

LESSON 15

Comparing Forecasts to Today's Weather

Overview and Objectives

Throughout the unit, students have observed and described some basic features of weather. The activity in this lesson reinforces the close connection between students' new knowledge about weather and the world of meteorology. Comparing their own observations of today's weather with a meteorologist's forecast helps students recognize that the observable weather features they have become familiar with are the same features that meteorologists use in their daily forecasts.

- Students compare a weather forecast from the newspaper with the day's actual weather.
- Students discuss the fact that forecasts are predictions based on observed and recorded data.
- Students discuss ways that forecasts can help them make decisions about outdoor activities.

Background

A **weather forecast** is a prediction that a meteorologist prepares on the basis of previously observed and recorded data. Over the course of the *Weather* unit, your students, like meteorologists, have learned to observe several different weather features. Through the activities in today's lesson, they will discover that the local forecast reports on exactly the same weather features that they have been studying—cloud cover, precipitation, wind, and temperature. They see this clearly as they compare a forecast with their own observations.

It does not matter how closely the forecast matches students' observations of today's weather. As everybody knows, not all weather forecasts are accurate all the time. What is important is that students recognize that both they and the meteorologists observe the same features of weather.

Materials

For the class

- 1 sheet of newsprint or poster board
- 1 weather forecast from your local newspaper
- 1 marker
- Weather Calendar
- Temperature Graph

Preparation

1. From your local newspaper, save the weather forecast for the day you plan to teach this lesson. (For example, if you teach the lesson on Tuesday, bring in the forecast that appeared in Monday's paper.) Bring to class both the forecast and the section of the newspaper in which it appears.
2. On the sheet of newsprint, make a chart entitled "The Forecast and the Weather," like the one shown in Figure 15-1.

Figure 15-1

*Chart for
comparing
forecast and
weather*

	FORECAST	TODAY'S WEATHER
CLOUD COVER		
PRECIPITATION		
WIND		
TEMPERATURE	°F	°F

Procedure

1. Follow the usual daily procedure for gathering information about today's weather and recording it on the Weather Calendar and the Temperature Graph.
2. Invite students to discuss what they think the word "forecast" means. Remind them that Barbara McNaught, the meteorologist in the reading selection in Lesson 2, makes weather forecasts by using the information she gathers at the National Weather Service.

Final Activities

3. Show students the section of your daily newspaper that contains the weather forecast and read it to them. Explain that the class will compare the forecast from the newspaper with the information that the class has observed and recorded about today's weather.
4. Choose one or more students to write the data on the chart, "The Forecast and the Weather." Have them record the data from the newspaper and from the Weather Calendar and Temperature Graph.
5. Ask students to discuss any differences they see between the data they collected about today's weather and the forecast from the newspaper. For example, discuss some of these questions: Is the sun shining or is it overcast? Is there cloud cover today? Is there a light wind? Is it raining? What did the forecast predict?

Extensions

1. Discuss the importance of forecasts in our daily lives, bringing today's forecast into the discussion. Ask the class to answer these questions:
 - How does a forecast help us decide what clothes to wear?
 - How can the weather forecast help us choose something fun to do outside with our family?
2. Invite students to share their ideas about the importance of weather forecasts for other people. You might introduce this topic by describing how forecasts help boaters and fishermen gauge whether it will be safe to be on the water on a particular day. Forecasts also predict weather at nearby vacation spots such as mountains or beaches and can help people make vacation plans.

SCIENCE

1. To reinforce the classroom experience of comparing a forecast with the actual weather, send home with each student one copy of the blackline master **Recording the Forecast and the Weather**. Have students fill out the column labeled "Forecast" with the help of someone at home. The next day, have students work together as a class to fill out the right-hand column, "Today's Weather."

SCIENCE

2. Compare radio, television, and newspaper forecasts with one another. Encourage students to speculate about why all the forecasts may not be the same.

LANGUAGE ARTS

3. Read a reference book such as *Weather Forecasting*, by Gail Gibbons, with the class. You may want to read only brief selections from the book at one time and then have a class discussion of that material.

