



Hurricanes K-2

Hurricane Science



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at www.redcross.org/disaster/masters

LESSON PLAN 2

The Life and Times of Hurricanes

The children will learn important facts about hurricanes: when and where hurricanes occur and the conditions necessary for the formation of a hurricane.

Key Terms and Concepts

Atlantic hurricane season	eye	rotate
clockwise	hemisphere	sun
clouds	meteorologist	
counterclockwise	rain	

Purposes

To develop in the students and their families an awareness of weather predictions through the observation of weather

To guide the students to discover the weather ingredients necessary for the formation of a hurricane and where and when hurricanes affect the United States

Objectives

The students will—

- Role-play and discuss different types of weather after reading *Weather Watcher*.
- Use *Weather Watcher* to observe, track and try to predict daily weather.
- Take home *Weather Watcher* to practice weather observation and prediction skills. (Home Connection)
- Learn facts about hurricanes—how they form, what ingredients are needed for the formation of a hurricane, and how large they can grow.
- Draw a picture or write a short story about the life of a hurricane.
- Use maps and *Weather Calendar* to compare the seasonal weather in the local area to the seasonal weather in areas prone to hurricanes. (Linking Across the Curriculum)
- Find locations on a map to determine whether or not these areas might be affected by hurricanes. (Linking Across the Curriculum)
- Listen to and discuss *Alligator Sue* by Sharon Arms Doucet; identify the role of the hurricane in the story; write stories of their own featuring a hurricane.



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Activities

“Weather Watcher”

“Hurricanes: Where and When”



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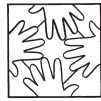
The Life and Times of Hurricanes

Materials

- *Weather Watcher*, 1 copy per student
- Crayons or markers
- Yellow, gray and blue construction paper
- Scissors
- Hole punch
- String



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"Weather Watcher"

SET UP 20 minutes CONDUCT 30 minutes

Science: Earth Science and Inquiry

1. Ask the students how they find out what the weather will be each day. (Going outside, listening to the radio or watching the morning news.)
2.  Distribute *Weather Watcher* and guide the students in discussing the meaning of the weather symbols. Have them describe the weather for each day on the chart. Which day would be the best day to play outside? What is their favorite weather? Why?

TEACHING NOTE You may have to add symbols for snow, sleet and hail.

3. Depending on the students' ages and abilities, either prepare large construction paper cutouts of the sun, clouds, raindrops and wind or have the students cut out the shapes themselves. Use the hole punch and string to turn the shapes into large necklaces.
4. Divide the class into small groups of students. In each group assign one student the role of the sun; two to three students the role of clouds; one student the role of the wind; and the remainder of the students the role of raindrops.
5. Have each group role-play the weather described on the weather chart. For example, if the weather is partly cloudy, have one "cloud student" stand in front of the "sun student"; if it is raining, have all the "cloud students" and all the "rain students" stand in front of the "sun student."
6. Discuss the changing weather. Does the sun ever go away? Why do the clouds move? Why does the rain come and go?
7. Have the students go outside or look out the window to observe the day's weather. Once they have ascertained the weather conditions, the students will use the weather symbols to begin their own Weather Watcher charts. Continue weather observations and recording for several days.
8. Have the students use the large weather symbols to role-play the week's weather.



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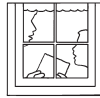


Wrap-Up

Ask the students if they can guess, based on their observations, what the next day's weather will be. Challenge them to make secret predictions and then test their forecasts against the actual weather. Have the students share their guesses and talk about the reasons for them. Discuss the role of meteorologists who predict the weather based on weather patterns.



As a class, keep track of the weather over an extended period of time to find possible weather patterns.



Home Connection

Send home a copy of *Weather Watcher*. Ask parents to use the worksheet to discuss the weather with their children each morning before school. If possible, suggest to parents that they have their children record the morning weather observation on a family calendar. After a week or so, suggest that students and parents try to make predictions for the next day's weather using the *Weather Watcher* symbols.



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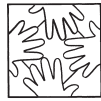
LESSON PLAN 2 The Life and Times of Hurricanes

Materials

- Large map of the United States
- Map pins
- *Weather Calendar*, 1 copy per student (Linking Across the Curriculum)



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"Hurricanes: Where and When"

SET UP 10 minutes CONDUCT 30 minutes

Science: Earth Science; Language Arts: Writing; Social Studies: Geography

1. Based on what they learned from Lesson Plan 1, ask the students to describe the kind of weather to expect during a hurricane. (High winds and heavy rains can be expected.)
2.  Share the information from How Hurricanes Form, a Web site created by the National Center for Atmospheric Research, at <http://www.eo.ucar.edu/kids/dangerwx/hurricane3.htm>. You can read the information to students or assign it to small student groups to read themselves.
3. Discuss the information from the Web site.
 - On a large map of the United States, ask students to tell you where they believe hurricanes are likely to cause trouble for people. (Hurricanes can affect people who live along the Atlantic coast, especially on the coastlines of the southern United States, around the Gulf Coast and Hawaii.)
 - How large can hurricanes become? (Hurricanes can be up to 600 miles [966 kilometers] across, with strong winds spiraling inward and upward at speeds of 75 to 200 miles [121 to 322 kilometers] per hour.)
 - Where is the calmest part of the hurricane and what is it called? (The calmest part of the hurricane is in the storm's center and is called the eye.)
 - Is the United States in the Northern or Southern Hemisphere of the earth? (It is in the Northern Hemisphere.)
 - Do the hurricanes that hit the United States rotate clockwise or counterclockwise? (In the Northern Hemisphere, hurricanes rotate counterclockwise.)
 - What weather ingredients are needed to produce a hurricane? (Hurricanes begin with warm ocean water and light winds outside the hurricane blowing from all directions, forcing the warm, moist air from the ocean upward.)
 - When are hurricanes most likely to form and hit the United States? Why? (Hurricanes happen when the oceans have been warmed during the summer months. In the North Atlantic, hurricane season is the period from June 1 to November 30, but most hurricanes happen during the fall.)



