

**Topic:** populations

**Content Areas:** ecology

**Grade Level:** 9

**Duration:** 2 classes

**GIS Tool:** smartphone with locator, arc gis

**Objectives:**

use collector to survey school grounds, marking locations of select flora and fauna

determine biodiversity level in of trees

**Instructional Sequence:**

A How diverse are the populations of organisms on campus

1. provide annotated field guide of select organisms found throughout campus
2. Demonstrate how to use collector on the smartphones/laptops
3. each group will be assigned one population to mark
4. each groups' samples will be loaded on common map and analyzed

B How many different species of trees are within a 0.5 mile radius of the school?

5. Separate students into groups of 2-3, each with at least one smart phone or tablet. Map trees around the school's campus with pictures taken also. Students can use GIS census information to map what demographics influence the type/popularity of the tree. (Age of house, type of household, factor in size of tree).

**Assessment:**

**Other Resources:** (Such as PowerPoint, Video, Supplemental Readings, etc.)

## **Supporting References:**