

# LENGTH – MULTIPLE AND SINGLE INFORMAL UNITS.

## INVESTIGATIONS OVERVIEW PAGE

THIS PAGE IS A SUMMARY OF THE INVESTIGATIONS THAT STUDENTS MAY ENGAGE IN TO DEEPEN THEIR RELATIONAL UNDERSTANDING. INVESTIGATIONS WITH INSTRUCTIONS TO STUDENTS FOLLOW ON SUBSEQUENT PAGES.

- In pairs, children have a selection of shapes or objects. They select one shape or object and use multiple uniform informal units of measurement to measure length identifying the dimension that they are measuring – up and down, or left to right or front to back. They record the shape or object, the length in their unit of measurement, and their measurement strategy – lining up multiple units of measurement along the length. *Reflection: How can we measure length?*
- In pairs, children measure lengths on shapes and objects using 2 or 3 different units of measurement, for example, a paper clip, a long craft stick and a short craft stick. They compare number of units needed, explaining why they needed more of the shorter units than the longer units to measure the same length, and fewer long units than short units to measure the same length. *Reflection: Why do we need more short units and fewer long units to measure the same length?*
- In pairs, children have a selection of shapes or objects. They select one shape or object and use a single informal unit of measurement to measure length identifying the dimension that they are measuring – up and down, or left to right or front to back. They record the shape or object, the length in their unit of measurement, and their measurement strategy – marking and moving a single unit of measurement along the length. *Reflection: How can we measure length?*
- In pairs, children measure around their heads using string or a strip of paper. They use informal units to measure the length of the string / paper. They record the distance around their head in their unit of measurement. *Reflection: How can we measure a curved length?*
- In pairs, children use informal units to measure heights, lengths and distances in the room. For example, they may measure the height of a chair/table/cupboard, the length of a chair/table/cupboard and the distance between objects or around objects with curved lines. *Reflection: How can we measure length?*
- In pairs, children lie on the floor, mark where their head and feet end, and measure the distance between feet and head / length of the child / height of the child in informal units. They identify that the language we use to describe length is flexible, for example, when we stand we have height, when we lie down we have length. *Reflection: How can we measure length?*

# Length – Multiple and Single Informal Units.

Select an object or shape.

Select units of measurement, for example, a paperclip or craft stick.

Use the units to measure the length of one dimension of the shape or object (up and down or left to right or front to back).

Record the shape or object and the way you measured the length of 1 dimension.

Record the length and the unit of measurement.

Reflection: How can we measure length?

## Length – Multiple and Single Informal Units.

Sit with a friend.

Each of you measure lengths on shapes and objects using a different unit of measurement, for example, a paper clip, a long craft stick and a short craft stick.

Compare the number of units you needed, and your friend needed.

Which unit did you need more of? Why?

Which unit did you need fewer of? Why?

Reflection: Why do we need more short units and fewer long units to measure the same length?

## Length – Multiple and Single Informal Units.

Select a shape or object.

Select a single unit of measurement, for example, 1 paperclip or 1 craft stick.

Use the unit to measure the length of one dimension of the shape or object (up and down or left to right or front to back).

Record the shape or object and the way you measured the length of 1 dimension.

Record the length using the single unit of measurement.

Reflection: How can we measure length?

## Length – Multiple and Single Informal Units.

Sit with a friend.

Using a string or a strip of paper, place the string around your head.

Select a unit of measurement.

Use 1 unit, or multiple units to measure the length of the string or strip of paper.

Record the way you measured the length of the curve.

Reflection: How can we measure a curved length?

# Length – Multiple and Single Informal Units.

Sit with a partner

Choose some objects in your room, such as a cupboard or chair.

Measure the dimensions of the object using your choice of units.

Or you could measure the distance between two items.

Record your measurement and the units that you used.

Reflection: How can we measure length?

# Length – Multiple and Single Informal Units.

Work with a partner.

The first person lies down on the floor. The other person makes a mark at their head and at their feet.

Measure the distance between the two marks and record your measurements and the units that you used.

Discuss whether we always describe length in the same way or if there are different ways to describe what you just measured.

**Reflection:** How can we measure length?