

## EarthComm Earth System Evolution: Climate Change and Your Community Activity 1

### This investigation will help you to:

- Factors Affecting Climate
- Part A: Physical Features and Climate in Your Community, to complete the investigation, each student group will need:
- Part B: Physical Features & Climate in a Different Community, to complete the investigation, each student group will need:
- To learn more about weather systems in the United States, visit the following web sites:
- To learn more about the jet stream, visit the following web sites:

#### Factors Affecting Climate

- What's Climate Change?, INNOVA Center for Sustainable Development  
This web site offers information on factors affecting climates, including both natural and human factors.
- What is Climate?, TERC  
This site provides basic information on factors that influence the measurement of climates (i.e., elevation, latitude, prevailing wind direction, topography, and ocean currents).
- **Latitude**
  - The Encyclopedia of the Atmospheric Environment  
This web site provides information on latitude and the varying amounts of sunlight received from different latitudes on Earth.
  - A Primer: Factors Affecting Arctic Weather and Climate  
"The factors discussed in this section are building blocks to understanding arctic weather and climate. Each factor plays an important role alone and in interaction with other factors."
- **Elevation and Geographic Features**
  - Elevation in Colorado, Colorado State University  
Discover the effects of elevation on Colorado's climate.
  - Secondary Influences on Climate  
The secondary influences affecting climate are introduced in this web site including position relative to land and water masses, altitude, topography, prevailing winds, ocean currents, and prevalence of cyclonic storms agents.
  - Back to the Isle of Man: Geography and Climate, IM Government  
Explore the British island, Isle of Man, and learn what role its geography has in creating its mild climate.
- **Global Climate**
  - The Official Global Climate Observation System Web Site, World Meteorological Organization, the Intergovernmental Oceanographic Commission of UNESCO, the United Nations Environment Programme, and the International Council for Science  
This web site provides information on world weather and climate conditions as well as global climate change with respect to mean sea level and terrestrial ecosystems.
  - Climate Change, the United States Global Change Research Program  
Learn about the factors affecting the world's climate system (i.e., natural and anthropogenic changes) and how these can also influence it's social and economic well-being by exploring this web site.

Back to Top

Part A: Physical Features and Climate in Your Community, to complete the investigation, each student group will need:

- **Topographic map of community**
- **Resources that provide climate data tables.** Visit the following web sites:
  - Comparative Climactic Data for the United States through 2000, NOAA  
If you would like to access other information (i.e., temperature, wind, sunshine, cloudiness, and humidity) on additional locations which are not provided in the book, visit this web site.
  - National Weather Service  
This link takes you to a directory with folders for 37 states and/or provinces. Inside each folder there are daily climate data and forecasts for selected locations in that area. Data is not available for all states at this site.
  - Climate-at-a-Glance, NOAA  
Search 106 years of archived weather data for the United States at this site. The user can query the site by searching for national, regional, state, and city information, by precipitation or temperature, and period of time. This site even allows the user to display the information in a bar chart, line chart, or table.
  - NOAA El Nino Page, U.S. Climate Prediction Center  
This website provides data tables/maps of US precipitation and temperature rates based on data from previous El Niño Southern Oscillation (ENSO) events.

Back to Top

Part B: Physical Features & Climate in a Different Community, to complete the investigation, each student group will need:

- **Topographic map of a different community**

Back to Top

To learn more about weather systems in the United States, visit the following web sites:

- National Oceanic and Atmospheric Administration (NOAA)
- National Weather Service
- Interactive Weather Information Network

Back to Top

To learn more about the jet stream, visit the following web sites:

- Jet Stream, National Weather Service (NWS)
- Jet Stream, University of Illinois
- Understanding Winds, Jet Streams, USAToday.com  
Scroll down to the "Understanding Winds, Jet Streams" section of this online newspaper to investigate the science behind the jet stream.

Back to Top

---