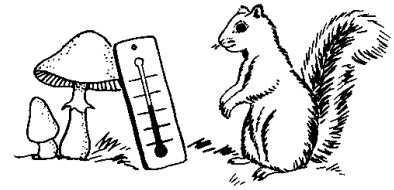


Activity: Temperature Walk

Grade Level: Grade 1

Major Emphasis: Measurement/Data Collection

Major Curriculum Area: Mathematics



Related Curriculum Areas:

- Refer to Outdoor Education Curriculum Matrix K-2
- Language Arts
- Science
- Social Studies

Program Indicator:

The student will be able to compare temperatures.

Student Outcomes: The student will:

1. measure temperatures in air, soil and water using appropriate thermometers.
2. record temperatures on appropriate charts.
3. compare the temperatures of the different environments (air, soil, water) using a graph.

Readiness:

1. Count by two's on a number line.
2. Introduce the following vocabulary:

temperature	expand	contract	cold
thermometer	degrees	hot	freezing
graph	warm	measure	Celsius or Fahrenheit
3. Complete the first grade Unified Science Unit, "Sun, Heat & Temperature."
4. Read temperatures on demonstration thermometer.
5. Complete Math Block 3; Using a thermometer, compare, read and record temperatures (p. 155).
6. Borrow soil, water and air thermometers from the Outdoor Education Center. Demonstrate their proper use in the classroom. Refer to Figure 1.

Materials:

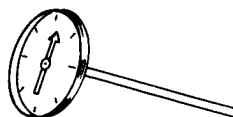
- | | |
|----------------------------------|---------------------------------|
| large demonstration thermometers | air thermometers |
| small demonstration thermometers | soil thermometers |
| Temperature Record Chart | water thermometers |
| Temperature Record Sheet | red crayons and markers |
| Thermometer Graph Chart | Personal Flotation Device (PFD) |
| Thermometer Graph Sheet | puppet |

Procedures: (DL2,3&4)

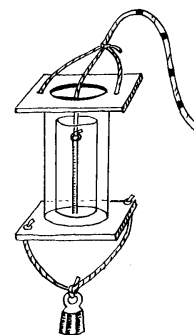
1. Introduce “Allie the Alien” to the students. Read the “Allie the Alien” story.
2. Discuss where Allie can live and what is most important to her. Record student responses.
3. Introduce air, soil and water thermometers as the tools to be used to locate Allie’s future home. Review how to read the thermometers and the Temperature Record Sheet, Supplement A, to be used for recording temperatures. Have the group predict where temperatures will be highest and lowest. Indicate the predictions on the Temperature Record Sheet using an H (highest) and an L (lowest).



Air



Soil



Water

Figure 1: Types of Thermometers

4. Measure and record temperatures at each of the following locations, using appropriate thermometers as well as student demonstration thermometers.
 - a. Field (air and soil temperatures)
 - b. Forest (air and soil temperatures)
 - c. Waterfront (air, soil and water temperatures)
If group is working from the pier, all students must wear a PFD (life jacket).
 - d. Indoors (air temperature)
5. Record time temperatures are taken.
6. Record data at each location on the Temperature Record Chart.
7. Discuss observations by asking questions such as:
 - a. What location was the warmest? Coldest? Most comfortable?
 - b. How did air temperature differ from soil or water temperature?
 - c. Which two locations were closest in temperature?
 - d. If you measure the temperature at (time), what might it be?
 - e. Why is air temperature different at each location?
 - f. If you came to camp in (January, July), how would the temperatures be different?

Summary: (DL1,2,3,4&5)

Determine where Allie the Alien will choose to live based on the temperature data that was recorded.

Follow-Up: (DL1,2,3,4&5)

1. Compare all the data collected and discuss findings for the final decision for Allie's home.
2. Have the students locate an appropriate home for Allie in the school environment, using the same criteria.
3. Have the students complete the Thermometer Graph Sheet, Supplement B, using data from the Temperature Record Sheet.

Extension Activity: (DL1,2,3,4&5)

Work in cooperative groups to design a poster or brochure to be sent to Allie's home on planet Awuba to advertise her new home to the other residents on Awuba.

Teacher Resources:

- < *First Grade Mathematics Block 3.
- < *First Grade Unified Science Curriculum: The Sun, Heat and Temperature.

Allie the Alien

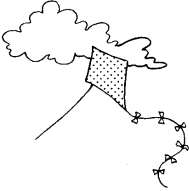

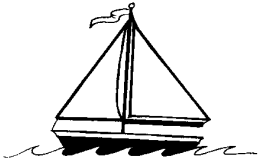


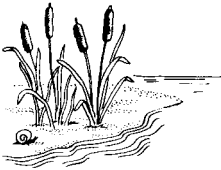
Leader: (*Read as though saying it*)

This morning when we arrived at the Outdoor Education Center, the staff told me that there were some strange happenings here last night. Strange sounds!; Flashing lights!; and a weird object appeared! Out of this object waddled a creature! Although she looks completely different from us, she was able to speak English. Here she comes now!

Puppet:

Hi! I am Allie the Alien! I have traveled for 5 years to get to your planet. My planet, Awuba, was so polluted that I decided to leave. I can live anywhere: in the water, in the ground, in the air and even on a black top. I am not fussy about this, **but**, I must live in the warmest place. Would you please find me a home in this area? Thank you, Earthlings!

Temperature Record Sheet

Location	Air 	Soil 	Water 
Field 			
Forest 			
Waterfront 			
Inside 