

## **Growth in the Garden**

**Grade Level:** 4<sup>th</sup>

**Title of Lesson:** Growth in the Garden

### **Performance Standard(s) Covered:**

MCC4.MD.1 Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two column table.

MCC4.MD.4 Make a line plot to display a data set of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and of measurements in fractions of a unit ( $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$ ). Solve problems involving addition and subtraction of fractions by using information presented in line plots.

**Essential Question:** How do we display data in different forms? How do we measure length?

**Objective:** Students will be able to compare measured length data in different units to 90% accuracy.

### **Key Words and Terms:**

- Data
- Measurement
- Two column table
- Line plot

### **Learning Activity**

#### **Abstract:**

Students will measure plants in the garden over a period of a few weeks and collect the data. They will record their data in different measurement units in a two column chart and in a line plot.

#### **Materials Needed:**

- A garden
- Class set of rulers
- Class set of graphing paper

#### **Safety Concerns:**

Warn students of insects that bite and sting while in the garden.

**Procedure:**

1. Teach students how to use a ruler in the classroom.
2. Explain to them that you will be going to the garden every other day to measure the height growth of the new seedlings using the rulers.
3. Take the class out and assign each student a plant to measure so that they have consistent results.
4. Students will use two different measurement units to record their information.
5. Repeat until you have 8-10 days of data.
6. Once all data is gathered have students create two line plots of their data.
7. As a class create a line plot of all data collected in one form of measurement units.