

MATHS





Lessons 3

Prep

Topic: Number and place value

Comparing quantities

Lesson concepts

-  **Number** — Names and symbols
-  **Number** — Quantity
-  **Number** — Counting
-  **Number** — Subitising

Today students will:

- ▶ recall forwards and backwards counting sequences
- ▶ compare quantities.

Resources

Digital

Learning object — Maths – Sing it! (Ten in the bed)

Find and prepare

Blanket

Counting materials (for example: blocks, counters, beads, counting bears)

Cards with numbers to 10

Key terms

For definitions and explanations of terms, please see the **Glossary**.

Lesson

Introduce the lesson

Note

The following language is important to highlight and develop throughout this lesson:

before, after, next, order, numbers, quantity, count, sequence, forwards, backwards, starting point, ones counting sequence, more, less, how many, total, same

Quantify collections

Ten in the bed — Counting forwards and backwards

Listen to the **Learning object — Maths – Sing it! (Ten in the bed)** (select the song from the right-hand menu).

Enact the song with students/toys, using a blanket as the bed.

Discuss and model how:

- they used counting forward to 10 to get the children in the bed
- they used counting backwards when they fell out
- there is one less in the bed each time one fell out.



Focus questions

Q: *If there were four in the bed and one came back, how many would there be in the bed?*

A: Five.

Q: *Would there be more or less?*

A: More.

Q: *If there were five in the bed, what would need to happen for there to be four in the bed?*

A: Personal response required.

Q: *Instead of beginning at one and counting forwards, how could you count each time one fell out?*

A: Count backwards by one.

Model answers with students/toys in the 'bed'.

Discuss when you might count forwards and when you might count backwards (for example: eating a bag of lollies, spending coins, collecting flowers, picking up toys).

Mime or act out some of these contexts to practise counting forwards and backwards.

Represent one more and one less

Ask students to make three stairs using blocks or paper squares. For example:



Focus questions

Q: *What patterns can you see?*

A: For example: There is one more block/square each time.

Q: *Can you match a number to each step? Explain.*

A: For example: students name numerals in consecutive order.

Q: *If you made the next step, how many blocks/squares would you need?
How did you work that out?*

A: For example: four because the step before it was three.

Q: *Which number is one more than three?*

A: Four.

Q: *Which number is one less than three?*

A: Two.

Q: *How did you work that out?*

A: For example: I counted backwards from one.

Explain that the number before is one less and the number after is one more.

Compare quantities

Numbers more or less

Display a collection of up to 10 objects (for example: blocks, counters, beads, counting bears).

Demonstrate how to:

- predict the quantity in the collection
- subitise part of the collection
- count on to find the total
- name one more or one less than the total
- label the collection with a numeral card.

Display a second collection with a different number of objects.

Ask students to:

- predict how many objects there are
- count to identify how many in the collection (encourage students to subitise part of the collection and then count on)
- identify one more and one less than the total
- find a numeral to label the collection.

Display a third collection and repeat the activity.

Ask students to order the groups from smallest to largest.

Focus questions

Q: *Which group has the most? How do you know?*

A: Personal response required.

Q: *Which group has the least? How do you know?*

A: Personal response required.

Q: *When are you counting forward, what number comes after six? How do you know that?*

A: For example: Seven because I know seven comes after six.

Q: *What number comes before two?*

A: One.

Q: *Four is one less than what number? Four is one more than what number?*

A: Five. Three.

Q: *How could you explain this using blocks or counters?*

A: Personal response required.

Order numbers using the counting sequence

Give the number cards 1 to 10 to students in a random order.

Explain that:

- the number cards represent the carriages of a train
- the carriages are out of order
- they will put the carriages back in order.

Focus questions

Q: If you start with two, which carriage will go before it? After it?

A: One. Three.

Q: So what is one more than two?

A: Three.

Q: What is one less than two?

A: One.

Q: Which carriage comes before eight?

A: Seven.

Q: Is that one more or less than eight?

A: Less.

Q: If you count backwards are you getting more or less?

A: Less.