Name: _____

Date: _____

Recording the Forecast and the Weather

Forecast

Today's Weather

Cloud cover		
Precipitation		
Wind		
Temperature	°F	°F



LESSON 16

Summarizing Our Weather Observations

Overview and Objectives

In this lesson, students' discussion of weather features they have observed over the course of the unit provides you with an opportunity to assess the growth in their knowledge of weather. Early in the unit, students were asked how one might remember what the weather was like two weeks before. Today they realize that they now have the information they need to answer this question. By examining the data from the Weather Calendar and Temperature Graph, they are able to summarize the weather over the past few weeks.

- Students review and discuss the data from the Weather Calendar and the Temperature Graph.
- Students tally collected weather data.
- Using their data, students summarize characteristics of the weather over a long period of time.

Background

One of the goals of the *Weather* unit is to help students collect, record, and interpret information. The activities in this lesson provide an opportunity for them to take part in interpreting the data that the class has been collecting over a long period of time. They will use the data on the Weather Calendar to form generalizations about what the weather has been like while they have been working on the unit.

The data might show, for example, that there were 30 sunny days, 4 partly cloudy days, and 6 cloudy days during that time. Using those numbers, students might formulate a statement like this: During our study of weather, most days were sunny. (It is important to remind the class that their conclusions reflect only the local weather for the period of time that their data were collected.)

In this lesson, students also examine the Temperature Graph. The graph may, over time, show a gradual change in temperature as the season changes. Sometimes, however, unexpected weather changes overshadow usual seasonal variations. If that happened while your class was studying the *Weather* unit, students can discuss and identify when variations occurred.

Materials

For each student

- 1 copy of **Record Sheet 16-A: Student Weather Tally**
- 1 copy of the blackline master **Super Meteorologist Award**
- Several completed Weather Calendar Post-it™ notes

For the class

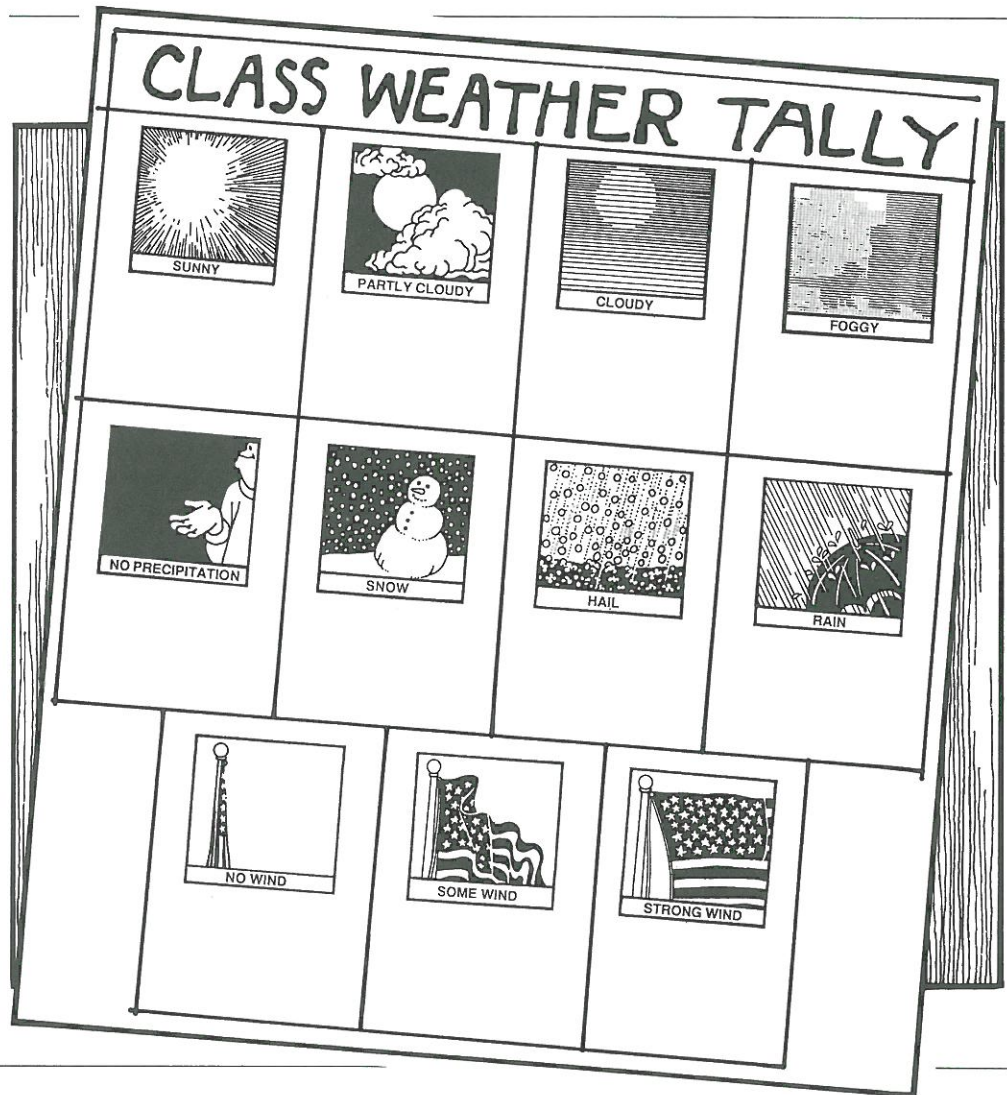
- 1 sheet of newsprint
- 1 set of 11 weather stamps
- 1 marker
- Weather Calendar
- Temperature Graph
- "Questions We Have about Weather" chart, from Lesson 2

