



ESTIMATING MEASUREMENTS. GRADES 3-7

How long is Riverside's Knowledge Path? Head outside and put these measuring techniques to practice!

WHAT YOU'LL LEARN:

- Estimate distances and measurements.
- Measure day-to-day things.

CURRICULUM OUTCOMES:

- Students will demonstrate an understanding of and apply concepts and skills associated with measurement.

MATERIALS

- Nature journal/ notebook/paper
- Pencil
- Coloured pencils, crayons, etc. (optional)

This is an individual or group outdoor activity, it can be done in outdoor spaces of the school, home, backyard, or nearby parks/trails

WHAT TO DO:

Overview

Learning to estimate correctly is an important skill used for giving directions, orienteering, and more. Generally, 15 regular steps are equal to 10 meters: one step = only 1 foot moved; right foot forward and then left foot forward = two steps..

Centimetres can be estimated using the width of the pinky finger. A foot (30 centimetres) can be estimated from the distance from the elbow to just before the

wrist. A ruler can be placed to the elbow following the wrist to ensure the exact spot in your arm.

1. Go to the Riverside's Knowledge Path and find something to measure; it could be an area of a trail, a rock, a specific path, tree branch etc.
2. Measure both length and width.
3. If you have more than one person, you can use a chain or rope. Walk 15 steps/10 meters and then step to the side (making set #1), the next person walks 15 steps from you (making set #2), etc. Recycle people up from the earliest sets until you have reached the end. Add a 0 to that final number of sets (every time a person stepped aside) for the total meters.
4. If only one person is participating in the activity, keep track of the number of times you take 15 steps, and then add a 0 to that number. (For example, took 15 steps five times = 50 meters.)
5. Ask students to record their observations in their nature journal.
6. Ask the class to record the measurements in their journals. They can draw pictures of the things that are measured.
7. Measuring long distances can be practiced best on hikes. Everyone can walk in the trail quietly without any conversation, measuring in their minds, and after the trail ends, the class can compare the results. The teacher should have a general idea about the trail distance, which the class is using to measure to evaluate the results.

ASSESSMENT:

- Learners can be evaluated on their cooperation, if working with a group or pairs.
- Learners can demonstrate the concept of measurement correctly.
- They show the difference between various measuring units such as centimetres and meters.

EXTENSIONS:

- This activity can be extended by taking it indoors and measuring the class and various distances to different rooms like the gym, music room, and library.

CREDIT/REFERENCES:

This activity has been modified from the Stony Brook-Millstone Watershed Association [nature journaling activity](#) developed by Elizabeth Thompson