LESSON 3

Recording the Weather

Overview and Objectives

Students began observing and describing the weather in the first two lessons. To improve their ability to observe the weather, they now focus on two basic weather features: cloud cover and precipitation. Recording observations on a daily Weather Calendar introduces students to long-term data collection. At the end of the unit, students will summarize the weather data they have collected.

- Students observe and discuss cloud cover and precipitation.
- Students collect data about cloud cover and precipitation.
- Students record weather data on a calendar.

Background

In the *Weather* unit, students observe and measure four variables that meteorologists work with—cloud cover, precipitation, wind, and temperature. They have many opportunities to observe these variables and to record and interpret their weather data, first gathering information with their senses and later on using simple weather instruments.

In Lesson 3, students are introduced to the Weather Calendar, on which they will record their weather data for the rest of the unit. The Weather Calendar provides a simple and understandable way for children to participate in long-term data collection and analysis, much as scientists do.

At the end of the unit, students will use the data they collect in order to summarize their observations of the weather. At that time, for example, they may discover that during the weeks they recorded the daily weather, it was mostly cold and rainy, or that it stayed quite hot and dry, or that it varied considerably.

Materials

For the class

3 Weather Calendars
1 set of 11 weather stamps
1 date stamp
1 stamp pad
100 Post-it™ notes, 7.6 × 12.5 cm (3 × 5 in)

Preparation

1. Write the name of the current month and the year in the blank space at the top of one of the Weather Calendars. Use the other two calendars as needed for the rest of the unit.
2. Choose a place in the classroom to display the Weather Calendar. Select a spot where there is enough space for the class to gather around the calendar to discuss daily weather observations.
3. Decide on a system for having individual students take turns observing and recording the weather for the class during the rest of the unit. Various possibilities are suggested in the box below.

Recording the Weather Daily

You can integrate the Weather Calendar into your daily calendar activities. For example, you may already be reviewing days of the week and dates by using sentences such as these: "Today is __[Wednesday, October 24th]__. Yesterday was __[Tuesday, October 23rd]__. Tomorrow will be __[Thursday, October 25th]__." This would be a natural time to talk about today's, yesterday's, and tomorrow's weather.

You will need to select an effective system for assigning students to observe and record the weather on a daily basis. Here are some possibilities:

- Appoint a team of two or more students for each week. Have one student collect the data and another record these observations for the class on the Weather Calendar.
- Assign a different student each day to observe and use the weather stamps to record the observations of the day's weather.
- Ask the children as a class or in small groups to describe the weather, and then select one student to record the day's weather.
- Assign one student to observe and record the weather over weekends and holidays. You would need to make two copies of the weather stamps (Figure 3-1) to send home with the student, who would circle the stamps illustrating the weather.

So that students will be able to summarize their data at the end of the unit, try to have them observe the weather at the same time each day and perhaps put the time of day the observations were made on each day's Post-it™ note. In some areas, and especially during some seasons, the weather will change during the day. If this happens during the time your class is keeping its Weather Calendar, you might want to have the students observe and record the weather twice during the same day.

Procedure

1. Ask the question "What was the weather like two weeks ago?" Students probably will not remember exactly what it was like unless something dramatic like a major snowstorm happened. Ask students to describe today's weather. Finally, ask them to discuss how they might be able to remember today's weather two weeks from now.
2. Introduce the Weather Calendar as one way to keep track of the daily weather. Show students the weather stamps, the date stamp, and the Post-it™ notes. Starting today, they will observe the weather and record

their observations using the weather stamps on a Post-it™ note, which will then be attached to the Weather Calendar. (The system that you have selected for making these assignments can be explained to the class later; see **Final Activities**, Step 4.)

3. Discuss the 11 weather stamps, pictured in Figure 3-1, in more detail with the class. As you show them the stamps, let them know that they will use the wind stamps in the next lesson. The three groups of stamps are
   - Cloud cover (sunny, partly cloudy, cloudy, foggy)
   - Precipitation (no precipitation, snow, hail, rain)
   - Wind (no wind, some wind, strong wind)
4. Now take your class outside to observe today's weather. Ask students to pay attention to cloud cover and precipitation.

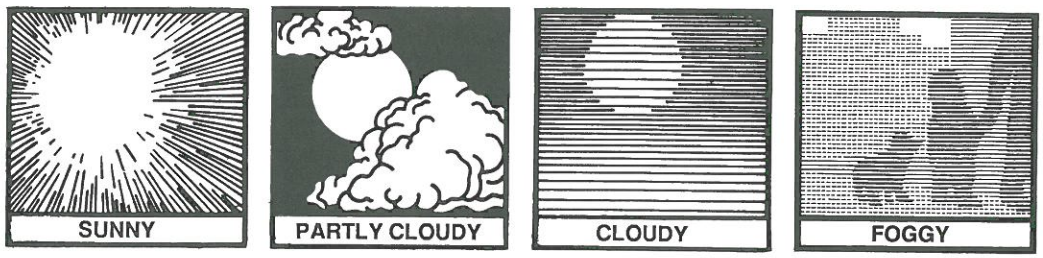
Final Activities

1. When you return to the classroom, ask students to decide which stamp best illustrates the cloud cover today. Select one student to use that stamp on a Post-it™ note.

