as 2 and 5. Ask one student in the pair to make one of the numbers with the Unifix cubes and the other student to make the other, then have them compare the numbers and suggest what the difference between the two is. Repeat with other number pairs. Finish the session by asking students to explain to their partners what difference between means in mathematics.

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 27–28. Ask early finishers to find a partner and collect some counters. Each student takes a small handful of counters, and then the pairs find the difference between the amounts they have each taken.
Concept exploration and skill development: Number lines

Number lines are a good tool for helping students visualise and understand the concept of difference between. Show students an enlarged copy of BLM 8: Number lines to 20 and ask them if they can tell you the difference between 4 and 9. Invite a student to come up and circle the two numbers, then draw jumps of 1 from 4 up to 9. How many jumps are there? Does this match up with what the students thought the difference between the two numbers was? Repeat with one or two more examples as needed, then give pairs of students their own copy of BLM 8. Write three “difference between” problems on the board for students to solve on the number lines with a partner. When they have finished, team pairs up to check their responses.

For example: “On the weekend, I shared a packet of chips with a friend. The difference between the number of chips I ate and my friend ate was 5.” How many chips might we each have eaten? Invite one or two students to suggest a possible solution, using concrete materials such as counters as a support if required. Then allow time for students to work in pairs to find as many answers as they can. Encourage them to explore combinations of larger numbers if they’re ready. Share their responses, identifying and sharing any patterns in the way that students have found solutions.

Student Book

Students to complete: Independent Practice activities, p. 29.

SUPPORT GROUP

Student Book with teacher support

Students to complete: Independent Practice activities, pp. 28–29. Use concrete materials such as 10-frames and counters to model the partitions as needed.

EXTENSION GROUP

Student Book

Students to complete: Independent Practice activities, pp. 27–28.

Activity sheet

Students to continue: Activity sheet 7: Finding the difference.

Session 3: Instruction and consolidation

WHOLE CLASS

Topic exploration: Calculating and checking

Take students outside and put them into mixed-ability groups of three. Model how to write the numbers from 0 to 9 in a horizontal line using chalk, then ask each group to follow the same process. Ask students to decide who is Person A, B and C in each group. Roll a 10-sided dice and ask Person A to stand on that number. Repeat and ask Person B to stand on that number. Each person should estimate what the difference between the two numbers is. Person C’s job is to check the difference between the two numbers. Articulate the problem that you have just modelled, e.g. “The difference between 4 and 2 is 2”. Repeat several times, changing the roles so that students experience each of them.

AT-STANDARD GROUP

Teacher activity: Problem solving with difference between

To extend students’ ability to apply the difference between concept, set them an open-ended problem.
SUPPORT GROUP

Concept exploration and skill development: Practising difference between
In pairs, give students a deck of cards with the face cards removed. The first student draws two cards and works out the difference between the numbers by counting back. The second student then takes a turn. The player with the highest difference scores a point, with the winner being the first to 5. Share strategies at the end to see if some students used counting on to find the difference. Discuss how both strategies result in the same answer.

Student Book with teacher support
Students to complete: Extended Practice activities, p. 30. Use 10-frames, counters and Unifix cubes to model the partitions as needed.

EXTENSION GROUP

Student Book
Students to complete: Extended Practice activities, p. 30.

Activity sheet
Students to complete: Activity sheet 7: Finding the difference.

Practice and Mastery Book
See page 4 for information about how to use the Practice and Mastery Book activities.

Session 5: Post-assessment
Students to complete: Post-test 3, Unit 1, Topic 7, p. 67.
Unit 1 Number and place value

Topic 8 Skip counting

Student Book pages 31–34

Learning focus

Explore and develop fast recall of skip counting sequences by 2, 5 and 10

Materials

- long pieces of paper
- playdough or modelling clay
- toothpicks
- 5c and 10c coins or play money
- BLM 16: 0–99 chart
- Activity sheet 8: How many?

Potential difficulties: Skip counting as repeated addition

Some students may be able to produce the skip counting sequence with no understanding that they’re adding a constant number each time.

- Help students to develop this important understanding by initially supplying material in equal groups to skip count.
- As you are practising skip counting sequences, ask questions such as “How many are we adding each time?” and “What will the next number be if we add on 2?” This will connect the concept with repeated addition.

DAILY PRACTICE ACTIVITY

Sit students in a circle and practise counting on by ones, twos, fives and tens by having students stand up as they say the next number in the sequence. Repeat with backwards counting sequences, this time having students sit down as they say their number. Practise the counting sequences in different ways, such as having students clap, click or stamp on each number, or getting louder or softer as they go.

