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**Oceanography 101/Atmospheric Sciences 211**

El Niño/La Niña Homework Assignment

✪First, read pages 92-96 in *The Earth System* textbook OR 221-225 *Oceanography* textbook

1. **Watch** the [El Niño and La Niña animation](http://www.pearsoned.ca/highered/mygeoscienceplace/ElNinoLaNina.html) (<http://www.pearsoned.ca/highered/mygeoscienceplace/ElNinoLaNina.html>). Pay attention to the labels on the arrows. Describe the following factors during normal, El Niño and La Niña conditions.

|  |  |  |  |
| --- | --- | --- | --- |
| **Factor** | **Normal** | **El Niño** | **La Niña** |
| Location of low pressure system, generating rainfall(eastern, mid or western Pacific) |  |  |  |
| Coastal winds along the west coast of South America (compass direction and relative strength) |  |  |  |
| Relative strength of upwelling off the coast of South America (weak, normal, strong) |  |  |  |
| Position of thermocline (shallow, deep, normal) |  |  |  |
| Location of warm surface water (eastern, mid or western Pacific) |  |  |  |

1. Go to the [El Niño Theme Page](http://www.pmel.noaa.gov/tao/elnino/nino-home.html) ([http://www.pmel.noaa.gov/tao/elnino/nino-home.html#](http://www.pmel.noaa.gov/tao/elnino/nino-home.html)). Watch the animation of tropical sea surface temperature over the past year in the *What is Happening Now* section of the page. Summarize how SST has changed over the last year off the west coast of South America. Does this represent a normal, La Niña or El Niño pattern?
2. Watch the YouTube Video:[*Developing an El Niño Observing System*](http://www.youtube.com/watch?v=nzBAWirHMvA&list=PLE575643A95F6CED2&index=1&feature=plpp_video&safety_mode=true&persist_safety_mode=1&safe=active). Explain how the TAO buoy system helps us understand and predict conditions in the tropical Pacific Ocean.
3. Go to the [Office of the Washington State Climatologist](http://www.climate.washington.edu/) (<http://www.climate.washington.edu/>). Click on *Outlook* for predictions about climate over the next few months. Summarize the climate outlook for Washington. Be sure to discuss any impact from La Niña or El Niño conditions.