Weather

Age Group: 6th grade
Time: 20 minutes
Materials:

- Rain gauges
- 2 high/ low thermometers (one for inside greenhouse and one for outside)
- Daily weather board
- Rain graph
- Daily temperature board
- Markers: green, blue and red

Description:
Students will learn how to monitor the weather at the LGL by using the daily weather board, thermometers and rain gauges.

Objectives:

Students will be able to…..

- Understand the basic concepts of weather.
- Link the relationship between weather and growing food at LGL.
- Record data daily and compare weather patterns.
- Record what they observe and predict.

Environmental Education Guidelines:

- Questioning & Analysis
- Knowledge of environmental processes and systems:
    - The earth as a physical system: processes shape the earth, changes in matter.
    - Environment and society: Technology

Major Life Science Themes:

- Structure & Function
- Ecosystems
- Photosynthesis

Vocabulary:

Weather: Condition of the atmosphere at a given place and time.

Climate: Weather over a period of time.

Safety:

- General garden safety, as expressed in the rules section below:
    - stay on the paths,
    - ask before you eat,
    - stay within sight of an adult
    - properly handle thermometers

Instructional Sequence:

Introduction *(5 minutes)*

- Introduce the lesson by explaining the importance of weather and why we study it.
- Explain:
    - What will be asked of each student while at the "weather station"
    - Why we are gathering the data.
- Show students:
    - Weather/Rain board
    - Rain Gauge
    - Thermometer
- Explain how each of the above will be used to record data and log information in their journals.

Observation *(12 minutes)*

- Observe the current weather outside with the students.
- Ask:
    - What do they see?
    - Colors?
    - Shapes?
- Engage the students by making connections about what we already know about clouds, rain, etc.
- Define *weather* and *climate* using the above definitions.
- Return to "weather station" inside.
- Draw shapes and descriptions of current weather, predictions, etc. on the weather board.
- Focus attention now on the thermometer.
- Explain to students the importance and care of the thermometer.
    - Remind students to never shake or drop the thermometer.
- Ask a volunteer to look at the thermometer and describe what they see.
    - What is the high, low and current temperature?
- Ask a different volunteer to record the above information on the daily board and temperature graph.
    - Remind them to reset the thermometer when finished in order to take a new reading for the next time.
- Ask another student to do the same with the outdoor thermometer.
    - Remind them to reset the thermometer when finished in order to take a new reading for the next time.
- Focus attention to the rain gauge.
- Ask:
    - Do we have a lot of rain in Portland?
    - How many inches do you think it rains a year? (Average: 45 inches)
    - How does this help the plants grow?
- Ask for a volunteer to help set up the rain gauge.
- Explain that rain will collect in the gauge allowing us to observe how much rainfall there

is. We can then use this data and record it on our rain graph.

Closure *(3 minutes)*

- Conclude the lesson by asking:
  - Why is weather important?
  - How does weather influence the garden?
- Answer any questions, comments or concerns.

Assessment/Evaluation:

- Have students write in their journals about how weather influences the garden.
- Have students write in their journals about how weather effects themselves, what kind of weather they like and why.

Additional / Optional Activities:

- Teach the students about other kinds of weather: frost, hail, snow, types of storms, thunder, etc. Then link this to the land and why and when we plant certain crops. For example, we plant garlic in the fall because it is resistant, but due to many different weather patterns and storms we cover it with straw to prepare. Salad bowl lettuce is planted in the summer and late spring because it's fragile leaves will be injured during dramatic weather and loves the sun. This may be a good lead into seasons.

- Seasons: what are the four seasons and what do we know about them. Maybe play a game pertaining to the changes of seasons by having four students volunteer to explain their favorite season with their bodies or sound affects.

- Identifying with the directions and where the weather comes from: Explain where the weather comes from. In the winter weather comes from the south, while in the summer it comes from the north.

- Linking our personal relationship with weather and how the plants feel: Covering garlic with mulch is like us staying inside more or hibernation for bears! Interconnectedness.