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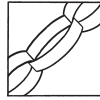


Wrap-Up

As students answer the questions above, make short, bulleted notes or simple diagrams to help them remember the information. Afterward, have students draw pictures and write or dictate stories about the life of a hurricane.

OR

Challenge students to create a hurricane at Create A Cane (<http://www.nhc.noaa.gov/HAW2/pdf/canelab.htm>). They can work in teams to pool their information and facts.



Linking Across the Curriculum

Science: Earth Science

Distribute copies of *Weather Calendar*. Have the students begin with the current month. What type of weather can they expect—hot and sunny, cold and snowy or overcast and rainy? Have the students draw weather symbols to show the weather for the seasons in their area. Tell them to mark the months from June through November as Atlantic hurricane season. What are some of the common characteristics of these months in their area? If the students do not live in hurricane-prone areas, ask them to compare their weather for the months of June through November with the weather in areas where hurricanes might hit. For students in areas that do not experience hurricanes, ask them what is the difference. (Many parts of the country are not close enough to the ocean to have a direct hurricane strike. Moreover, some parts of the country are far enough north that the water will not be warm enough to generate a hurricane. Some parts of the country may not have a direct strike but will experience low-level hurricanes or tropical storms as they move away from the coast.)

Social Studies: Geography

Have the students locate on the map the homes of relatives or friends or other places they have lived. Could any of these areas be affected by hurricanes? Why or why not?

Language Arts: Reading and Writing

For this activity you will need a copy of *Alligator Sue* by Sharon Arms Doucet (Farrar, Straus & Giroux, 2003).

Share the story *Alligator Sue* with the students. Ask them to analyze the descriptions of the hurricanes in the story. Do they think the fiction stayed true to hurricane facts? Why or why not? How did the hurricane affect the plot of the story? The characters? What words were used to describe the hurricane?

Briefly, discuss the elements of a story: the plot (what happens), the characters (the people in the story) and the problem and its resolution (part of the plot). Invite students to write or dictate their own fictional story about a hurricane. Share the stories on a bulletin board.

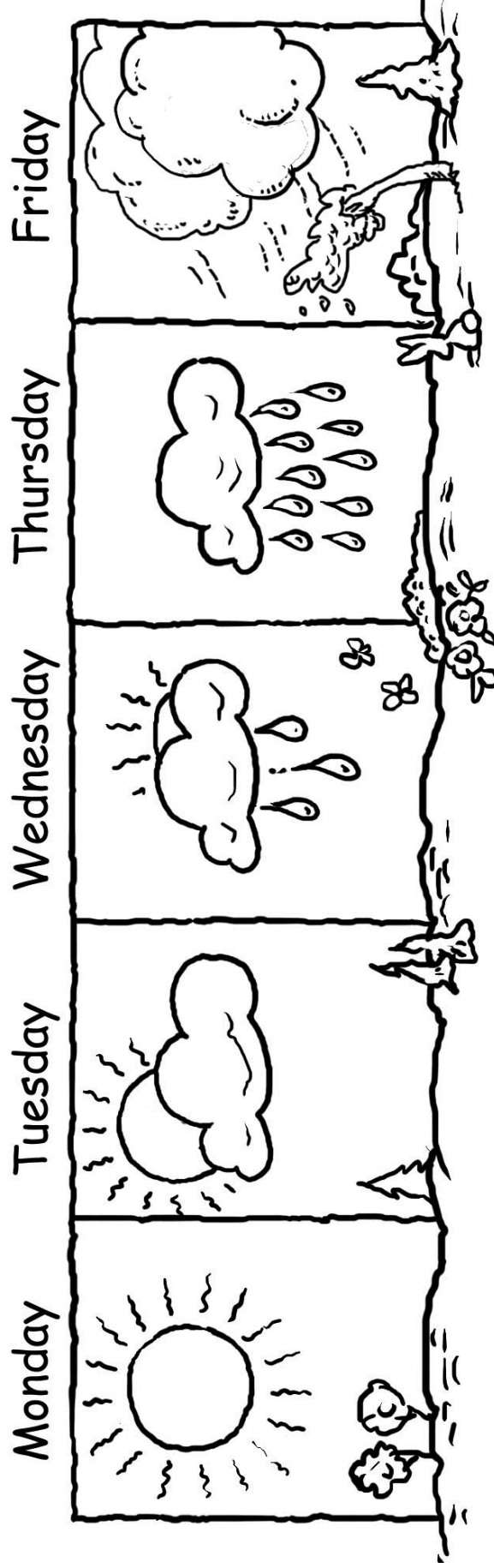


Weather Watcher

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Name _____

Directions: Use the pictures to talk about the weather..



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Weather Watcher

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What is the weather like outside?

Monday	Tuesday	Wednesday	Thursday	Friday
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Weather Calendar

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Name _____

Directions: Starting with this month's weather, draw weather symbols in each square to show the kinds of weather you can expect every month of the year.

January

February

March

April

May

June

July

August

September

October

November

December

