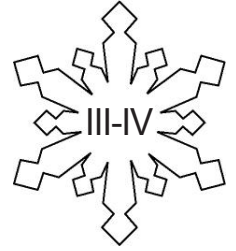


Climate Comparison

Levels



Grades 5-8

Overview:

Climates vary around the world and throughout the country. In this activity, students will compare the weather in their home community and a community in Hawaii.

Objectives:

The student will:

- review the difference between weather and climate;
- understand that the climate is different in different parts of Alaska; and
- recognize that communities closer to the equator have warmer climates.

GLEs Addressed:

Science

- [5-8] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [7] SD3.1 The student demonstrates an understanding of cycles influenced by energy from the sun and by Earth's position and motion in our solar system by observing a model that shows how the regular and predictable motion of the Earth and moon determine the apparent shape (phases) of the moon over time.

Math

- [5] S&P-1 The student demonstrates an ability to classify and organize data by [designing an investigation and collecting L], organizing, or displaying, using appropriate scale, data in real-world problems (e.g., social studies, friends, or school), using bar graphs, tables, charts, diagrams, or line graphs with whole numbers up to 50 (M6.2.1 & M6.2.2).
- [6] S&P-1 The student demonstrates an ability to classify and organize data by [designing an investigation and collecting L], organizing, or displaying, using appropriate scale for data displays (tables, bar graphs, line graphs, or circle graphs), data in real-world problems (e.g., social studies, friends, or school), with whole numbers up to 100 (M6.2.1 & M6.2.2).

Materials:

- Computer with Internet access
- STUDENT WORKSHEET: "Weather Comparison"
- TEACHER INFORMATION SHEET: "Climate Facts"
- TEACHER INFORMATION SHEET: "Flash Cards"

Activity Preparation:

(NOTE: Make sure to do the Activity Preparation 1 and 2 as close to class time as possible so that the weather data is accurate.)

1. Navigate to <http://nws.noaa.gov>. In the upper left corner, in the "Local Forecast by 'city, st'" text box, enter your city and state and click "Go." Print out the resulting forecast. If your community is not available, click on the map of Alaska, then navigate to your area by clicking on the appropriate section of the map, then print the forecast.
2. Repeat the above procedure to get the weather for a community in the Interior or North Alaska, and then again for a community in Hawaii.
3. Cut out the flash cards in the TEACHER INFORMATION SHEET: "Flash Cards."

Activity Procedure:

1. Remind students that weather is what is going on outside at any given time. If it is rainy today, than the weather is rainy. Weather encompasses temperature, precipitation, wind speed and direction, and cloud cover and type.
2. Climate is a result of looking at weather data over many years. The climate tells us in general what our weather is like. Alaska generally has a cold climate even though there are warm days, whereas Hawaii generally has a warm climate even though there are cold days.
3. Explain that in this activity, students will compare the weather in three communities for one week.
4. Write the names of the communities on the board along with the high temperature and sky conditions (wind, clouds, rain, etc). Discuss how the weather differs in these two communities. Discuss the appropriate clothing for each of these weather conditions. Explain that the weather in Hawaii and their Alaska village is not just different today. Hawaii is usually warmer than Alaska. Hawaii has a different climate. To determine climate in an area, scientists looks at the weather over a long period of time, 30 years or more, rather than just a few days.
5. Hand out the STUDENT WORKSHEET: "Weather Comparison." Complete this activity as a class, using the weather data previously printed.
7. Share the facts on the TEACHER INFORMATION SHEET: "Climate Facts" with Level I students. Play a quiz game using the flash cards by reading the text on a flash card, then having students call out whether that information corresponds to Hawaii or Alaska.

Answers:

Answers will vary, except for:

12. b.

Climate Facts

Teacher Information Sheet

Hawaii	Alaska
Hawaii has eight main islands.	
Hawaii rainfall varies greatly on each island.	Alaska rainfall varies between the north, interior, and south.
The Hawaii average annual temperature is about 75° F.	The Alaska average annual temperature is about 33° F.
Rainfall ranges from 23-134 inches per year in Hawaii.	Rainfall varies from 11-55 inches per year in Alaska.
The average temperature in Hawaii during the winter is only 10 degrees cooler than the average temperature in the summer.	The average temperature in Alaska during the winter is about 60 degrees cooler than the average temperature in the summer.
There is only one climate zone in Hawaii.	There are three different climate zones in Alaska.

Flash Cards

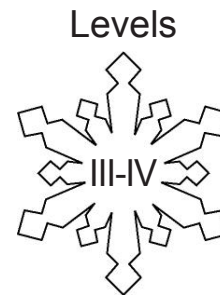
Teacher Information Sheet

<p>Fact: This state has eight main islands</p> <p>State: Hawaii</p>	<p>Fact: The rainfall in this state varies between the Northern region, Interior region, and Southeast region.</p> <p>State: Alaska</p>
<p>Fact: Each island on this state varies greatly in its amount of rain.</p> <p>State: Hawaii</p>	<p>Fact: The average temperature in this state is 33 degrees Fahrenheit.</p> <p>State: Alaska</p>
<p>Fact: In this state, rainfall ranges from 21 inches to 134 inches per year.</p> <p>State: Hawaii</p>	<p>Fact: The rainfall in this state varies from 11 inches to 55 inches per year.</p> <p>State: Alaska</p>
<p>Fact: The average temperature in this state is only 10 degrees cooler in the winter than in the summer.</p> <p>State: Hawaii</p>	<p>Fact: The average temperature in this state is 60 degrees cooler in winter than in summer.</p> <p>State: Alaska</p>
<p>Fact: This state has one climate zone.</p> <p>State: Hawaii</p>	<p>Fact: This state has three climate zones.</p> <p>State: Alaska</p>
<p>Fact: The average temperature in this state is 75 degrees Fahrenheit.</p> <p>State: Hawaii</p>	

Name: _____

Weather Comparison

Student Worksheet (page 1 of 2)



1. What is the name of your community?

2. What is the name of the community in Hawaii that your class will examine?

3. Using the current conditions information on your weather forecast, complete the following chart:

	Your Community	Hawaii Community
Community Name		
Temperature	° F	° F
Wind Speed	mph	mph
Sky Conditions		

4. Which community has the lowest temperature?

5. Which community has the highest temperature?

6. Using the information on your weather forecast, complete the following chart for tomorrow's weather.

	Your Community	Hawaii Community
Community Name		
Low Temperature	° F	° F
High Temperature	° F	° F
Sky Conditions		

Name: _____

Weather Comparison

Student Worksheet (page 1 of 2)

7. Which community is likely to have the highest temperature tomorrow?

8. Which community is likely to have the lowest temperature tomorrow?

9. Is the community with the highest temperature today and the highest temperature tomorrow the same?

10. Is the community with the lowest temperature today and the lowest temperature tomorrow the same?

11. What do you think your community would be like if your weather was the same as the community in Hawaii?

12. Climate is:

- a. The weather on one day.
- b. An average of the weather over many years.