Activity 5
Weather Station Plots
Level 1

Objectives:
- Students will learn basic weather symbols used on weather station plots
- Students will learn, read and interpret the symbols.

Teachers Notes:
You could begin covering these objectives every day with a symbol of the day activity. These symbols could include cloudy, no clouds, partly cloudy, temperature, and precipitation symbols such as snow, rain, scattered showers etc. A key is provided at the end of this lesson plan. However, we **DO NOT** recommend giving students all of the symbols at this time, as symbols will be introduced in future lessons as new concepts are introduced. Ask students to make predictions and only provide them what is necessary at this time. To reach the activity website go to http://www.uni.edu/storm/activities/level1/.

On surface maps you will often see station weather plots. Because meteorologists must convey a lot of information without using a lot of words, plots are used to describe the weather at a station for a specific time. When all stations are plotted on a map, a "picture" of where the high and low-pressure areas are located, as well as the locations of fronts, can be obtained.

There are a large number of weather symbols used for station plotting. Some are used for weather elements such as rain, snow, and lightning. Others represent the speed of the wind, types of clouds, air temperature, and air pressure. All of these symbols help meteorologists depict the weather occurring at a weather observing station.

National Science Education Standards: All students should develop an understanding of: properties of earth materials and changes in earth and sky.

Engage:
On the activity web page, access the US station plot map. Have the students look at the map and ask them to tell what kind of information they think the map gives. They should be able to identify cloud cover and temperature. Ask them whether it is possible to tell what kind of weather any particular area of the country is having.

Explore:
Draw the following station plots on the chalkboard and tell the students, "Today we are going to interpret the weather symbols on a station model."

1. What does the symbol below tell you about your weather?
2. What does the number mean?
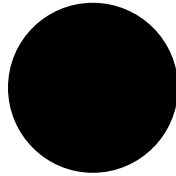3. What kind of precipitation do you think the ** represent?

31

✳✳ ◑

2. What kind of precipitation do you think the dots represent?

45
•• ●

3. What do you think the numbers represent?

Explain:

1. Teacher explains the station model information.
2. Show students various weather symbols, such as fog, blowing snow, and thunderstorms.
3. Have students identify and write down temperature, cloud cover, and precipitation type.
4. Have students practice reading stations on the activity website. As they look at the weather station models, have them choose (or you may choose) five stations for students to write a brief weather report.

Extend:
1. Have pairs of students choose different locations and give the current weather report each day for that city or state using the map on the activity web page.   Have them draw a model of a weather station on the board when doing the weather report.

Evaluate:
1. Collect student sheets, monitor discussion, evaluate weather report.

For Further Inquiry: How can students use weather station model maps to track weather as moves across our country? Invite them to design an investigation to answer this or any other question they might have about station models.

RAIN

Light

Moderate

Heavy

Light Shower

Moderate Shower

Thunderstorm

Heavy T-storm

SNOW

Light

Moderate

Heavy

Light Shower

Moderate Shower

DRIZZLE

Light

Moderate

Heavy

FREEZING RAIN

Light

Moderate

OTHER

Haze

Fog

Ice Crystals

Typical weather-type symbols