

## Pacing Exercise

### Introduction/Discussion topics

- We need to calculate distances for a variety of reasons while monitoring plant populations:
  - Drawing maps and writing directions to the population, e.g., “Plant population begins 12 meters south of the southwest corner of the long plank bridge.”
    - Estimating how large the population is from one end to the other. This is done by taking one distance measurement north to south and another east to west.
- Using a measuring tape to get an exact distance measurement is the preferred method; however, sometimes this option is unavailable because:
  - Measuring tape is not available.
  - Distance to measure is so long that it would be too time-consuming or cumbersome
  - Measuring distance along a windy path.
- Pacing is a back-up method of calculating distances, although it’s not ideal:
  - Potential error mainly due to inconsistency of step size.
  - Different walking speeds can make one’s pace greater/smaller.
  - We all walk differently on different days.
  - Terrain affects how big our steps are.
  - Ways to minimize error:
    - Set a personal, standard step size, e.g. 1 “step” = 3 footlengths
      - Use the same pace every time - you’ll get used to your own pace length.
      - Use the Pacing Exercise...
- **How to calculate distance:**
  - Take the # of steps it took to walk the known distance and back (say: 40 meters)
  - Divide # of steps by the known distance to get # of meters/step (ie. 40 meters/60 steps = 0.67 meters per step)
- **How to determine an unknown distance:**
  - Pace the distance
  - Multiply the # of paces by the # of Meter/step (i.e.,it takes me 30 steps to the mark, so 30 steps x 0.67 meters/step = 20 meters)