PUMPKIN EXPLORATION

Overview

The class will take a field trip to the local pumpkin patch where each child will pick out a pumpkin to take back to the classroom to measure the height, weight, and circumference of the pumpkin. The students will draw horizontal and vertical bar graphs and a line plot to record and compare the pumpkin data.

Suggested Grade Level:
3rd

Time:
Field Trip to a pumpkin patch
Classroom Time: 1 hour

Subjects:
Math

Objectives

1. Students will collect data by measuring the height, weight, and circumference of their pumpkin.
2. Students will be able to draw a horizontal and vertical bar graph and a line plot to compare their pumpkin data.
3. Students will compare the data and hypothesize why some pumpkins are bigger than others.

Background Information

Pumpkins, like all plants, need sunlight, water, air, soil, and a proper environment to grow. The height, weight, and circumference of each pumpkin varies depending on these factors.

Vocabulary

Circumference: The external boundary or surface of a figure or object.

Height: The distance from the bottom to the top of something standing upright.

Weight: The amount that a thing weighs.

Estimate: The approximate value of something (or to put it more simply: a good guess).

PUMPKIN EXPLORATION

Materials

- Pumpkins of different sizes (1 per child)
- Scale measuring ounces and pounds
- Flexible tape measure
- Ruler
- Calculator
- Pencils and Paper
- 1 orange crayon
- Estimation and Recording sheet
- 3 sheets of paper per child for bar graphs and line plot

Procedures

1. Students will complete the “My Pumpkin Data” worksheet with a partner. Partners can help each other accurately measure and record the data.
2. Instruct each student how to draw a bar graph and line plot. Draw an example of each on the board and decide as a class what the scale will be.
3. Call upon each student to share his or her pumpkin data for the height. As each child shares the data, other students will draw a bar on their graph with a crayon.
4. Repeat for the weight data and circumference.
5. Complete line plot. As each child tells his circumference data, the other students can plot it.
6. Upon completing the lesson, the students will calculate the average height, weight, and circumference of the pumpkins. Then they will hypothesize why the pumpkins vary in height, weight, and circumference.

Conclusion Questions

1. What is the average height, weight, and circumference of the pumpkins?
2. Whose pumpkin was the tallest? Heaviest? Whose had the greatest circumference?
3. Why do you think this is?
4. What do plants need to live?
5. What would happen to a plant if it did not get much sunlight or rain?
6. What if the plant received too much rain?
7. Does the type of soil a plant is grown in effect it?
8. How could you grow a really big pumpkin? Assessment: Check each student’s bar graphs, line plot, and data worksheet.

PUMPKIN EXPLORATION

My Pumpkin Data

Name:_____

Date:_____

	Estimate	Actual
Height		
Weight		
Circumference