Customizing “Measuring Abundance: Transects and Quadrats” Lesson

The “Measuring Abundance: Transects and Quadrats” lesson contains a lot of suggestions on how to introduce sampling methods and ways for students to get comfortable using the equipment and taking data. The time required for a class to become adapted at using the new methods will vary. Do as much practice as you feel your class needs in order to be prepared in the field.

Note on Quadrat Data Sheets

There are two ways to take quadrat percent cover data – using either the entire area of the quadrat to estimate percent cover or using the modified “squares” method. Thus, all quadrat data sheets are duplicated. One data sheet (designated as “percov”) has the totals in each column adding up to 100%, while the other data sheet (“percov squares”) has the column totals adding to 36 squares. Otherwise, both quadrat data sheets are the same and both include the point count method. The data sheets incorporate both one of the percent cover and the point count methods because even if you plan on using just one quadrat method in the field, it is important to practice and learn both in the classroom so the students can see the pros and cons of each method.

Classroom Data Sheets

In the classroom the data sheets assume a transect length of 10m. You can add or subtract rows or change the half-meter separations between transect points. You can change the designated transect and quadrat points to any standard distance (e.g. every 0.5m, 2m, 5m, etc.) depending on the size of your classroom.

Categories on the quadrat data sheets are not labeled as they are for photoquadrats and courtyard sampling so you can personalize the data sheets for your classroom. For instance, you could introduce the sampling equipment using student desks (which would make the categories: book, pencil, bookbag…), colored index cards (red, yellow, green) or sweet species (M&M’s, lollipop, snickers).

Classroom Sampling – Transects Data Sheet
Classroom Sampling – Quadrats (Percent Cover)
Classroom Sampling – Quadrats (Percent Cover Squares)

Courtyard Data Sheets

The courtyard data sheets assume a transect length of 20m. You can change the designated transect and quadrat points to any standard distance (e.g. every 0.5m, 2m, 5m, etc.) depending on the size of your study site.
You can also change the category designations based on the composition of your courtyard.

Courtyard Sampling Pictures
Courtyard Sampling – Transects
Courtyard Sampling – Quadrats (Percent Cover)
Courtyard Sampling – Quadrats (Percent Cover Squares)
Site Conditions: Describing Substrate and Estimating Wind Speed