

MATHS




Lesson 18

Prep

Topic: Using units of measurement

Comparing the length of objects

Lesson concepts

-  Length — Language (describing, comparing, ordering)
-  Length — Direct comparison
-  Length — Indirect comparison

Today students will:

- ▶ compare the length of objects.

Resources

Find and prepare

Different coloured streamers, ribbons, wool or string

Key terms

length

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

Lesson

Note

It is important to highlight and develop the following vocabulary throughout this lesson: compare, order, longer, shorter, the same length, predict, tool, sort, display, measure.

Introduce the lesson

- Ask students to brainstorm what they already know about length and situations where we see how long things are.
- Share and discuss student ideas.

Make direct comparison of the length

- Ask students to compare the length of the following body parts with another person:

- arm
- foot
- pointer finger
- thumb
- stride.



We put our feet together with the heels touching. My foot is much longer than Sally's.

- Discuss and demonstrate the different methods students used to compare length including looking, guessing and placing the body parts side-by-side.

Focus questions

- Q: Who had the longer or shorter arm, foot, finger, thumb and stride?
- Q: How did you know they were longer or shorter?
- Q: How else could you have checked?
- Q: Why did you predict that (Joe) would have a longer arm?
- Q: What problems did you have measuring?
- Q: What must you remember to do when you compare the length of objects?

Explore methods of comparing length

Note

When students compare the length of their body parts side-by-side, that is called direct comparison.

This section of the lesson focuses on indirect comparison. Students will have to use materials and objects to compare the lengths of body parts.

- Ask students to suggest ways of comparing the length of body parts, such as arms, without direct comparison.



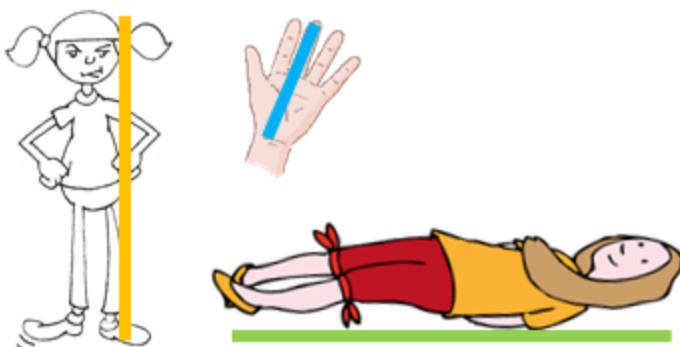
- Ask students to consider:
 - what they are going to measure
 - methods of indirect measuring students have observed (for example: using tools such as rulers, tape measures, tapes, interlocking blocks)
 - which method would be the best
 - what students might need to be mindful of when measuring.

Focus questions

Q: When you compared the length of your foot with another person who had the longest foot?

Q: How could you check?

- Demonstrate to students how to measure using a streamer.



Make sure the streamer:

- touches the start and the end of what you are measuring
- has no twists and is straight.

- Plan with students how to collect data on the length of their body parts. For example:
 - measure with another person
 - use a different coloured streamer for each part measured (for example: pink strips are how long your arms are, blue strips are for how long your legs are)
 - put the person's name clearly on each strip
 - collect each strip as they are measured.

Compare the length of objects

- Gather up the strips and discuss how the lengths could be displayed.

Focus questions

Q: How could you display this information about the length of our feet?

Q: If you placed the strips that way, what would that tell you?

Q: How could you order them from longest to shortest?

- Ask students to:
 - sort the strips
 - order the strips
 - display the strips
 - decide what they have learned from the display.
- Discuss and compare the findings.

Focus questions

Q: What did you find out?

Q: What made you think that?

*Q: Did this match your predictions about who had the longest/shortest foot?
Why?*

Q: How would you explain the result?