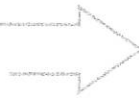


50 Weather Effects

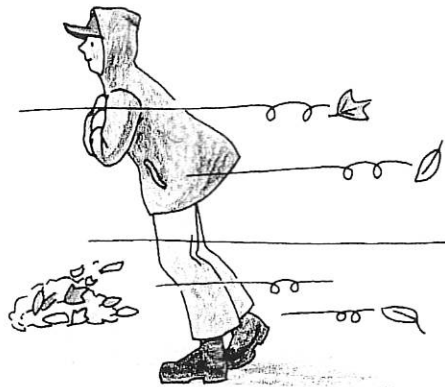
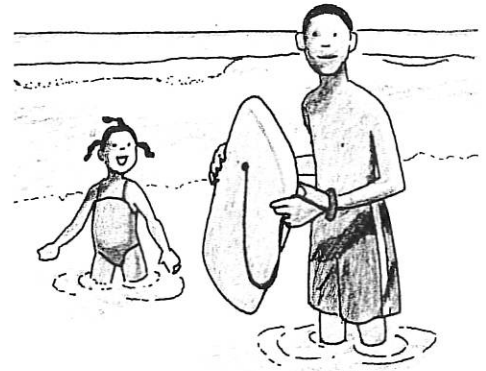


Many people enjoy a warm sunny day or complain when it rains. But sometimes, bad weather can be more than an inconvenience. It can also pose a hazard. By knowing what the weather is likely to be, people can work to avoid such hazards.

CHALLENGE



How does weather influence daily life?



Weather can vary from day to day. How would you describe the weather in each picture?

MATERIALS



For each student

- 1 Student Sheet 50.1, "Intra-act Discussion: Weather Effects"
- 1 Student Sheet 50.2, "Scientific Careers in Weather"

PROCEDURE

1. Carefully read the story that starts on the next page.
2. Mark whether you agree or disagree with the statements on Student Sheet 50.1, "Intra-act Discussion: Weather Effects." Predict what you think other members of your group will say.
3. Discuss the statements with your group. Have each person share his or her opinion about each statement and explain why he or she agreed or disagreed.
4. Think about the different ways in which weather affected the students in the story. With your group, brainstorm about jobs that could be affected by severe or unexpected weather.
5. On Student Sheet 50.2, "Scientific Careers in Weather," review some of the knowledge about weather that is required by four different scientific careers.
6. During this unit, you will learn what skills and knowledge are needed for each of these four careers. Decide which set of skills interests you the most by selecting one of the careers. Discuss your selection with the rest of your group.

BACK TO SCHOOL

It was the first day after Thanksgiving break. As Zoe walked down the hall, she saw her friends Sonia, Ray, and Luke.

“Hey Sonia, how was your break?” asked Zoe.

“Not bad,” said Sonia. “We flew to my grandmother’s house for a big family reunion. Everyone was waiting for us—my aunts, my uncles, and all of my cousins. We didn’t get there until eight o’clock at night, and dinner was almost over.”



“What happened?” asked Luke.

Sonia made a face as she replied, “That crazy snow-storm grounded our plane. The pilot said that it was too dangerous to fly. It must have been colder than 0 degrees Celsius (32 degrees Fahrenheit) because ice kept forming on the wings. The plane took off three hours late, after the storm was over.”

“I remember,” said Luke. “We had about 60 centimeters (24 inches) of snow on the ground after the storm ended. It was fun to walk around in the deep snow, but no one could drive anywhere, and most of the buses weren’t running. I hated not being able to go to the movies.”

“My vacation plans got messed up too,” said Ray. “My uncle won one of those radio contests and took our whole family on a cruise. We were supposed to go to Puerto Rico, which is where my mother is

from. The day after we left, a huge hurricane was moving through the Caribbean Sea. The ship went to Mexico to avoid the path of the hurricane.”

“It’s too bad you didn’t make it to Puerto Rico,” said Sonia.

Luke laughed. “Mexico still sounds pretty good. I’m surprised you’re not more tan!”





"It was the weather," said Ray. "Even though the hurricane passed us by, it was rainy and windy in the whole area. Whenever it cleared up a bit and I went out on deck, I had to dump water from the deck chairs! The wind speed was about 40 kilometers per hour."

"That's equal to about 25 miles per hour. That doesn't sound very fast," remarked Zoe.

Ray replied, "The wind was strong enough to form some large waves and cause a lot of spray along the sides of the ship. Because it was such a large ship and it had a stabilizer, it didn't cause any rocking. So I guess it wasn't so bad."

"Did you have fun over break, Zoe?" asked Luke. "It was your birthday, wasn't it?"

