MIDDLE SCHOOL CORNER (6-8)

ANALYZING THE ALIENS

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EALR: 1.4: Understand and apply concepts and procedures from probability and statistics.

GRADE LEVEL: 6-8

CLASS TIME TO COMPLETE: 1.5—2 hours

OBJECTIVES:

- gather real data and graph it in two or more forms
- understand native and non-native species and their affects on natural areas.

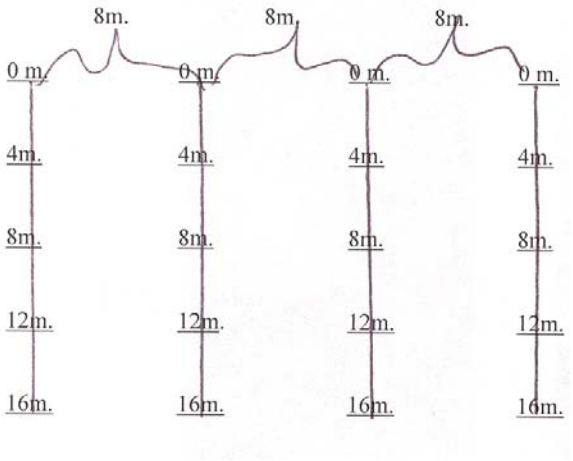
MATERIALS:

1. Undisturbed or disturbed plot of land. (A park or school-yard, for example.)
2. Tape Measure
3. Graph paper
4. Plant ID books
5. Stakes or other markers

PROCEDURE:

I. Take a transect of the area to be studied. (A transect is a straight line where data is gathered in 4 meter, for example, intervals.

2. Gather at least 15-20 pieces of data. For example:



3. Carefully measure and stake the intervals.
4. Identify whatever plant is under the stake. Note is the plant natural to the area or non-native.

ANALYZE DATA:

Note how many plants of each species were recorded, and which plants were the most common. Note how many and what percent were native or non-native. Use this information to graphically organize the data. Bar graphs, circle graphs and stacked graphs work well.

EXTENSION:

Discuss native versus non-native (alien or invader) plants. Non-natives are transplanted from other geographical areas and usually are found in disturbed areas. Non-native species can harm ecosystems because the areas do not have predators or insects to control these invaders. Thus, the non-natives can reproduce rapidly without natural checks to their populations. A change in the type of plants can affect the make up of the entire ecosystem, if the animals depending on the plants for food can not adapt.

FACTS:

- Roughly 25% of all prescription medicines in the US are derived from plants.
- The largest seed in the plant kingdom weighs 60 lbs. It's the seed from the Coco de mer, or double coconut palm.
- Ladybugs can eat 40 aphids in an hour!
- A standard garden hose puts out 20 gallons/minute. A hose left on by mistake can waste as much as 28,000 gallons in just 24 hours.