



Teaching with Math and Me!

Math in the Garden

Connection to Standards

Students will understand how to measure using standard and nonstandard units. (NCTM)

Materials Needed:

- Rulers (one per student or per group of 2–4 students)

Differentiation for ESL

- Review these additional vocabulary words in context: *garden*, *inches*, *measure*
- Allow students to complete word maps for any term for which they have limited understanding. Have students say or write the definition in their own words.
- Have students sit with a partner while reading. After each page, have students discuss words and ideas they found confusing.

Before Reading

Building Background Knowledge:

- If this is students' first time reading this series, explain to them that in each book they'll be reading about different ways they can use math in their everyday lives. Tell them that in this book, they'll be learning about using math in the garden.
- Ask students to raise their hands if they have a garden, have ever worked in a garden, or have ever helped to plant seeds or flowers. Invite these students to share their experiences with gardening and to discuss some of the ways they used numbers while gardening.

Preview:

- Show the cover of the book. Explore the cover photo. Ask students to guess who the people are and what they are doing.
- Lead students on a brief picture walk of the book, exploring the photos on each page. Have students identify one or two details in each photo.

Predict: Ask students to predict some of the specific parts of gardening they will read about. Have students support their predictions with evidence they discovered while previewing the book.



Lexile: 440
Words: 366

PreK–2



Vocabulary: Turn to page 23 (“Words to Know”). Read each vocabulary word and have students raise their hands if they know the word. Call on students to define each word, then read the definition provided. Ask students to consider whether the provided definition matches their understanding of the word.

Strengthen understanding of words students do not know well by modeling how to use the word in a sentence. Create sentences with rich context clues, then review how the context clues help students understand the meaning. Have students come up with their own sentences for each word.

Skill Introduction: Write the word *length* on the board. Explain that *length* is the distance from one end of something to the other.

Pass out a ruler to each student or group of 2–4 students. Explain that a ruler is used to measure the length of things in *inches* or *centimeters*. Point out inches on the ruler. Explain that there are 12 inches on a ruler and that 12 inches are equal to one *foot*.

During Reading

Look for Key Details: Remind students that the main idea of the book is to describe some of the ways we use math in the garden. As you read each chapter, invite volunteers to share how that chapter supports the main idea. In what ways does the chapter show math being used while gardening?

Practice the Concepts: Ask students the following questions as they read.

- **pp. 8–9:** *Suppose each plant should be 9 inches apart instead of 6 inches. How many plants can fit in the 36-inch row? Count by nines to find out. (4)*
- **pp. 10–11:** *Suppose the seed packet says to plant 4 seeds in each hole instead of 3. How many seeds will you need to fill 6 holes? (24)*
- **pp. 12–13:** *If each of the 6 holes needed 2 cups of water, how much water would you need to water all the plants? (12 cups)*
- **pp. 14–15:** *A few weeks later, the first plant is 6 inches taller and the second plant is 2 inches taller. Which plant is taller? (The first plant is now 12 inches tall and the second plant is 11 inches tall. The first plant is taller.)*
- **pp. 16–17:** *If there were a fourth plant with 3 tomatoes, how many total tomatoes would you have? (19)*
- **pp. 18–19:** *If each basket held 4 tomatoes instead of 8, how many baskets would you need to hold the 16 tomatoes? (4)*

AFTER READING

Reflection: Ask students to share ideas for other ways to use math in a garden.

Skill: Have students use their rulers to complete the “Measuring Mania” worksheet on the following page.

Name _____

Measuring Mania

Use your ruler to measure different items in your classroom in inches. Then write the name of the item or draw a picture of it in the column that is closest to its length. Try to find at least one item for each column! When you are finished, answer the two questions under the table.

2 inches	4 inches	6 inches	8 inches	10 inches	12 inches

1. What is the **shortest** item you measured? _____

2. What is the **longest** item you measured? _____