Session 1: Pre-assessment

Students to complete: Pre-test 4, Unit 1, Topic 8, p. 68.

Session 2: Topic introduction

WHOLE CLASS

Introductory activity: Introducing skip counting

On an enlarged copy of BLM 16: 0–99 chart (or using an interactive whiteboard version), circle the numbers in the skip counting sequence by 2 from 0 to 20, saying each number as you go. Ask students to describe the counting you just did. Discuss skip counting as a way to “skip” numbers to make it faster to count things. Show students that you skipped one number each time you counted. Let them know that although you can skip count by other numbers, each skip counting sequence involves counting by the same number each time.

In mixed-ability pairs, instruct students to make five sets of left and right handprints on a long piece of paper. Students then write a skip counting pattern beneath them. Depending on the level of your students, some groups might count by twos to find the total number of hands, while others might count by fives or tens to find the total number of fingers. Encourage students to think about how they might know that they have found the correct answer. Have students repeat the counting patterns as they share their work and display the finished pieces around the room.

AT-STANDARD GROUP

Student Book

Students to complete: Guided and Independent Practice activities, pp. 31–33. Early finishers can work with a partner to find how many fingers there are between all the students in the classroom today.

SUPPORT GROUP

Concept exploration and skill development: Modelling skip counting

Providing students with ways to group objects is a good strategy to help them with the concept that they do not have to count each item individually if they know how many are in each group. Give students five balls of modelling clay or playdough to represent echidnas. Distribute toothpicks and instruct students to place two into each echidna as spines. Can students work out the total number of spines using skip counting? Repeat with five and 10 toothpicks. Students can use a visual cue (such as BLM 16) to support their identification of the correct number sequence for each.
Student Book with teacher support
Students to complete: Guided Practice activities, p. 31. To help students with their skip counting, clearly link the number chart at the top of the page with the activities.

EXTENSION GROUP

Student Book
Students to complete: Guided and Independent Practice activities, pp. 31–33.

Activity sheet
Students to begin: Activity sheet 8: How many?

Session 3: Instruction and consolidation

WHOLE CLASS

Topic exploration: Experiencing skip counting
Remind students of the different ways they used their hands to skip count in the session 2 whole-class activity (Introducing skip counting). In small mixed-ability groups, challenge students to think of other ways we can use our bodies for skip counting. Invite their suggestions and try them out as a class. For example, with the class in a circle, students might use their arms to practice skip counting by two, with each student putting both arms into the circle as the count comes around to them. Ask students for suggestions of other natural groupings that they can skip count, such as the crayons in a packet.

AT-STANDARD GROUP

Teacher activity: Skip counting with money
Money is a useful tool for skip counting as it features already bundled groups of cents. Display a group of notes or coins that come in denominations of 5. Do students understand the difference between the number of coins and the total value of the coins? Ask students to suggest how you could find the value. Can they explain that they are adding five each time? Try with different numbers of notes or coins, allowing students to skip count to find the total value of each set. Repeat with notes or coins that come in denominations of 10.

In pairs, give students a handful of one type of coin or note and allow them time to count their value. Ask students to share with the group both the number of coins or notes and the value of the coins or notes they were given.

Student Book
Students to complete: Extended Practice activities, p. 34.

SUPPORT GROUP

Student Book with teacher support
Students to complete: Independent and Extended Practice activities, pp. 32–34. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, working together to find the numbers in each sequence.

EXTENSION GROUP

Student Book
Students to complete: Extended Practice activities, p. 34.

ACTIVITY SHEET
Students to complete: Activity sheet 8: How many?

Practice and Mastery Book
See page 4 for information about how to use the Practice and Mastery Book activities.

Session 4: Post-assessment
Students to complete: Post-test 4, Unit 1, Topic 8, p. 69.
Unit 1 Number and place value

Topic 9 Equal shares

Student Book pages 35–38

Learning focus

Understand the concept of equal shares in simple division problems

Materials

• paper plates
• ziplock bags
• pasta (divided into sets of 6, 9 and 12 pieces in the ziplock bags)
• a digital camera or tablet
• counters
• modelling clay or plasticine
• toothpicks
• paper bags
• BLM 6: 10-frames
• Activity sheet 9: Share it

Potential difficulties: Recording numbers

Some students may be able to identify a 2-digit numeral upon hearing it, but may struggle to record the numeral with ones and tens in the correct places.

• Provide opportunities for students to develop the ability to both recognise and write numbers by asking them to read 2-digit numerals aloud. For example, for 36, students point to the part that shows 30 and the part that shows 6 as they say it.

• After students read a number, link the numeral with different representations, such as on a place value chart or with concrete materials.

