

EarthComm Earth's Fluid Spheres: Oceans and Your Community Activity 5

This investigation will help you to:

- Weather and Climate
- Teleconnections and El Nino
- To complete the investigation, each student group will need:
- To learn more about the relationship between El Niño and the occurrence of hurricanes in the Atlantic, visit the following web sites:
- To learn more about the fluctuations in wheat prices over the last 20 years, visit the following web sites:

Weather and Climate

- "US Climate Divisions Plotting Page" - NOAA Climate Data Center
This site allows you to create maps showing precipitation, temperature, or drought severity, of the current or past (back to January 1895) United States.
- "Where to Find Weather and Climate Information" - NOAA Climate Data Center
Page includes links to sites on weather and climate data for the United States and the world, weather maps, forecasts, and more.

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Teleconnections and El Nino

- "USGS News and Information on El Nino" - USGS
This site focuses on the impacts of El Nino, including coastal erosion, flooding, landslides, storms, and climate change. Click on link to open the article of interest.
- "List of Impacts and Prediction Benefits" - PMEL (NOAA)
Click on link to find further information on the impacts of El Nino, such as El Nino and tornado occurrences, El Nino and hurricane frequency, coral reef bleaching, El Nino and marine fish and birds, and more.
- "El Nino Sea-Level Rise Wreaks Havoc in California's San Francisco Bay Region" - USGS Fact Sheet 175-99
Online fact sheet (can also be downloaded and printed in PDF format) looks at the impact of the 1997-1998 El Nino event on the Bay area. Site includes damage photos, sea level data, upwelling images, and an explanation of Kelvin waves and their impact.
- "El Nino Storms Erode Beaches on Monterey Bay, California" - USGS Fact Sheet 026-00
Two-page fact sheet reviews the relationship between El Nino and coastal erosion on Monterey Bay, California. Includes color images.

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To complete the investigation, each student group will need:

- **Copies of outline map of the US w/ state borders**
(2 per group)
- **Internet access:** to collect precipitation data for your community, visit the National Weather Service website. Click on region of interest to open a new site. You will have to do a little "clicking around" to get to your local Weather Service office.

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To learn more about the relationship between El Niño and the occurrence of hurricanes in the Atlantic, visit the following web sites:

- "La Nina, El Nino, and Atlantic Hurricane Damages in the United States" - Pielke, R.A. and Landsea, C.W., 1999, Bull. Amer. Meteor. Soc., 80, 2027-2033
Online article examines the relationship between the ENSO cycle and US hurricane losses.
- "Effect of El Nino on U.S. Landfalling Hurricanes, Revisited" - Bove, et al., 1998, Bull. Amer. Meteor. Soc., 79, 2477-2482.
This online research paper analyzes the frequency of hurricanes making landfall in the United States from 1900-1997 to determine if there is a connection between El Nino and hurricane occurrence.

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To learn more about the fluctuations in wheat prices over the last 20 years, visit the following web sites:

- "Prices Received by Farmers, Wheat, US" - National Agricultural Statistics Services, USDA
Graph illustrates wheat prices from 1993 to 2001.

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