

LENGTH – CONVERT ALL UNITS USING PLACE VALUE.

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 pack of playing cards. They select cards to make numbers to represent a length in a single unit of measurement - kilometres, metres, centimetres or millimetres or in a combination of units of measurement. They use multiplicative place value to convert between units of measurement by multiplying or dividing by powers of 10. They record their measurement in a metric measurement chart, and read as both units of measurement. Children could record their multiplicative place value chart on the left page, and their metric measurement chart on the right page. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*
- In pairs, children have a map with a simple scale. They measure distances in centimetres and millimetres. Then calculate distances in kilometres, then convert to metres. For example, a distance may be 28.4 kilometres. Children convert to metres by multiplying by 1000 to get 28 400 metres. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*
- In pairs or small groups, children are given a ball of wool. They estimate the length of the wool in millimetres, centimetres, metres and kilometres, then measure it. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*
- In pairs, children have a large object, for example a box, garbage or storage bin. They predict whether the height or the perimeter (or circumference) will be longer. They measure both, converting between units of measurement, and combinations of units of measurement. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*
- In pairs, children have a length of string to create shapes with the same perimeter. They record the shape and the length of each side in centimetres and millimetres, converting between the units of measurement. Add lengths of sides, confirming they add to the length of the string. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*
- Children measure the perimeter of the school, then convert between units of measurement and combinations of units of measurement. They compare it with the perimeter of their garden, the local park, a sports field, etc. *Reflection: How can we use multiplicative place value to convert between units of measurement of length?*

Length – Convert All Units using Place Value.

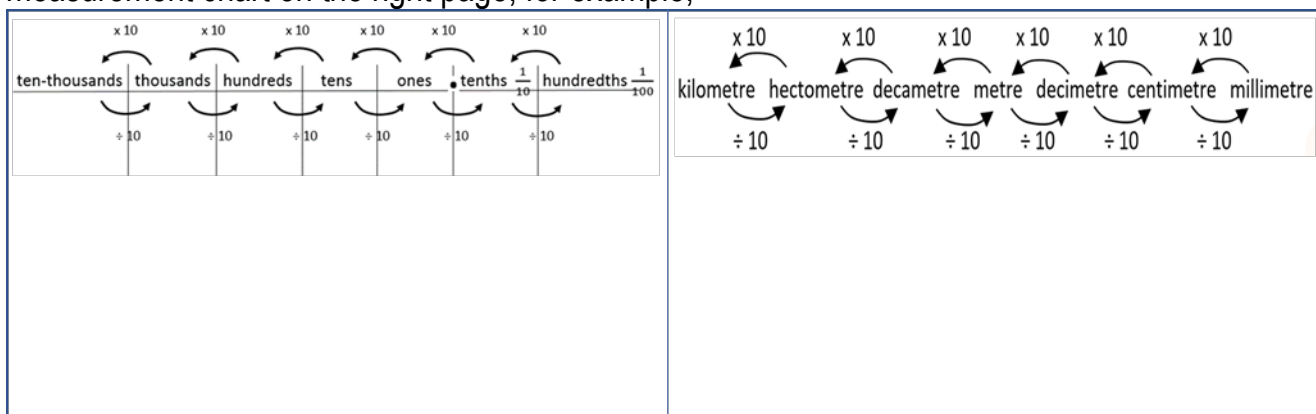
Have a pack of playing cards.

Select cards to make numbers to represent a length in a single unit of measurement – (kilometres, metres, centimetres or millimetres), or in a combination of units of measurement (centimetres and millimetres or metres and millimetres or metres and centimetres or kilometres and metres).

Use multiplicative place value to convert between units of measurement by multiplying or dividing by powers of 10.

Record your measurement in a metric measurement chart, and read as both units of measurement.

You could record your multiplicative place value chart on the left page, and their metric measurement chart on the right page, for example,



Reflection: How can we use multiplicative place value to convert between units of measurement of length?

Length – Convert All Units using Place Value.

Have a map with a simple scale.

Measure distances in centimetres and millimetres.

Calculate distances in kilometres, then convert to metres.

For example, a distance may be 28.4 kilometres. Convert to metres by multiplying by 1000 to get 28 400 metres.

Reflection: How can we use multiplicative place value to convert between units of measurement of length?

Length – Convert All Units using Place Value.

Have a ball of wool.

Estimate the length of the wool in millimetres, centimetres, metres and kilometres, then measure it.

Reflection: How can we use multiplicative place value to convert between units of measurement of length?

Length – Convert All Units using Place Value.

Have a large object, for example a box, garbage or storage bin.

Predict whether the height or the perimeter (or circumference) will be longer.

Measure both, converting between units of measurement, and combinations of units of measurement.

Reflection: How can we use multiplicative place value to convert between units of measurement of length?

Length – Convert All Units using Place Value.

Have a length of string to create shapes with the same perimeter.

Record the shape and the length of each side in centimetres and millimetres, converting between the units of measurement.

Add lengths of sides, confirming they add to the length of the string.

Reflection: How can we use multiplicative place value to convert between units of measurement of length?

Length – Convert All Units using Place Value.

Measure the perimeter of the school, then convert between units of measurement and combinations of units of measurement.

Compare it with the perimeter of a garden, the local park, a sports field, etc.

Reflection: How can we use multiplicative place value to convert between units of measurement of length?