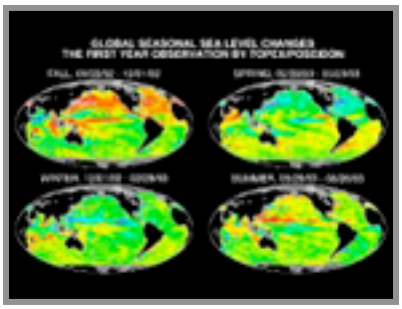
Is the Sea Level?

Introduction

We now have satellites that can measure the height of the ocean and we've discovered that some parts of the ocean are higher than sea level and other parts are lower. Sea level is just an average measurement of the height of the ocean. In this activity, you will investigate how sea level changes during the year and determine why.

Collecting Data



Locate this movie:
Program: Hydrosphere
Library: Sphere Topics

Question: How does the sea surface change during the year?

Study this color image. Notice what the colors mean from the scale at the bottom of the picture.
When the ocean is higher than average, its color is: _____

When the ocean is lower than average, its color is: _____

Observing and Analyzing Data

When is the sea highest in the Northern Hemisphere? _____

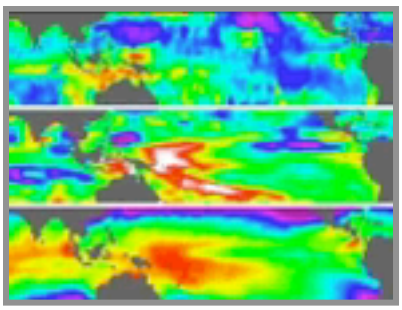
When is the sea highest in the Southern Hemisphere? _____

In your own words, explain what causes this annual change in sea level.

On these maps, locate your favorite beach and predict when there will be very high tides and when the tides will be very low.

Does It Work? - Testing Your Analysis

El Niño is the name given to an abnormal warming of the waters in the eastern Pacific. La Niña describes an abnormal cooling.



Collecting More Data

Locate this movie:
Program: Hydrosphere
Library: Sphere Topics

Question: What is an El Niño and a La Niña?

The movie shows changes in three factors at once: winds (upper map), sea height (middle) and temperature (bottom).

Analyzing Data

Compare the sea height and the temperature. Does the relationship you observed above also hold in this movie?

How do wind speeds relate to ocean temperature and height?