Preparation

1. Make a copy of **Record Sheet 16-A: Student Weather Tally** for each student.
2. Make one copy of the blackline master **Super Meteorologist Award** for each student and fill it out. Decide how you want to present the awards to the students. (See Extension 1 for ways to celebrate students' completion of the unit.)
3. Plan to distribute an equal number of Post-it™ notes from the Weather Calendar to each student. Figure out how many notes each will receive.
4. On the sheet of newsprint, make a chart with the title "Class Weather Tally," as shown in Figure 16-1. Use the 11 weather stamps to create the chart.

Figure 16-1

A weather tally chart



Procedure

1. Ask students what the weather was like two weeks ago. Invite one student to use the data recorded on the Weather Calendar to describe the weather at that time.
2. Show students the “Class Weather Tally” chart, and let them know that they will receive a record sheet that looks like this chart. They will use these record sheets to summarize the weather that was recorded on the Post-it™ notes from the Weather Calendar.
3. Using the “Class Weather Tally” chart, demonstrate to students how they will record the data from the Weather Calendar on their record sheets:
 - Choose a Post-it™ note from the Weather Calendar.
 - Read the weather data recorded on the note aloud to the class.
 - As you read, make a tally mark for cloud cover, precipitation, and wind in the appropriate space on the chart, as shown in Figure 16-2.

