Catching the Rain!

Reference: Adapted from *Measuring Rain* - Corvallis School District second grade Air and Weather Science Unit

Overview: Students will measure rainfall in the school garden using a rain gauge.

Subject area: Science, Math

Grade level: 2nd

Objective: Students will be able to identify factors that cause rainfall variations in the atmosphere and then measure accumulated rainfall in the school garden.

Next Generation Science Standards:
K-ESS2 Earth's System's

- **K-ESS2-1.** Use and share observations of local weather conditions to describe patterns over time.

Oregon Common Core State Standards for Mathematics:
2.MD Measurement and Data

- **2.MD.1** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

Prep time: 15 minutes

Lesson time: 30 minutes

Materials needed:

- Rain gauge
- White board and markers
- Paper and pencils

Space needed: School Garden

Staff needed: 1-2

Preparation steps: One week before the lesson, place the rain gauge in the desired area of the garden for later recording by students.

Presentation Steps:
<u>In the classroom:</u>

1. Ask students:
    - *What kind of weather do we often have in the winter?* (rain, colder temperatures, fog)

- *When we see lots of clouds in the sky, what kind of weather can we usually expect?* (rain, snow, hail)
- *What do the clouds look like that bring rain?* (cumulus or stratus clouds; gray and cover the sky)

2. Discuss the following with students:
   Sometimes clouds bring more rain or snow than other times. Today, we are going to the garden to measure how much rain we've received in the past week. How do you think we can measure the rainfall? (With a rain gauge) *How do you think a rain gauge works?* (Point out the measuring lines, if you have one in the classroom, or draw an example on the board). Explain that *the container catches falling rain. As more rain falls, the water level goes up. The scale on the outside measures how much rain has fallen.*
   - Ask students, *how much do you predict that it has rained in the last week*? Write predictions on the board.
   - *Are there certain areas outside that you think it might rain more than others*?

<u>In the garden:</u>

3. Show students the rain gauge and help the students measure and record the rainfall.
4. After the rainfall is measured, gather the class together and ask:
   - *How does rainfall affect the living and non-living things in the garden?*
   - *What do you think will happen to our plants if they don't get enough rain?* (They won't grow or they will die, they will be more susceptible to pests and diseases, they won't have as many nutrients, etc.)
   - *What do you think will happen to our plants if they receive too much rain?* (They won't grow or will die, they will be more susceptible to pests and diseases, they won't have as many nutrients, etc.)