

Money-Saving Garden

Grade Level: 4th

Title of Lesson: Money-Saving Garden

Performance Standard(s) Covered:

MCC4.OA.2 Multiply or divide to solve word problems involving multiplicative comparison, problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

MCC4.OA.3 Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.

Essential Question: How do you mathematically demonstrate which school garden crop has the most value?

Objective: Students will be able to use multiplication, division, addition, and subtraction to determine the amount of money saved by eating from the garden instead of shopping at a grocery store to 100% accuracy.

Key Words and Terms:

- Multiplication
- Division
- Addition
- Subtraction
- Chart

Learning Activity

Abstract:

Students will conduct a homework assignment to research the prices of produce in the supermarket. They will then harvest from the garden, weigh the produce, and determine the value of what they have grown.

Materials Needed:

- A garden
- Class set of harvesting shears
- A scale (preferably a hanging or table scale, not a bathroom scale)

Safety Concerns: When harvesting from the garden warn students of spiny crops and demonstrate how to properly use harvesting shears.

Procedure

1. Have students (as a homework assignment) look up the prices for the crops growing in the garden in local grocery stores. Students must determine
 - a. Store name
 - b. How crop is sold (individually or by the pound)
 - c. Organic or conventional produce
 - d. Price of item
2. When students have had time to learn cost of crops in the grocery store then it is time to harvest!
3. Teach students how to read the scale and how to use harvesting shears.
4. Over the course of a few days have students harvest from the garden and keep up with the following:
 - a. Date of harvest
 - b. Crop
 - c. Weight
5. When you have completed harvest have the students determine the value of the crops based on the prices collected during homework.
6. Some of the following questions could be asked -
 - a. How much money did we save from growing this crop ourselves?
 - b. Compare the value of crops from different grocery stores in a chart or graph
 - c. Compare weights by harvest dates in a chart or graph
 - d. Which crop is valued at the most money? The least?
 - e. On average how many pounds of produce were produced by each plant of this crop? The value earned per plant?
 - f. If the garden was twice as big how much money could we have saved?
 - g. If you have x pounds of this crop and they are \$1.99/lb and your total value is \$7.38, how many pounds did you harvest?