

# World Wide Weather

## Science

### Intermediate Grades 3–5

#### Purpose

Students begin to understand that weather is different all over the world. Students explore the causes of weather patterns, noting how weather in one location helps predict weather in related areas.

#### Description

Teams of students study, chart, and write about the weather and its effects on a particular city, for the month. The team constructs a multimedia presentation of its findings. The class constructs a final project that uses and merges the teams' findings to demonstrate weather patterns around the world.

#### Activities

##### PREPARATION

- ▶ Arrange for class speakers: radio or TV meteorologists or members of local weather clubs.
- ▶ Gather resources (books, maps, multimedia CDs, weather videos, Internet sites).
- ▶ Prepare a KWL (know, want to know, learned) chart to assess student knowledge.
- ▶ At the beginning of each day, identify the probable weather concepts, technology skills, and topics to be covered (e.g., weather vocabulary, graphing concepts from a spreadsheet). Gather the appropriate resources for exploring the daily concept.

##### PROCEDURE

- |  | SCIENCE<br>STANDARDS                    | NETS<br>PERFORMANCE<br>INDICATORS<br>GRADES 3–5 |
|--|---|---|
| 1 As a class, establish the project's guidelines or elements: for example, a graph of precipitation, temperatures (high and low), description of typical weather for the current season, adaptations people make based on current weather, and generalizations of weather patterns for an average year.                            | *K–4 SCI D3<br>K–4 SCI G1<br>5–8 SCI G1 |   |
| 2 Group the class into teams, by continents. Assign each individual a role within each group (weather reporter, multimedia gatherer, chart producer, or journal recorder). Rotate the jobs every week to allow all students to experience each job. (If time allows, consider having students make their own weather instruments!) |   |   |
| 3 Ensure that team members understand their roles and responsibilities for the first week of data collection.  |   |   |
| ▶ The weather reporter and chart producer find and chart each day's high and low temperatures, wind speed, amount of precipitation in their selected city, as well as produce weekly graphs.   | K–4 SCI C3                              | 1, 3 4, 5, 6,<br>7, 9, 10                       |
| ▶ The multimedia gatherer looks for photographs, QuickTime movies, and weather maps that describe the weather of the city during the week, saving the items in a specially marked folder or disk.  | 5–8 SCI C4                              | 1, 4, 7, 10                                     |

\* Science standards indicate grade levels (K–4, 5–8, and 9–12) in front of the actual standard(s) number (e.g., K–4 SCI A2, C3, E1).

	SCIENCE STANDARDS	NETS PERFORMANCE INDICATORS GRADES 3–5
<p>► The journal recorder keeps a daily record of the group's activities and the effects of the weather on the city's inhabitants. If possible, the recorder will also communicate by e-mail with a person or class from the city. To find out how and where to connect with other classes (see Tools and Resources).</p>	K–4 SCI G1 5–8 SCI G1	1, 3–10
<p>4 Conduct a class session on generalizations from the data collected thus far. Be sure to emphasize correct vocabulary and term usage.</p>	K–4 SCI C8, D3	
<p>5 Help the groups reach conclusions about the weather patterns for the month. Periodic status checks are helpful as groups report on their findings each week. As the groups accumulate more data, encourage them to compare their findings from one week to the next. Group the cities by location, tracking the weather from one location to the next. Encourage students to make generalizations about how the weather in one location may predict weather elsewhere as winds and currents travel in a given direction.</p>		
<p>6 After four weeks of data collection, teams construct multimedia presentations or Web pages that include the findings on the weather patterns for their selected cities and the effects of the weather for that month. Multimedia presentations must include facts about each city's weather, charts and graphs, and timely weather maps. The effects of the weather on the people living in the cities must also be included.</p>	5–8 SCI C4	1, 3–10
<p>7 Following group presentations, conduct a debriefing session on trends and generalizations that are apparent in the data. To stimulate the discussion, use weather sites on the Internet to show current video tracking of weather around the globe. The class constructs a final multimedia project that includes all of the cities studied.</p>	K–4 SCI B5	

## Tools and Resources

### SOFTWARE:

- ▶ Multimedia-authoring or presentation

### WEB SITES:

- ▶ For finding weather information:

The Weather Channel:

[www.weather.com/](http://www.weather.com/)

USA Today's Weather Page:

[www.usatoday.com/weather/wfront.htm](http://www.usatoday.com/weather/wfront.htm)

CNN Weather:

[www.cnn.com/weather/](http://www.cnn.com/weather/)

Weather Underground:

[www.wunderground.com/](http://www.wunderground.com/)

Dan's Wild Wild Weather Page (a television meteorologist's interactive site):

[www.wildwildweather.com/](http://www.wildwildweather.com/)

weatherOnline:

[www.weatheronline.com/](http://www.weatheronline.com/)

*Note: The National Weather Service (NWS) has sites all over the nation. Most NWS sites have clickable maps. See, for example, Weather Connections ([www.srh.noaa.gov/elp/](http://www.srh.noaa.gov/elp/)), the NWS site for El Paso, Texas.*

- ▶ For finding keypals/project partners:

epals Classroom Exchange:

[www.epals.com/](http://www.epals.com/)

Global Schoolhouse:

[www.gsn.org/](http://www.gsn.org/)

Intercultural E-Mail Classroom Connections:

[www.iecc.org/](http://www.iecc.org/)

Global Rigby:

[www.hi.com.au/keypals/default.asp](http://www.hi.com.au/keypals/default.asp)

Web66:

<http://web66.coled.umn.edu/>

Kids' Space Connection:

[www.kids-space.org/](http://www.kids-space.org/)

### OTHER:

- ▶ Daily newspapers, TV access in the classroom or at home

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## Assessment

Group multimedia projects can be scored on a rubric based on the criteria presented for the elements of the project. Teams can be assessed by their weekly charts and journals. The criteria in the rubric depends on the students' scientific background and can be set based on district, state, and national guidelines, as well as students' personal goals for learning.

Using the class's final project, students can write a paragraph that describes the differences and similarities they see between each city's weather. In addition, students can write general descriptions about weather patterns they have observed.

## Credits

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## Comments

*Several teachers in our district have used this learning activity as an ongoing project with weather as a social studies or multidisciplinary unit that includes a substantial geography component. Daily connections with a city gives students a sense of their own location's weather as they make comparisons with other cities. Coupled with other units of instruction, the project makes local weather come alive!*

*Students from other countries have been especially interested in this project. In searching the Internet for information, these students have been able to find weather or city sites for their native regions, in their own languages. For example, Mikato, a fifth grader from Japan, had a rough transition to his new school and neighborhood. The climate of his new area was much warmer than he was used to, and he did not have access to the same seasonal sports. By participating in the weather study, he not only tracked and translated the weather for his group, he taught students weather terms in Japanese! The connectivity enabled Mikato to collaborate with students in his old school and begin a weekly weather comparison. Because the weather in Japan is reported in Celsius, his American classmates learned how to convert to Fahrenheit in order to understand and report measurements for their partners.*

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