

## Step 4: Watch It Happen

### B.1) Ocean Weather Forecast Worksheet

#### What is an Upwelling?

- 1 Describe how winds are related to upwelling events off the coast of NJ.
- 2 In your own words describe the how an upwelling happens along the coast of New Jersey.
- 3 Explain how an upwelling can affect the food chain in the ocean.

#### Seeing an Upwelling

- 1 Record the date and temperature of the surface water at the LEO-15 research area for each satellite image. How does the temperature change over time? Based on the change in temperature, do you think an upwelling is taking place? Why, or why not?
- 2 How could you use sea surface temperature images from satellites to predict an upwelling?
- 3 How deep is the layer of warm surface water (red/orange color) in the July 14 CTD image? How does this warm water layer change over time in the other images?
- 4 At what depth is the thermocline in the July 14 image? How does the thermocline change over time in the other images?
- 5 How does the position of the cold bottom water change over time? Based on the changes of the different temperature layers over time, do you think these CTD images support the predictions you made from looking at the satellite temperature images? Why, or why not?