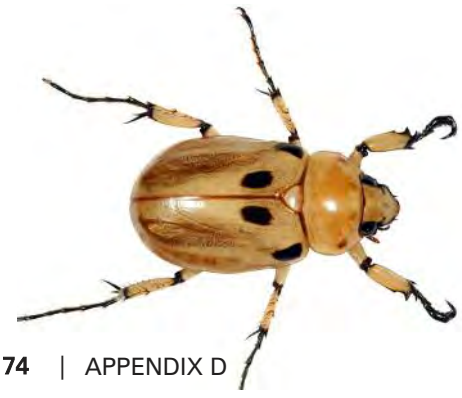
Pacing, Baseline Mapping and Mapping to Scale

Many educators approach mapping the schoolyard and taking site inventories in different ways. For some, mapping may be an entire unit which culminates in making a scale model of the schoolyard. Others choose to do rough estimate of schoolyard dimensions, spending more time on assessing the characteristics of the site. The following information will help as you decide on your own approach to schoolyard assessment.

Pacing

Pacing is one method students can use to determine the dimensions of your Schoolyard Habitats site and to make measurements when creating baseline maps. This method provides opportunities for students to practice practical math skills such as calculating averages and measurement conversions. If more accurate measurements are desired, use 50-100 ft measuring tapes instead of pacing when mapping the site.

1. Establish a starting point.
2. Measure a 100 ft straight line out from that point.
3. Begin with your left foot and count the number of paces it takes you to walk 100 ft. Count every time your right foot hits the ground.
4. Pace this distance several times; determine the average number of paces you take to walk this distance.
5. Divide 100 by the average number of paces you take to walk 100 ft. This is the length of your pace. You can use this distance to determine an approximate measurement of the site you are inventorying by pacing the distance for each side of the inventory area.



Baseline Mapping

A baseline is a fixed line from which all measurements are made.

1. To create a baseline inventory map for a Schoolyard Habitats project, students should first make a hand sketch map of the site they will be inventorying on an 8 1/2" x 11" sheet of paper.
2. Determine the dimensions of the site; mark each side of the sketched area accordingly.
3. Conduct an inventory of the site and sketch or write the name of key inventory elements in their approximate location on the map.
4. Use one edge of the inventory site as the baseline.
5. Place a measuring tape along this edge (or if pacing, use string to establish a visible, straight line).
6. Measure the distance from the baseline to each of the key inventory elements that have been sketched on the map. To do this correctly, measurements should always be made at right angles to the baseline.
7. Use a second string (or measuring tape) to create a perpendicular "line" from the baseline to the element. Measure this distance and write it on the map next to the item.
8. Repeat for all elements on the map. Make sure to demonstrate this process before having students try it.

Mapping to Scale

Determine a scale for your map that will fit onto the graph paper being used. The scale should be large enough that the habitat site takes up most of the page.

1. Transfer the rough sketch of the area from the sketch map onto the graph paper, indicating correct dimensions and shape. Be sure to include a compass rose.
2. Using tracing paper, create overlays of the inventory elements. Use a separate sheet of tracing paper or overhead transparency for each type of inventory element and a different colored marker (marker ink shows through the layers better than crayon). To do this, place a single overlay sheet on top of the graphed base map. Plot the locations of one element (i.e., traffic flow) according to the established scale. Remove the overlay and repeat for each type of inventory element.