DAILY PRACTICE ACTIVITY
As a basis for daily discussion, use the photos that you take during the session 2 whole-class activity (Practising sharing). Choose one photo each day and have that group talk about what they did and what they learned about sharing.

Session 1: Pre-assessment
Students to complete: Pre-test 4, Unit 1, Topic 9, p. 68.

Session 2: Topic introduction

WHOLE CLASS
Introductory activity: Practising sharing
Invite students to tell you about times that they have shared something with a friend or family member. Talk about what it means when shares are equal. Ask students to suggest whether the scenarios they recounted involved equal or unequal sharing.

Put students into threes and give each student a paper plate. Provide each group with a ziplock bag containing six pieces of pasta. Have each group share the pasta equally between its members. Take photos of the students as they work. Discuss the results as a class. Did everyone end up with the same number of pasta pieces? Groups can then repeat the activity with nine and 12 pieces of pasta.

Regroup students into pairs and challenge them to experiment with the three pasta amounts to find out which of the numbers can be equally shared between two people and which has a leftover piece. Take photos of students again for use in the daily practice activity.

AT-STANDARD GROUP

Student Book
Students to complete: Guided and Independent Practice activities, pp. 35–37. Ask early finishers to work with a partner to find which numbers between 1 and 20 can be equally shared, using paper plates and counters.

SUPPORT GROUP

Concept exploration and skill development: Equal or not equal
Directly comparing collections of items that have been shared out can help consolidate the idea of equal sharing. Seat students in a circle and place an enlarged copy of BLM 6: 10-frames in the centre. Take four counters in your hand and explain that you are going to share them out equally between two of the 10-frames. (You may like to cut the third 10-frame off or fold it under to avoid confusion.) Model sharing the counters out by placing them on the 10-frames one at a time and verbalising the process. For example: “That’s one on that 10-frame and one on this 10-frame; two on that 10-frame and two on this 10-frame.” Ask students if the shares are equal. How do they know? Repeat with other even numbers, inviting students to help with the sharing and counting out.
In pairs, give students BLM 6 and a supply of counters. Ask one student in each pair to take a small number of counters and share them out between two of the 10-frames. How many counters did they start with? Could they make equal shares? Allow time for discussion of students’ discoveries and then repeat the process with the other student in the pair having a turn. Encourage students to articulate the process that they use to share out the counters and to explain how they know whether or not the groups are equal. If they are ready, extend students to experiment with sharing counters between the three 10-frames.

**Student Book with teacher support**

Students to complete: Guided Practice activities, p. 35. Use concrete materials to model the problems for students as needed.

**EXTENSION GROUP**

**Student Book**

Students to complete: Guided and Independent Practice activities, pp. 35–37.

**Activity sheet**

Students to begin: Activity sheet 9: Share it.

**Session 3: Instruction and consolidation**

**WHOLE CLASS**

**Topic exploration: Consolidating sharing**

In pairs, give students a large piece of modelling clay or plasticine and some toothpicks. Ask them to make two balls of fairly equal size with the clay to represent aliens, with some clay left over. Ask students to count out six toothpicks and share them equally between their aliens as arms. How many arms does each alien have? Ask students to suggest how many arms they would need if there were three aliens. Instruct them to make a third alien with three arms and try it out. Were their guesses correct?

Instruct students to remove the arms and make four aliens, then share eight toothpicks equally between them. How many arms does each alien have? What if each alien had four arms? How many toothpicks would be needed? Allow time for students to check their guesses and discuss the results.

In pairs, ask students to take 12 toothpicks and experiment to see how many aliens they could share the arms between equally. Can students find more than one possibility? Share their responses and invite students to model some of the solutions with their materials for the rest of the class.

**AT-STANDARD GROUP**

**Teacher activity: Sharing in context**

Students who understand the concept of equal shares may start to use skip counting to divide items into groups. Give pairs of students four paper bags and 16 counters. Explain that you bought a packet of 16 chocolates that you want to share between the four members of your family. Ask students to use the materials to show you how many each person would get. Watch to see if students are sharing items one by one into the bags, or whether they are beginning to share out in groups. Discuss the strategies that they used and the results.

Ask one student in each pair to collect as many bags as they have immediate family members. The partners then work together to see if the 16 counters can be shared equally by that family. Have the students swap roles, this time using 20 counters as the starting number. As a group, make a list of the numbers that 16 and 20 can be divided equally into.

**Student Book**

Students to complete: Extended Practice activities, p. 38.

**SUPPORT GROUP**

**Student Book with teacher support**

Students to complete: Independent and Extended Practice activities, pp. 36–38. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, encouraging them to model the problems with counters if needed.

