



Physical Oceanographer Data Collection Sheet

What influences a marine food web?

Physical Oceanographers: _____
Names

Directions: *Collaborate with the people in your group to answer the following questions. You will need access to the internet to complete this task. In some cases you may be directed to a specific website otherwise you may use your favorite search engine. After completing this task you will form a new group where you will be the expert physical oceanographer. You will then work together to identify what really influences a marine food web.*

1. What areas of study/measurement does physical oceanography encompass?

2. What different abiotic (nonliving) parameters do you think a physical oceanographer could investigate?

Go to: <http://cordellbank.noaa.gov/library/videogallery.html>

View CTD Video

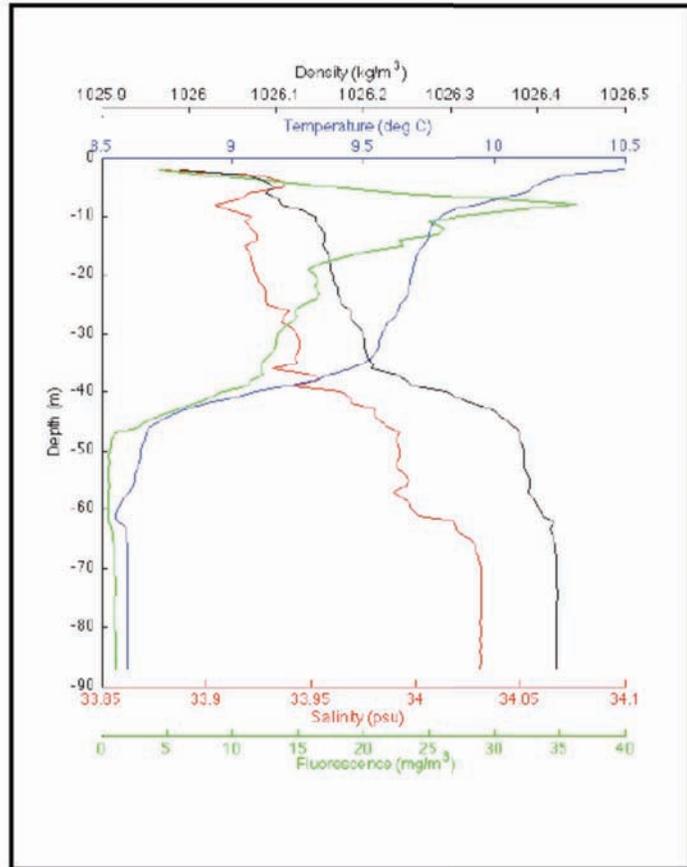
3. What is CTD an acronym for?

4. Identify the different parameters that can be measured using this piece of equipment **and** how that information is used. Be sure to include the additional probe that is attached to the cage.

June 2008 Line 2 Station E

5. The following is a profile from a CTD logger deployed by ACCESS researchers at a sampling site in June of 2008. As a group answer the following questions in order to draw conclusions regarding the temperature, fluorescence, salinity and density at this sampling site at this particular point in time? Be sure to support your answers with data.

- A. As depth increases what happens to the water temperature?
- B. As depth increases what happens to salinity?



C. At what depth is fluorescence the greatest?

D. Does density increase or decrease with increasing water depth?

6. Additional water samples can be taken to measure nutrient availability. What role do you think nutrients play in primary (phytoplankton) productivity in a marine food web?

Go to: <http://cordellbank.noaa.gov/about/oceanographic.html>

7. After reading the oceanographic setting of the Cordell Bank National Marine Sanctuary describe the three different seasons and specifically the influence of abiotic factors on biotic factors in the area.

a. Upwelling Season

b. Relaxation/Oceanic Period

c. Winter Storm Season/Davidson Current Period

8. What major abiotic factors would your group identify as influencing a marine food web?