

MATHS





Lesson 1

Prep

Topic: Number and place value

Counting from different starting points

Lesson concepts

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

Today students will:

- ▶ count forwards and backwards from different starting points.

Resources

Find and prepare

Counters, blocks and other materials for counting, for example: pasta, toys, beads

Hopscotch track marked in chalk or masking tape on the floor

Key terms

sequence

For definitions and explanations of terms, please see the [Glossary](#).

Keep the **Glossary** for reference throughout this unit.

Lesson

Note

It is important to highlight and develop the following vocabulary throughout this lesson: count, forwards, backwards, order, sequence, next, before, after, start, number, more, less, add, take, position

Introduce the lesson

- Have students practise counting forwards and backwards to and from 20 (and beyond).
- Model movement sequences for students to copy as they count forwards and backwards:
 - March **1**, step **2**, hop **3** ...
 - Hands on your head **1**, shoulders **2**, clap **3**, snap your fingers **4** ...
 - Emphasise every second number **1 2 3 4 5** ...
 - Tap your head **1**, tap your shoulders **2**, tap your knees **3**, stamp left foot **4**, stamp right foot **5**, and repeat the pattern as you continue counting.
- Encourage students to make up their own movement and counting sequences.



Focus questions

- Q: What patterns did you notice when you were counting?*
- Q: What problems did you have remembering the order of the numbers?*
- Q: What could you do to remember them better?*

- Ask students to think of situations where they might use forwards counting and situations where they might use backwards counting.

Focus questions

- Q: How do you know if you were counting forwards or backwards?*
- A:** When I counted forwards the numbers got bigger. When I counted backwards, they got smaller.
- Q: When do you need to use forwards and backwards counting?*
- A:** I would use counting forward when I get more things and backwards when I get less things.

- Display a collection of counters and ask students to:
 - look at the collection of counters
 - predict how many they can collect in a handful.

Explain to students

- ‘ Predicting ‘how many’ is like guessing but you have to think about the size and shape of the counters and how big your hand is before you predict. ’

- Ask students to:
 - take a handful of counters
 - count to check how many they have collected
 - repeat the activity at least five times
 - change their prediction each time, if necessary.

Focus questions

Q: What happened to your predictions as you repeated the activity?

Q: Why do you think that happened?

Q: How did you use counting?

- Have students repeat the activity using different materials, for example: blocks, pasta, beads.
- For each different collection of materials, ask students to:
 - look at the collection
 - predict how many they can collect in a handful
 - take a handful
 - count to check how many they have collected
 - describe how many (blocks/pasta/beads) were in their handful.

Focus questions

Q: What totals did you get when you took a handful of these objects?

Q: Why do you think the totals were different?

Q: Which handful of objects had more in it? Why do you think that?



- Ask students to show how they could use forwards counting to collect objects from a container.

Say to students

‘ As you take an object out of the container, you could count forwards. ’

- Explain to students how they could return the objects using backwards counting.

Explain to students

‘ As you return objects to the container, you could count backwards to check how many are left in your hand. ’

- Ask students to:
 - tip out the container of blocks
 - take a handful of blocks
 - predict how many
 - count to check their totals
 - place that handful back in the container
 - take another handful of blocks
 - count on as they return those blocks to the container.

Count from different starting points

- Explain to students that:
 - there are times when they might count forwards or backwards starting from a number other than one
 - they are going to practise this type of counting.
- Construct a hopscotch or number track with students:
 - use chalk or tape on the floor
 - write the numbers 1 to 20 (at least).



- Have students practise counting by:
 - jumping forwards and counting. When they hear ‘Stop’, students stop, and then count backwards.
 - tossing a block or counter onto the track and counting forwards or backwards from that number.
 - jumping forwards/backwards and counting. When they hear ‘Stop’, students stop, and say what number comes before/after the number they are on.

Focus questions

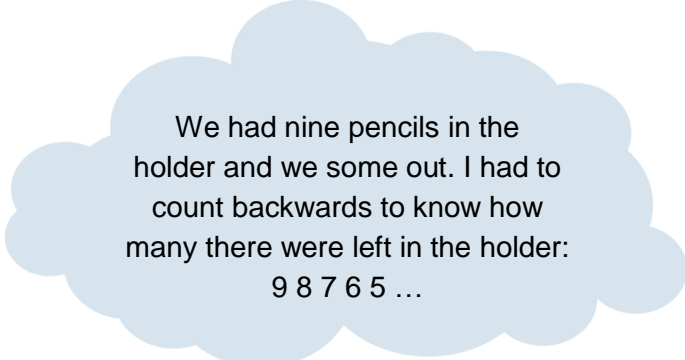
- Q: *What number came before/after that number?*
- Q: *How do you know that?*
- Q: *Will it always come before/after that number in counting? Why/why not?*
- Q: *Which numbers were confusing to say? (for example: teen numbers)*

- Have students pack away the objects and materials they used in this session.
- When collecting up the materials, ask students to identify when they may use forwards counting or backwards counting.

Focus questions

- Q: *At what number did you start/finish?*
- Q: *When did you count forwards or backwards? How can you tell?*
- Q: *Why did you count forwards/backwards then?*

- Have students draw the situation and write the counting sequence they used.



We had nine pencils in the holder and we some out. I had to count backwards to know how many there were left in the holder:
9 8 7 6 5 ...