

Pumpkin Activity Lesson Plan

Objectives:

- Have the students become familiar with measuring physical objects.
- Understand the botanical definition of a fruit and its importance to the life cycle of a plant.
- Introduce the concept of averages.
- Develop addition and division skills.
- Have students recognize relationships between measured objects.

Plan

1. Collect pumpkins of varying size. Ideally you would like to have enough pumpkins for an entire class split into groups of 3-4.
2. Split students into enough groups for the number of pumpkins you have available.
3. Have students measure the circumference and weight of the pumpkin and record this information as a group. With groups of three, one student can be the recorder, one can measure the weight, and one can measure the circumference of the pumpkin. Compile the information of the entire class on the board.
4. Cut open the tops of the pumpkins for your students. Have them count the number of seeds in each pumpkin. Compile this information on the board with the weight and circumference measurements.
5. Discuss the botanical definition of fruit as a part of the plant that produces seeds and discuss the student's previous ideas about fruits.
6. Introduce the idea of an average as a "middle" value of all the measurements and explain the process of adding all the values of the measurement together and divide by the number of objects you measured. Multiple descriptions of an average are preferred. Use a number line, use simple counts of objects like eggs in a basket, and use visual aids as well. For example, one can visualize an average of the heights of two individuals by marking their heights with a line on the board and looking for an intermediate point between the two lines.
7. Have the students first calculate the sum of the seed counts, the weight, and the circumference.
8. Have the students derive the average by physically allocating seeds equally into bins.
9. Have the student's calculate the averages of the other two variables of interest.
10. As a class, have students come up and plot points on a graph of number of seeds against weight and circumference, respectively. Discuss the relationship between the two variables.
11. Have students write down some thoughts on the parts of the activity they most enjoyed, found most difficult, and learned the most.