Figure 16-2

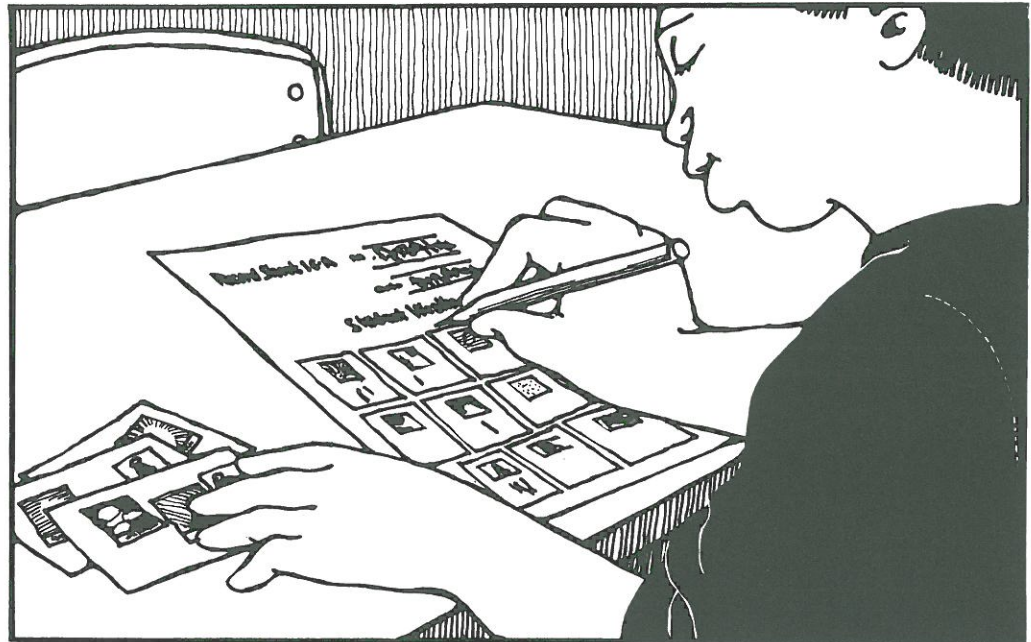
Tallying the weather data



4. Distribute a copy of **Record Sheet 16-A: Student Weather Tally** to each student. Also distribute the Post-it™ notes from the Weather Calendar to the students and have them record the data on their record sheets (see Figure 16-3).
5. Once students have completed their record sheets, help them compile all of the information on the “Class Weather Tally” chart. Call on each student to tell you how many tallies he or she marked in each section for cloud cover, precipitation, and wind.
6. Count the total number of tallies in each section of the class chart and record this number in the respective sections.

Figure 16-3

*Filling out the
record sheet*



7. To help students summarize the data from the “Class Weather Tally” chart, discuss the following questions:
 - How many days were sunny?
 - Which type of cloud cover was most common?
 - Which type of cloud cover was least common?
 - What kind of precipitation was most common?
 - Were there any types of precipitation that did not occur at all?
 - How often was there no wind at all?
 - How often was there some wind or strong wind?
8. Now look at the Temperature Graph and discuss which temperatures were the most and least common. Highlight any temperatures that were unusually high or low.

Final Activities

1. To synthesize all of these data, have students help you write summary statements. For example, “The weather during the *Weather* unit was mostly cloudy with a lot of rainy days, and it was cold. There were only a few days of sunshine, and there was not much wind.”
2. Invite students to look at the list of questions about weather they generated in Lesson 2 and added to during the unit. Which questions have been answered? Which questions have not been answered? Are there any they want to add today? Encourage students to continue learning about weather by investigating these questions.
3. Hand out the **Super Meteorologist Awards** to the students and celebrate their work as meteorologists! See Extension 1 for celebration ideas.

Extensions

LANGUAGE ARTS

ART

1. This final lesson provides an opportunity to celebrate your students' accomplishments as meteorologists. You might want to consider some of the following suggestions for a celebration:
 - Invite a meteorologist to present the **Super Meteorologist Awards** to the students.
 - Consider inviting others—either another class or the students' families—to participate in the celebration. Send them invitations in the shape of clouds, umbrellas, or raindrops.
 - Use a weather motif for the celebration—serve cloud-shaped cookies, for example, or decorate the room with snowflakes.
 - During the celebration, have students share what they have done and learned in the *Weather* unit.

LANGUAGE ARTS

2. Share a picture book about seasons, such as *Our House on the Hill*, by Phillippe Dupasquier. Children can make up their own stories to go with the pictures.

LANGUAGE ARTS

3. Have students create a “Crazy Flip Book” (see Figure 16-4).

Assessments

Throughout the unit you have had many opportunities to assess your students' growing awareness of the features of weather, their ability to use tools to measure weather, and their awareness of the effects of weather in their own lives. The Post-unit assessment in Lesson 17 and the Final Assessments provide additional opportunities for your students to share what they have learned and for you to assess their growth.

Post-Unit Assessment

Lesson 17: Post-Unit Assessment is a matched follow-up to the pre-unit assessment in Lesson 1. Comparing students' pre- and post-unit responses to the same set of questions allows you to document their learning.

Final Assessments

Final assessments for this unit are in Section 5 of this guide.