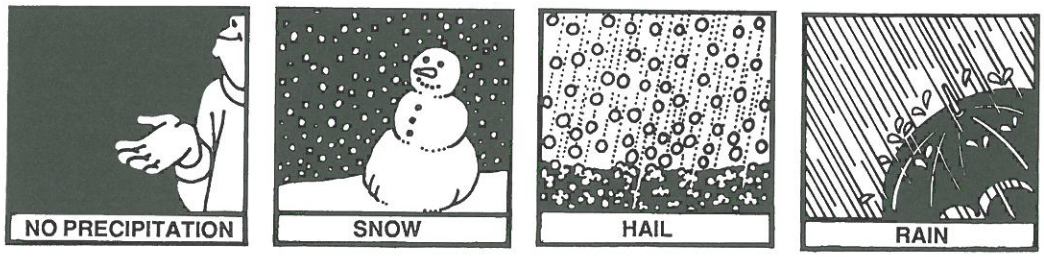
Figure 3-1

The 11 weather stamps

CLOUD COVER



PRECIPITATION

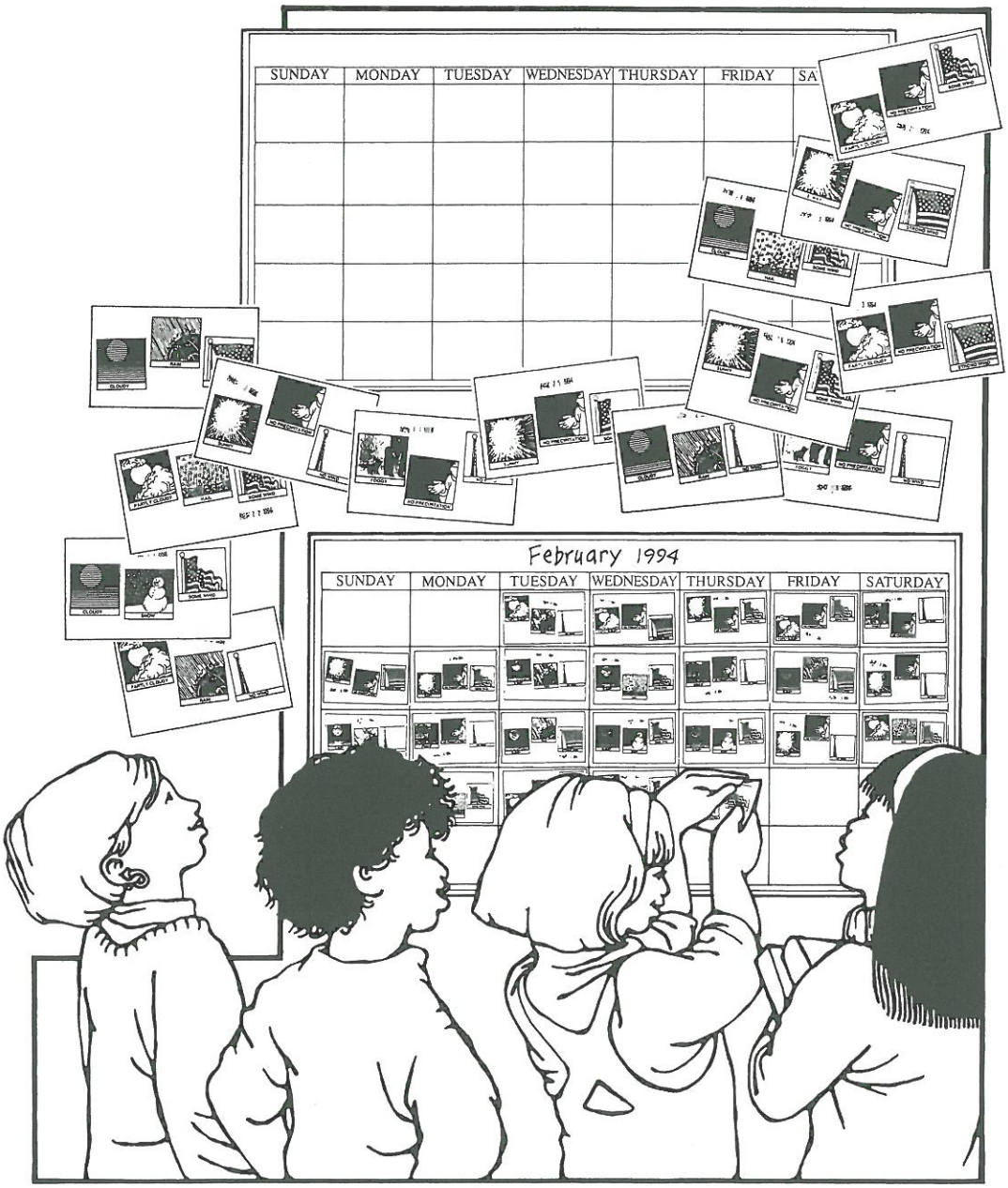


WIND

2. Ask the class to decide which stamp best illustrates today's precipitation and have one student stamp the same Post-it™ note with that stamp.
3. Finally, show the class the date stamp, and choose one student to stamp the date on the Post-it™ note. Then stick the Post-it™ note to the Weather Calendar. Figure 3-2 shows how a partially completed Weather Calendar looks as students record data.
4. End the lesson by explaining to students the system you have devised (see **"Recording the Weather Daily"**) so that each student will have a turn observing and recording the weather for the class.

