

Step 2: Analyze Data

B.1) Ocean Temperature Worksheet

Satellite Images

Using the four satellite images answer the questions in your lab journals. Notice that the temperature scales are different in each image (for example, the color red may represent different temperatures in different images). Areas colored white represent clouds.

1. What color on the satellite images is used to show the warmest water? What color is used to show the coldest water?
2. During what months is the ocean the warmest? The coldest? Why?
3. Is the water right along the coastline warmer or colder than the water further offshore? Why? Is this true for all of the images?
4. Notice that the water temperature is warmer at the bottom right corner of all of the images. Can you think of a reason why this warmer water would be present further out in the ocean all through the year?

CTD Data

1. What types of data does a CTD record?
2. How cold is the water at 4 meters depth in December? In June? Is there a big difference? If so, why?
3. What happens to the temperature of the water in June as you move from the surface down towards the bottom? What happens to the salinity as you move deeper? Do you notice this same pattern for the other months?
4. Write a short paragraph describing the relationship between temperature, salinity, and depth based on the CTD graphs.

CTD Data and Satellite Images

Using your new knowledge of how to read satellite temperature images and CTD data graphs, write a two-paragraph description of how both types of data would be useful to scientists.