

Topic: Using units of measurement

Comparing the length of objects

Lesson concepts



Length — Language



Length — Direct comparison

Today students will:

- ▶ identify the length of objects
- ▶ explain that the length of an object is the same regardless of its location
- ▶ compare the length of objects using direct comparison.

Resources

Find and prepare

Lengths of string, paper tape or ribbon (the same length)

Materials to compare lengths

(for example: string, paper, straws, ice-cream sticks)

Building blocks

Key terms

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

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

Lesson

Introduce the lesson

Note

It is important to highlight and develop the following vocabulary throughout this lesson.

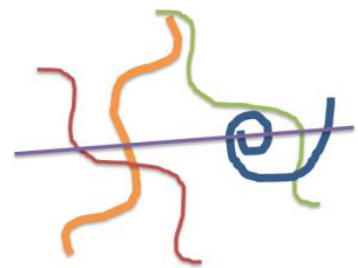
length, longer, longest, shortest, shorter, short, long, longer, tall, taller, the same length as, as long as, as short as, compare, beside, next to

Explore conservation of length

Provide students with a number of lengths of string, paper tape or ribbon the **same** length.

Ask students to:

- arrange the lengths in a variety of ways (such as straight, curly, wavy)
- check whether they are the same length by lining up the ends.



Focus questions

Q: *Are these pieces of string the same length? How do you know?*

A: Yes, for example: I lined them up side-by-side, matching the ends.

Q: *What would you notice if you straightened these pieces?*

A: They would all be the same length.

Q: *What can you find that is the same length as your string?*

A: For example: the width of the keyboard.

Reinforce to students that the length remains the same regardless of how the pieces are arranged.

Explore length of objects

Provide lengths of materials for students to use in play as they compare lengths, for example: string, paper, straws, wool, ice-cream sticks.

Use the language of length as students play with the materials. For example: Which strip of paper is long enough to fit here? Is this piece of wool too short to go around here?

Ask students to run their finger along the length of objects. For example: the long part of a table, the length of a pencil.

Ask students to compare objects that have the same length. For example: two new pencils or crayons.

Explain to students that it is important they always line up the base of the objects being measured when they compare the length.

Focus questions

- Q: *How can you tell which part of the (pencil) shows the length?*
- Q: *Can you find another (pencil) that has the same length?*
- Q: *If I move this (pencil) to the table over there, will it still have the same length?*
- Q: *How could you find out?*

Make direct comparisons of length

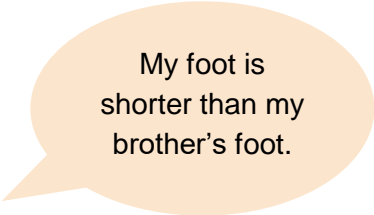
Provide two objects that differ in length for students to compare, for example: pencils that are clearly different lengths, toys, books.

Focus questions

- Q: *Which (pencil) is longer/shorter?*

Ask students if they can find something that has either the same/longer/shorter length as their:

- arm
- leg
- feet
- pointer finger
- thumb
- stride.



My foot is shorter than my brother's foot.

Discuss methods of comparing length, including looking, guessing and placing the body parts side-by-side.

Focus questions

- Q: *What problems did you have measuring?*
- Q: *What must you remember to do when you compare the length of objects?*

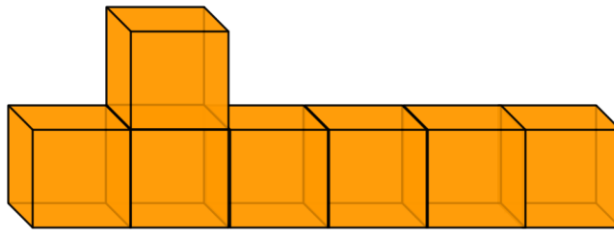
Provide several objects for students to compare the lengths.

Focus questions

- Q: *Which is the shortest/longest?*

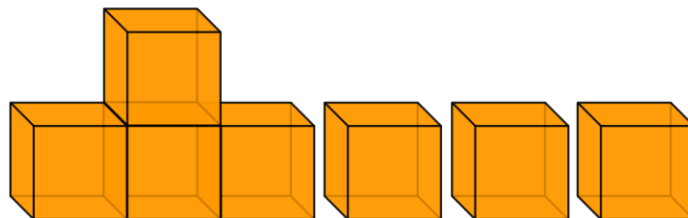
Partition a length

Ask students to make a road train from building blocks that are the same length. For example:



Have students count the number of trailers in the road train (for example: three).

Have students make a second road train with three trailers, but with the trailers disconnected. For example:



Focus questions

Q: *Why does the second road train look longer?*

Q: *How could you make the road trains look the same length?*