Weather

Project Overview

Introduction/Background Information

Activity 1

Task: Think about a time when you were frightened by the weather. What happened? Did you know that this weather condition was going to happen ahead of time? How did you know? Were you prepared? Was there any damage? Respond to these questions in your science journal and then be prepared to share your experience with the class.

Activity 2

Overview: Soon you will be asked to take on the role of a meteorologist. A meteorologist is a person who studies the atmosphere. Two famous meteorologists, Joanne Simpson and Roger Daley, contributed to what we know about weather.

Task: In your teams go to the computer and look up what contributions Joanne Simpson and Roger Daley made to weather. What did you find out? Record this information in your science journal.

Beginning Investigations

Overview: In this project you will be taking on the role of a meteorologist. One of your jobs as a meteorologist is to inform the public about weather disturbances and help them make informed decisions regarding their safety in these situations. Your current job has you working one of the following locations:

Location	Weather Condition
London, England	Fog
Calgary, Alberta, Canada	Blizzard/White Out
Port Hedland, Australia	Hurricane
Wichita, Kansas, United States	Tornado
Ethiopia, Africa	Drought
Hong Kong, China	Severe Thunderstorms
Dresden, Germany	Flooding. Flash Flood
St. Moritz, Switzerland	Snow/Hail/Avalanche

Notice that each city has a particular weather phenomenon that occurs in its area. You will be assigned to research and report on one of these cities and its associated weather phenomenon. Other students will also be assigned to the same city. This will allow you to discuss your research and plan a team project together.

Team Project Requirements:

- Show the longitude and latitude of your city on a map.
- Find out what the climate is for this city.
- Generate a team explanation of why this city has a particular climate based on what you have learned regarding the physical characteristics that affect climate.
- Note your findings and discussions in your science journal.
- Create and revise a causal map.

Task: Using your team password go to the *Seeing Reason* Web site and complete a map to answer this question: *How does weather affect us?* This task will be ongoing. As you learn new information your team needs to update your map. Don't forget to save copies of your map to your portfolio.

The Research

Overview: Each team will be assigned a particular audience (see chart below) to inform about your local weather phenomenon. In researching your phenomenon you will need to keep in mind how you, in your role as a meteorologist, will inform your audience about an impending weather disturbance and help them make informed decisions regarding their safety in this situation (since they all live in an area where this phenomenon may occur). Your recommendations may someday save one of your viewer's lives.

Keep in mind, that you will conduct research and gather information on your topic in order to complete both an individual report and a team presentation directed at a particular audience. See the chart below for possible assignments.

Phenomenon	Location	Presentation Audience
Fog	London, England	Other meteorologists at a conference
Blizzard/White Out	Calgary, Alberta, Canada	Elementary students
Hurricanes, Typhoons Cyclone	Port Hedland, Australia	Citizens who just moved to this area
Tornado	Wichita, Kansas, United States of America	Mobile home park owners
Drought	Ethiopia, Africa	A group of farmers
Severe Thunderstorms	Hong Kong, China	A group of business owners.
Flooding, Flash Flood	Dresden, Germany	A parent group
Snow/Hail/Avalanche	St. Moritz, Switzerland	Tourists

Individual Task: Each person in your team must answer all of the following questions individually and outline your findings in report form. The report will be assessed using the **Weather Project Rubric**.

- *What is your phenomenon?* **Note:** You need to give a definition of your phenomenon that your viewers will understand.
- *What are the characteristics of this weather phenomenon?*
- *How does your phenomenon occur?* This needs to be as detailed as possible. Explain any scientific vocabulary.
- *Where else does this phenomenon occur?*
- What are the relative destructive powers of this type of phenomenon?
- *How can we weather this weather?*
- *How can we reduce damage resulting from this phenomenon?*
- *How does this form of weather affect us?* Include the effects your phenomenon has on humans, land, and business.
- *Where do you think your phenomenon will strike next?*
- *What safety steps should be taken when one encounters your phenomenon?* List all preparations and precautions.
- *What are some other interesting facts and statistics regarding your phenomenon?*
- *Why do we need to prepare for natural disasters?*

Team Task: Once you have completed your individual research and outlined your findings in report form, meet together as a group. Discuss your answers to the above questions with your group.

Revisit *Seeing Reason* and revise your team map based on your discussion. As you continue to discuss your research findings and develop your team project, keep returning to revisit and revise your causal map. You will be expected to have at least four revised maps by the end of the unit.

Team Presentation

Your presentation can be in any format you choose and must be approved by the teacher. Keep in mind that it is helpful to have something visual to accompany your oral presentation, for example: a Web page, a multimedia presentation, a brochure, a poster, a puppet show, or a dramatic play.

The team presentation must keep in mind the assigned audience. Use the Weather Team Checklist to organize your presentation.