



PROJECT

Plant Explorers

Session 2 of 4

Plant Collection and Classification

What types of plants are growing around us? Of those, which are most plentiful in different areas? Why might that be?

YOU WILL NEED

- Census collection sheet with pre-selected species for students to tally
- Handouts with images of the plants on the census collection sheet
- Egeria densa demonstration handout
- Computer
- Smartboard or projector
- Presentation
- Plant Explorers — Handout
- Census Collection Sheet — Handout
- Egeria Densa Demonstration Report — Handout

STEP 1 (60 Minutes)

This portion of the lesson depends on the areas your students will have access to during the activity. A field trip to a nearby botanic garden with a “local flora” section is best, but students can take a walk around the school, go to a nearby park, or anywhere else where they can see native plant-life in their area.

You will have to do some pre-trip work to scout the area and create a list of plants the students should look for, as well as a visual guide so they can identify those plants. After scouting the area, the teacher should research the plants to determine what their different needs are (e.g. this tree needs lots of sunlight, or this shrub grows in shady areas) and include that in the plant guides.

On their “trip,” students will identify plants using the guide. They will note the type of plants they see, how many, and where they observe the plants on their census sheets.

Students will also be encouraged to collect fallen leaves to bring back for an activity in the following session.

STEP 2 (30 Minutes)

Field Trip Debrief and Histogram

Upon return, ask students to examine their data.

- Which plants were most plentiful in the area?
- Which plants were not found?
- Which plants were often found near one another?

Then lead the class in creating a histogram on the board. The types of plants will be listed on the “x-axis” and the number of plants will be listed on the “y-axis.” The teacher will tally how many of each plant was found and then lead the students in a discussion. Each area the plants were found in will be designated with a different color (e.g. all plants found near a stream will be blue, all plants found near the street will be green).

- Which plants were overall most plentiful?
- Which plants were least plentiful or nonexistent?
- How are those plants different? Why might one be more common than the other?
- Which plants frequently grew near each other? Why might that be?
- Which plants were not found in similar areas? Why might that be?

STEP 3 (30 Minutes)

Egeria densa Demonstration Phase 2 and Report

Bring the E. densa tank back to the front of the classroom and ask students to observe what has changed in the test tube (the water has been pushed out and there is oxygen trapped inside).

Ask students what they think happened and guide them through a discussion: *as plants photosynthesize, they produce oxygen, which travels up the stem of the funnel into the test tube where it displaces the water.*

Students will then complete a report of the demonstration.