Figure 3-2

Recording data on the Weather Calendar



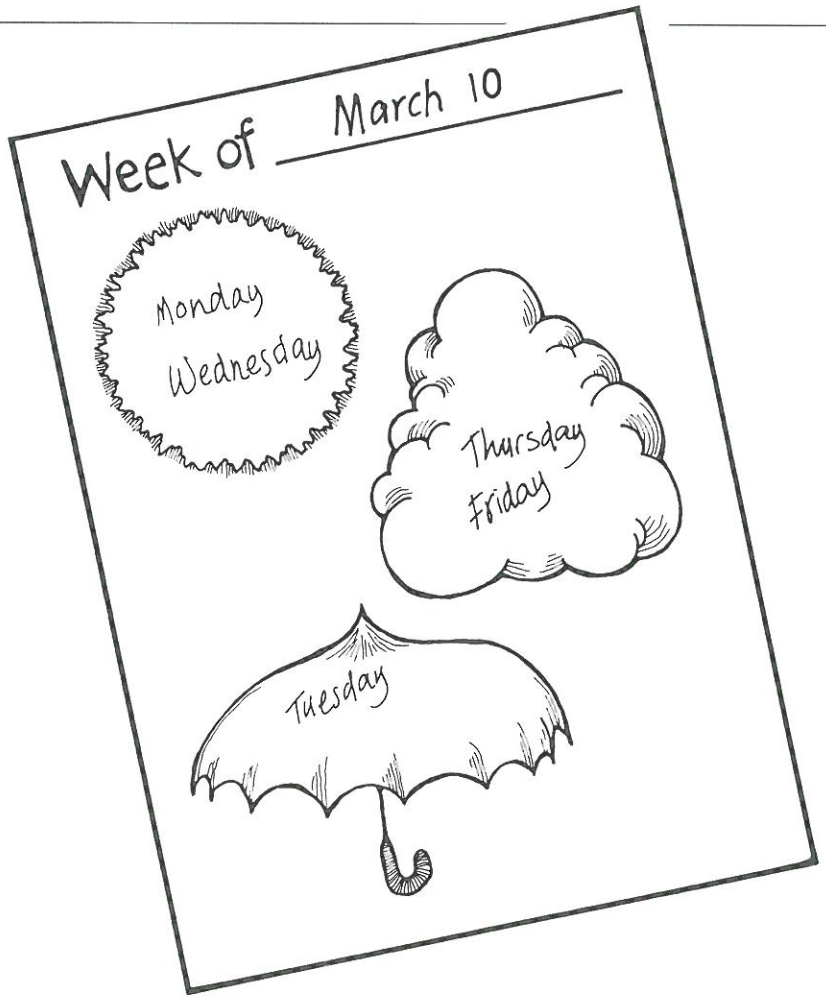
Extensions

SCIENCE

1. Diagrams are a good way to help students summarize the weather. Figure 3-3 illustrates one way to make a lively diagram. To fill it in, have students refer to the Weather Calendar at the end of the week to see what the weather was like each day. Students would then record the sunny days inside the sun, the rainy days in the umbrella, and the cloudy days in the cloud. You could add to or modify this type of diagram as needed to match the weather in your geographic area.

Figure 3-3

Summarizing weather data on a diagram



SCIENCE

2. Set up a learning center where students can use the weather stamps. Have students make a sample of all 11 stamps on a sheet of paper to show and discuss with their families. This helps introduce their families to the topic that your students will be studying for the next few weeks.

ART

3. Have students make large stuffed clouds, raindrops, or suns to hang around the room. They can also use the stuffed objects to create a mobile. Children can easily make these objects by cutting out two pre-drawn patterns of each weather element and gluing them together at the edges, leaving an opening for stuffing them with cotton or paper.

Assessment

Observational Guidelines

In this lesson students started recording daily observations on the Weather Calendar. To help them learn how to analyze their data, ask questions that encourage them to make comparisons and synthesize information. Throughout the rest of the unit, notice changes in your students' recording and analyzing skills.

Following are some questions that you might ask your students:

- How many days this week were sunny?
- How many days this week were cloudy?
- Were there more sunny or rainy days last week?
- What was special about the weather on [select a day of the week]?
- Which days this week had similar weather?
- On which day did you most enjoy the weather? Why?

Note: The weather will not necessarily accommodate teaching the lessons in this unit in sequence. If necessary, the following lessons can be postponed and taught later in the unit when the weather is suitable:

- Lesson 4: Estimating Wind Speed
- Lesson 9: Experimenting with Color and Temperature
- Lesson 10: Making a Rain Gauge
- Lesson 11: Exploring Puddles
- Lesson 13: Observing Clouds