Seed Collection Harvest Data

Learner Outcome:

The student will be able to:

- grow a Wisconsin Fast Plant and pollinate with bee sticks to support an argument that bees and flower parts depend on each other for seed production and the survival of bees (Standard MS-LS1-4).
- explain how bees taken out of a mutually beneficial relationship with flowers affect both organisms through growing Wisconsin Fast Plants and not pollinating a sub-group of plants with bee sticks (Standard MS-LS2-2).

Directions: Answer the following questions about the plants that you have grown in class.

1. What is the number of pods found on each plant in your quad? (There should be some seeds in the pods)

   Plant 1 _____

   Plant 2_____

   Plant 2_____

   Plant 4_____

   Total Number of Pods in Quad _____

2. What is average number of pods produced for each plant in the quad?

   _____ divided by _____ = _____
   (total number of pods) (number of plants) (average number of pods per plant)

3. Dissect the pods and count the total number of seeds. Place the seeds in the petri dish.

4. Do you think your group had high, medium, or low production? Give an explanation for the seed production in your group.

5. What was the total number of seeds for your class? On the graph paper provided, create a bar graph that compares seed production for each class.

Total Class Seed Production _____

6. During the plant lab, an experimental group was set up exactly like the quad for your group except the experimental group did not get pollinated at any point in time. Write down the seed production for the experimental group. Does this number seem low, medium, or average?

7. On the second piece of graph paper, make a bar graph that compares the seed production of your group to the seed production of the experimental group.

8. Construct an argument explaining why flowers are important to bees and how bees are important to plants (mutualism) based on the quantitative data collected.

9. Can you think of anything that may cause a decrease of pollinators (bees, insects, birds) in an environment?

10. Construct an argument for the following question. If pollinators were taken out of an environment, predict what would be the negative impact on the environment? Relate your explanation to the data collected in class.