"Yeah, I had a good time," Zoe replied. "It was pretty low-key. I saw a lot of relatives, and I did get some nice gifts. I'm still waiting for my big present, though. I asked my parents for a digital camera. They went to buy it, but the one that I want wasn't in the stores. The delivery trucks bringing the camera shipment were delayed because of floods. I won't get the camera until next week."



"I heard heavy rains caused flooding out west," Sonia added. "It rained several centimeters in less than 24 hours, and it'll take several days for all of the roads to be cleared."

Sonia sighed. "It sounds like the weather affected everyone's break."

"Yeah, it's one of the few things no one can do anything about," said Luke. "Next thing you know, they'll tell us to expect a tornado over winter break!"

ANALYSIS



1. How does weather affect your daily life? Provide at least two examples of situations when weather caused you to change your plans.
2. Use information from the activity to complete the following table.



Units Used to Measure Weather Data

	Metric Units	English Units
Temperature		
Rainfall		
Snowfall		
Wind Speed		



3. Locate your state on the three risk maps shown on the next page. These maps, produced by the U.S. Geological Survey, are based on the numbers of hurricanes, floods, and tornadoes that have occurred in each region. *Note:* These maps do not include the states of Alaska and Hawaii.

What is the level of risk:

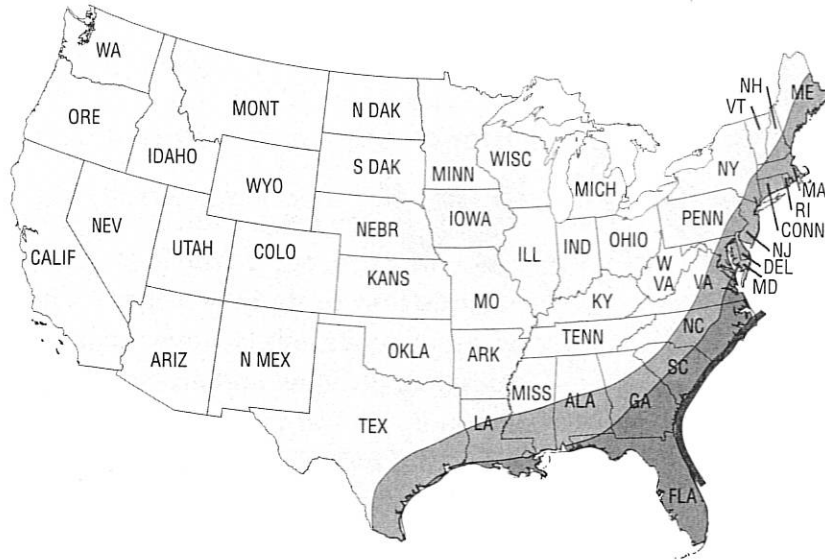
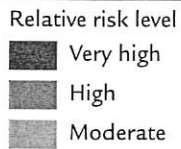
- a. of hurricanes in your state?
- b. of floods in your state?
- c. of tornadoes in your state?



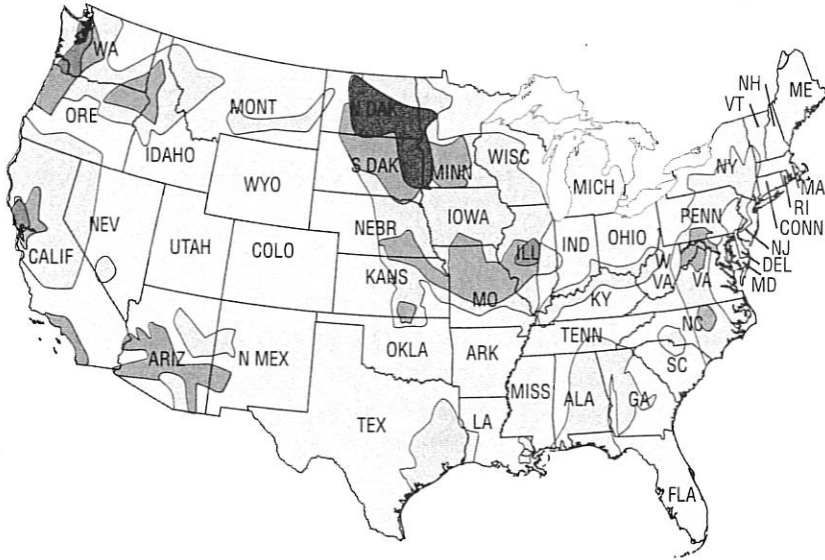
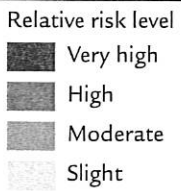
4. **Reflection:** What is the worst weather you have experienced? How did it affect you? Describe your experience.

United States Risk Maps

Hurricane Risk



Flood Risk



Tornado Risk

