



# Measuring the Harvest

## Materials:

- Rulers
- String
- Scissors
- Science journals
- Pencils
- Whiteboard and markers
- Optional: Scale

## Standards and Curricular Connections:

### Common Core State Standards

MP.2 Reason abstractly and quantitatively

MP.4 Model with mathematics

MP.5 Use appropriate tools strategically

## Strategies for Engagement:

Review how to carefully harvest before the activity begins.

Compare inches or centimeters as units

## Overview & Objective

In the garden, it is obvious that that math is relevant to day-to-day life. We measuring the distance between seeds and tracking and charting plant growth. This lesson focuses on using math tools and skills while harvesting in the garden.

Students will:

- Measure length and width.
- Line up and chart garden growth.
- Optional: Use tools to measure the circumference of a round vegetable.

## Pre-Activity Questions:

- How do we know which vegetable is the longest? Widest? Or heaviest?
- Where do you think we will find the biggest vegetables?

## Activity

- Pass out rulers and review how to use. Ask the students which unit they should use. Where do you start measuring?
- Demonstrate measuring the *length* and *width* of a vegetable and using a string and ruler to measure the *circumference* of a round vegetable. What do they do if their object is longer than the ruler?
- Review unfamiliar terms.
- Pair students and give each group a ruler, string, and science journal.
- Depending on what is in season and quantities, instruct the students to harvest and measure certain vegetables and amounts. Carrots work well for length, and big collard or swiss chard leaves are fun to measure the width.
- Line similar types of produce up from smallest to largest. Was a particular size the most common? Were there any individuals that differed from all the others?
- Create a table of students' measurements on a white board or outdoor chalkboard. What was the longest? Widest?



# Measuring the Harvest

## Resources:

- The Garden Classroom: Hands-On Activities in Math, Science, Literacy, and Art by Cathy James
- The Growing Classroom: Garden-Based Science by Roberta Jaffe and Gary Appel

## Gateway Greening

### Resources:

Connect with us on Facebook to discover upcoming Youth Garden Institute workshops or join the Gateway Greening Educators Group to connect with other teachers:

 @ GatewayGreening

Discover season-specific gardening how-to's and examples of current lessons:

 @ gatewaygreening

Looking for Field Trip opportunities or need to ask a question about our education services? Please contact [education@gatewaygreening.org](mailto:education@gatewaygreening.org) or 314-588-9600 ext 107

## Additional Activities & Follow Up

- Use your garden scale to weigh the harvest. Which vegetable is the heaviest? Is there any relationship between length, width, circumference, and weight? Practice adding by totaling the amount harvested in one season.
- Practice using rulers when transplanting seedlings or planting seeds. Read the back of the seed packet for appropriate spacing.
- Calculate the area of a garden bed and how many seeds can be planted based on spacing needs.
- Students measure out a meter then race to cover the length measured distance with leaves. The first group to finish - wins! Fun to do in fall or after a tree identification lesson.
- Weekly, measure the height of a plant from seed to full grown. Create a graph of its growth.
- Create equal portions to distribute for a snack by measuring the length vegetables before cutting.
- Have students choose a favorite flower, leaf, vegetable, etc. Create a bar graph of favorite items. What was the most popular?