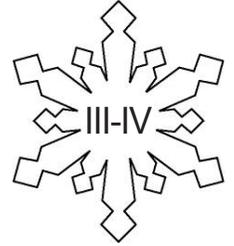


Weather Versus Climate

Levels



Grades 5-8

Overview:

In this activity, students will learn the difference between weather and climate and explore climates to determine which one they live in.

Objectives:

The student will:

- understand the difference between weather and climate;
- read a climate zone map;
- use the Internet to perform research;
- present findings to a group; and
- understand the differences between the 5 major climate zones.

Materials:

- TRANSPARENCY: "Climate Map"
(Download from the Classroom Lessons page of <http://www.ArcticClimateModeling.org>)
- STUDENT INFORMATION SHEET: "Weather Versus Climate"
- STUDENT WORKSHEET: "World Climates"

Activity Preparation:

1. Print out the previous day's weather report from the Internet or copy it from the newspaper. Provide a copy for each student or make into a transparency so all students can view at once.
2. Go to <http://climate.gi.alaska.edu/Climate/Normals/index.html> and print out the climate normals for your community, or the community nearest your location. Make one copy for each student or group of students.

Activity Procedure:

1. Ask students to examine the weather report. What does it say the temperature was yesterday? Did it rain or snow? Or was it clear out? Explain that those things tell us what the weather was.
2. Explain that climate is the average weather in a location over a long period of time (30 years or more). It takes many years of observation to determine the climate of an area. For example, if one only looked at the weather in Alaska for one week in June, they might think it was warm all year round. However, when one looks at the weather for the whole year, they discover that most of the year is cold. Even from year to year the weather can vary. Sometimes one year is warmer than another. If one only looked at the weather data for that year, they may not get an accurate picture of the climate of the area. *Note: When scientists do experiments, it's important that they examine normals to determine if their results are realistic.*
3. Ask students if they have ever traveled out of Alaska. Where did they go? What was the weather there? What is the climate there? Show TRANSPARENCY: "Climate Map," and point out how different locations in North America have different climates.
4. Ask students to think about how life would be different in Alaska if the climate were different. How would it affect the food people eat? How would it affect cultural activities? How would Alaskans dress differently?

5. Explain that the major factors that determine the climate of a particular region are the temperature and precipitation (the amount of rainfall or snowfall). There are five basic types of climate: tropical, dry, temperate, cold, and polar. Within these types, there are more specific climates. *Note: There are several classification systems, which use different names or more or less distinctions. The five types listed here represent the first hierarchy of the Koppen Climate Classification system.*
6. Divide the students into 5 groups. Hand out the STUDENT WORKSHEET: "World Climates." Assign each group a climate to investigate. Students will fill out the worksheet and then present their findings to the class.

Answers:

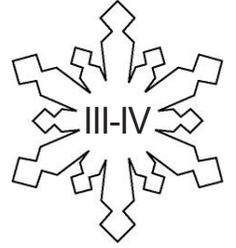
Answers will vary depending on the climate being investigated.

Name: _____

World Climates

Student Worksheet

Levels



Directions:

Alone or in a small group, complete the following questions and activities. The teacher will assign each student or group a climate to research. At the end of the class period, the teacher will require a presentation on the following material.



Use the Internet to locate the answers to the questions below.

The following sites are recommended:

- <http://www.blueplanetbiomes.org/climate.htm>
- http://en.wikipedia.org/wiki/Climate_zone

I am investigating the _____ climate.

1. The average minimum rainfall for this climate is _____ inches.
2. The average maximum rainfall for this climate is _____ inches.
3. The average minimum temperature for this climate is _____ degrees F.
4. The average maximum temperature for this climate is _____ degrees F.
5. What types of plants and animals are found in this climate?

6. Find and print out a picture of your climate to share with the class during your presentation.

Use the Internet or the STUDENT INFORMATION SHEET to answer the following.

7. This climate is located in which countries?

Name: _____

Weather Versus Climate

Koppen Climate Classification System

North America

Student Information Sheet

Levels