**EXTENSION GROUP**

**Student Book**

Students to complete: Extended practice activities, p. 38.

**Activity sheet**

Students to complete: Activity sheet 9: Share it.

**Practice and Mastery Book**

See page 4 for information about how to use the Practice and Mastery Book activities.

**Session 4: Post-assessment**

Students to complete: Post-test 4, Unit 1, Topic 9, p. 69.
Unit 1 Number and place value
Topic 10 Ordinal and cardinal numbers

Student Book pages 39–42

Learning focus
Read, write, compare and order cardinal and ordinal numbers

Materials
- online ordinal sequence video (see link in the Introductory activity)
- drawing paper
- drawing materials
- small pieces of card
- counters of six different colours
- feely bag
- potatoes or other objects that can easily be rolled
- a tablet or other video recording device
- playing cards

Potential difficulties:
Sequencing of cardinal and ordinal numbers

Students will struggle with ordinal numbers if their understanding of the cardinal number sequence is not well established.

- Ensure that students are confident with counting to 10 before introducing ordinal numbers.
- Make clear links between the numbers in the cardinal and ordinal sequences – for example, if you are in position 1 that means you came first.

DAILY PRACTICE ACTIVITY
Use ordinal language intentionally throughout the week. For example, ask students to identify who was first to get packed up for the day, who was the sixth person to sit on the floor or who was the second person to answer a question.

Session 1: Pre-assessment
Students to complete: Pre-test 5, Unit 1, Topic 10, p. 70.

Session 2: Topic introduction
WHOLE CLASS
Introductory activity: Revising the ordinal sequence
Watch a video about ordinal numbers together, such as the one at http://qrs.ly/ae78kxq, to revise the ordinal counting sequence. Write the cardinal sequence 1 to 6 on the board and ask students to nominate what the matching ordinal words would be. Brainstorm with students when you would use ordinal numbers. Each student then chooses a scenario and draws a picture showing 1st to 6th, labelling the positions in words and in symbols. Give each student a highlighter and guide them to highlight the part of the ordinal number word that appears in the numerical representation – for example, the st in first and the nd in second.

AT-STANDARD GROUP
Student Book
Students to complete: Guided and Independent Practice activities, pp. 39–41. Ask early finishers to write the cardinal sequence to 20 and see if they can write the matching ordinal numbers in symbols and words.

SUPPORT GROUP
Concept exploration and skill development: Practising with ordinal numbers
To help consolidate their knowledge of ordinal numbers, give each student six small pieces of card and guide them to write the ordinal symbols from 1st to 6th on them. Place six counters of different colours in a feely bag and invite a student to nominate one of the colours. All students must then guess in which order that colour will come out of the bag if the counters are drawn out randomly, placing the card that represents their guess in front of them. Choose a student to draw out the first counter. Was it the nominated colour? If it was, any students who chose 1st score a point; if not, continue until the target colour is selected. Repeat the activity with different colours, encouraging students to count along with the ordinal sequence as counters are drawn out. The first student to reach a pre-set number of points wins.

Student Book with teacher support
Students to complete: Guided and Independent Practice activities, p. 39–40. Support them to identify the correct items in the sequence as needed.
Session 3: Instruction and consolidation

WHOLE CLASS

**Topic exploration: Using ordinal numbers**

Organise students into groups of six. Give each student a potato or another item that can easily be rolled. You could get students to decorate their potatoes and give them names. Take students outside and explain that they are going to roll their potatoes to see whose potato goes the furthest and find out who comes first to sixth. Provide each group with a tablet or other recording device so that they can film the activity and the results. When they are done, have students either make a narrated video to describe the ordinal places, or write a script that they can read out as the video is being played, drawing on the video that they watched in the session 2 whole-class activity (**Revising the ordinal sequence**). Share the students’ work as a class.

AT-STANDARD GROUP

**Teacher activity: Sequencing events**

Play a simple game with students, such as Simon says. Invite students to suggest what you did first in the game, what came second and so on. In pairs, have students play a quick game of Snap using playing cards. Students should then draw or write about the steps in the game, using ordinal numbers to describe the sequence. You may like to allow one or more groups to share their work with the whole class and see if they can follow the sequence to play the game.

**Student Book**

Students to complete: Extended Practice activities, p. 42.

SUPPORT GROUP

**Student Book with teacher support**

Students to complete: Independent and Extended Practice activities, pp. 41–42. Check in with students as they work through the Independent Practice activities, discussing any difficulties, before supporting them to complete the Extended Practice activities, encouraging them to verbally describe the steps in the pictures.

EXTENSION GROUP

**Student Book**

Students to complete: Extended Practice activities, p. 42.