MATHS

Prep

Topic: Using units of measurement

Comparing length using indirect comparison

Lesson concepts

- **Length** — Language
- **Length** — Direct comparison
- **Length** — Indirect comparison

Today students will:

► compare lengths using indirect comparison.

Resources

Find and prepare

Sheet — Length: 'Super me'

Continuous streamers/string/wool of three different colours

Chalk

Pen to label streamers

Fabric for a cape (optional)

Tape (optional)

Cardboard (optional)

Key terms

length, measure

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

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Lesson

Introduce the lesson

> **Note**
>
> The following language is important to highlight and develop throughout this lesson.
>
> distance, how far, closer, longer, shorter, short, long, same, compare, wide, wider, widest, width, narrow, narrower, narrowest, low, lower, lowest, near, nearer, nearest, far, further, furthest, apart, close, thick, thicker, thickest, thin, thinner, thinnest, deep, deeper, deepest, shallow, shallower, shallowest, tall, taller, tallest

Make indirect comparisons of length

Present students with situations where direct comparison is difficult. Help students to understand that indirect measurement of objects will allow for comparison of objects. For example: Will that large desk fit through this doorway? How could we find out without moving the desk?

Use a streamer or a piece of string to measure the width of the desk and the width of the doorway. Compare the streamers to decide whether the desk would fit through the doorway.

> **Note**
>
> It is important that students make sure the streamer is aligned with the start and end of what is to be measured. It is also important that students keep the streamer straight.

Focus questions

Q: *Which streamer is longer?*

Q: *How can you check?*

Q: *Will the desk fit through the doorway? How do you know?*

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Compare lengths indirectly

Use the **Sheet —** Length: 'Super me' to find some length measurements.

Tell students that they will be using streamers or string to find some length measurements about themselves as 'Super me'.

Develop three length questions to ask about 'Super me'. For example:

- How tall are you?
- How far can you jump?
- How long is your shoe?

Record these questions.

Focus questions

Q: *Which measurement do you think will be the longest?*

Q: *How can you check?*

Q: *Which measurement will be the shortest?*

Q: *How can you check?*

Discuss ways of measuring these lengths using streamers or string.

Model how to measure height using string or streamers. Select one colour to measure the height. For example:

Make sure the streamer:

- is lined up with the feet and top of the head of the person being measured
- has no twists
- is pulled taut so that it is straight.

Label and tape the streamer that measured 'Super me's' height onto the wall.

Ask students to measure the height of another person using a streamer.

Label and tape the other person's streamer onto the wall.

Ask students how they might measure the length of their jump.

Organise a starting line and measure 'Super me's' jump using a different coloured streamer.

Label and tape the length of the jump streamer onto the wall next to the streamer that shows 'Super me's' height.

Ask students to measure the length of another person's jump. Label and tape the streamer beside the height streamer.
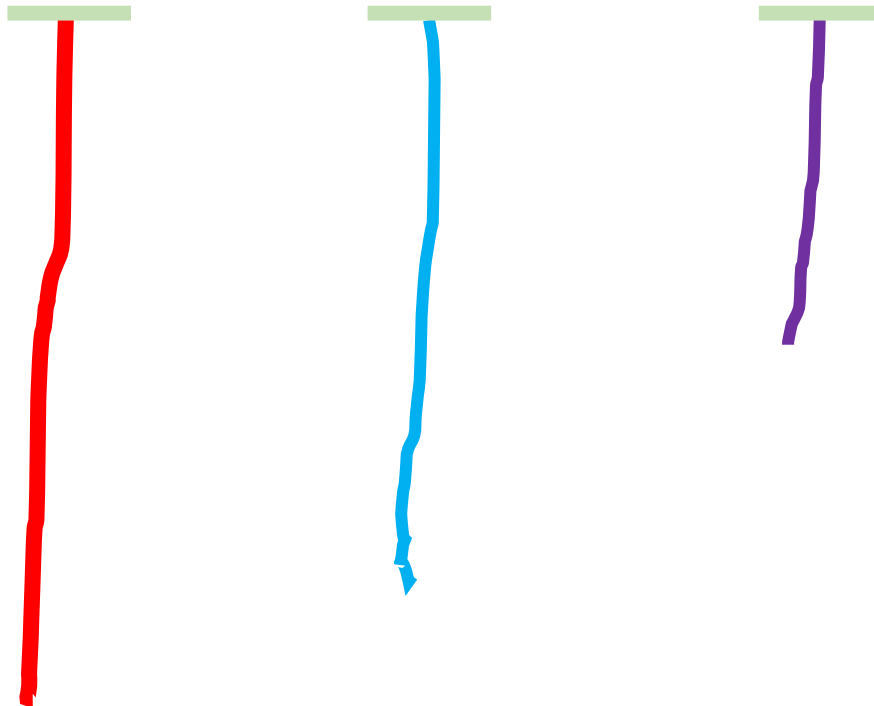
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Ask students to measure the length of their shoe. Label and tape the streamer beside the height and jump length streamers.

Ask students to measure the length of another person's shoe using a streamer.

Label and tape the other person's streamer onto the wall.

Remind students that each streamer needs to be taped and aligned at one end. For example:

Super me

Focus questions

Q: *Which is the longest streamer? How do you know?*

Q: *Which is the shortest streamer?*

Q: *What does that tell you about 'Super me'?*

Q: *Which is longer: 'Super me's' shoe or jump? How do you know that?*

Q: *Which streamer is longer — this one or that one?*

Q: *What does this tell you about the lengths you have measured?*

Q: *Which streamer is shorter than this one? Explain how you know.*

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