Figure 16-4

How to make a
"Crazy Flip Book"

1. Compose a sentence about the weather that has three blanks for the students to fill in. Print the sentence on a long strip of paper. Leave enough space between the blanks so that later you can cut the strip into three sections. Give a copy to each student.

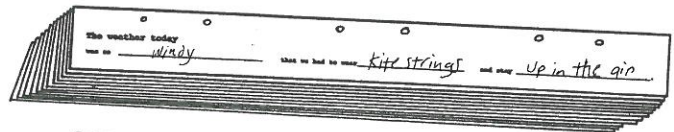
The weather today _____
was so _____ that we had to wear _____ and stay _____.



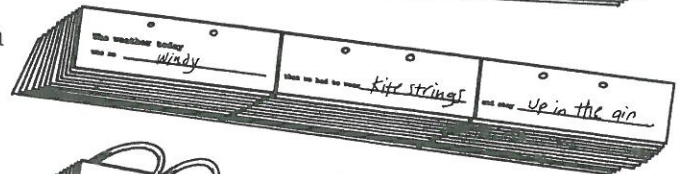
2. Have students fill in the blanks with serious or silly ideas. For example,

The weather today _____
was so scorching hot that we had to wear suntan lotion and stay away from hot sidewalks.

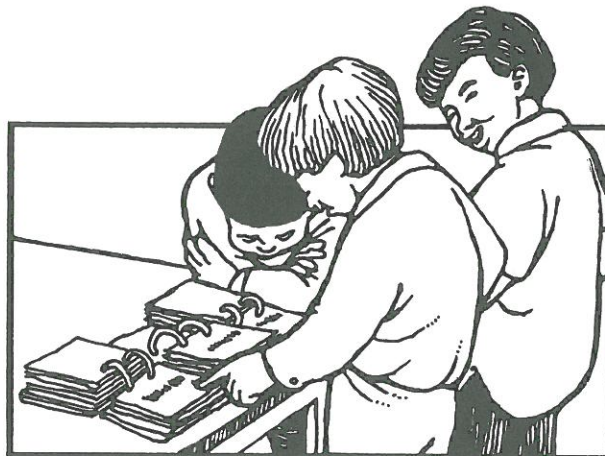
3. Put all of the pages together. Punch holes along the top edge.



4. Cut the pages between the sentence blanks.



5. Add a cover and bind the pages together with rings or yarn.



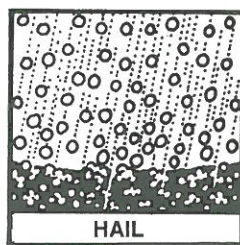
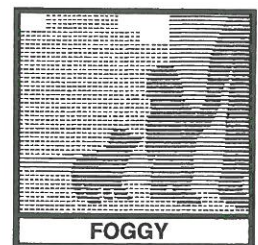
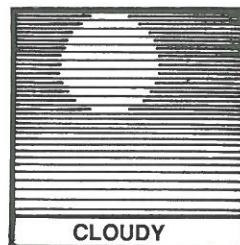
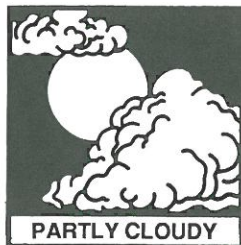
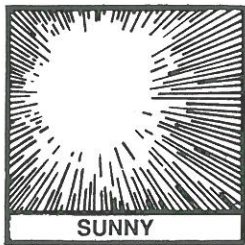
6. As students flip through the book they will come up with interesting—and sometimes "crazy"—sentence combinations.

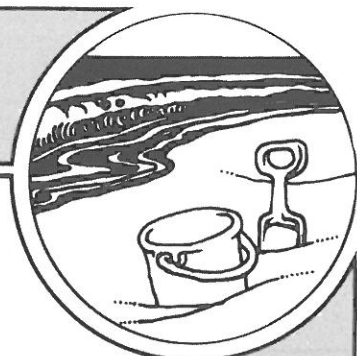
Record Sheet 16-A

Name: _____

Date: _____

Student Weather Tally





WEATHER

Super Meteorologist Award

Name

You're the Best

Date

