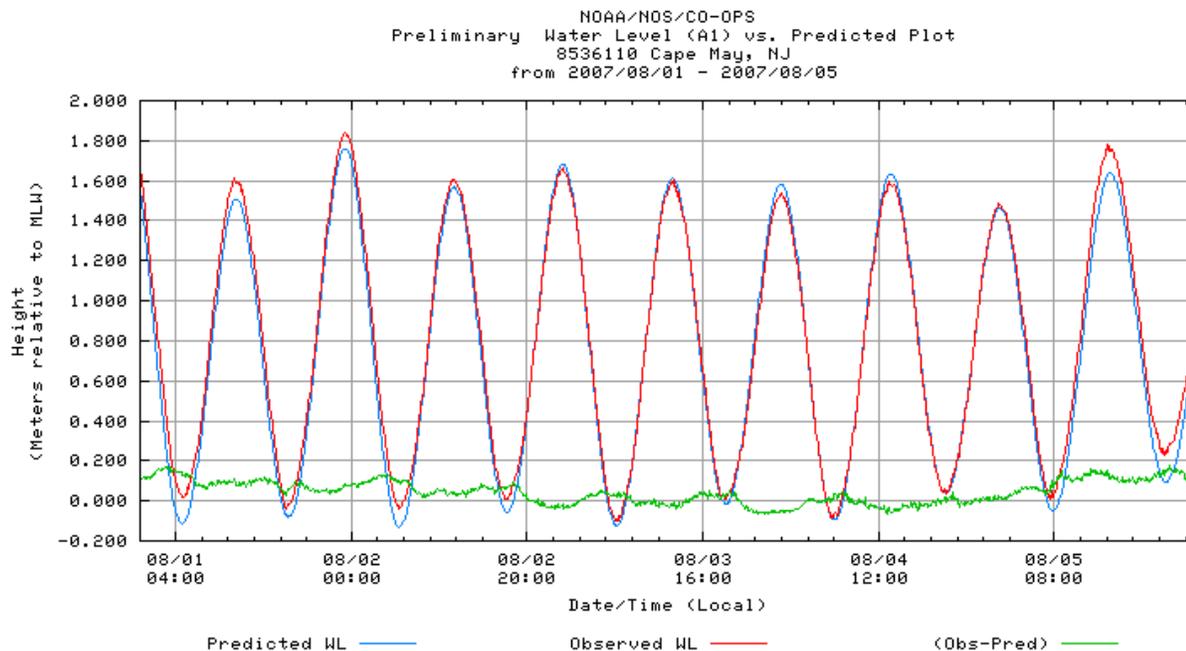


Student Master

Practice Reading Tide Data

Water level around the globe is always changing as a result of many factors. One of those factors is the effect of tides caused by the gravitational attraction of the Moon. In this activity, you will use charts of real tide data, like the one shown below, to research tides in a specific location. Your goal is to describe the typical height change and period of the tidal change.



1. Visit www.dataintheclassroom.org, and find the Sea Level module.
2. Follow the link to “Tide Data.”
3. Choose a location you wish to study, and write the name on your data sheet. Using the form on the Web site, select the location from the list of recording stations.
4. Select a start and end date for the data you wish to retrieve. Be sure to retrieve data over a period of at least several days, so that you can see a number of tide cycles.
5. Click the “Get Data” button.
6. If you have access to a printer, print a copy of the tide data chart. Otherwise, save a copy to your computer so that you can refer to it later. On a PC, right-click with the mouse and select “Save as....” On a Mac, hold down the Ctrl key and click with the mouse.

7. Look at the chart and see if you can identify a pattern of low and high tides. Choose a point on the chart that represents a low tide. Use the scale on the y-axis to determine the relative height of the water at that point. Record the approximate time and the relative water height on your data sheet.
8. Now find the point that represents the next high tide, and record the relative height of the water then.
9. Calculate the difference between the water height at high and low tides. This is the height change. Record this change on your data sheet.
10. Next choose two points on the chart that represent consecutive low or consecutive high tides. Use the time scale on the x-axis to determine the time period of the tide cycle. Record the period on your data sheet.

Do you think the measurements you just made provide a good description of the tides at this location?

Hint: Make measurements using data from the same location at other times to see if the tides are different. Once you have made several measurements, can you make calculations to find the average height change and period from the data you collected?

Data Sheet

Station Name:

Date	Time (Approx)	Low Tide Height	High Tide Height	Tide Height Change	Tide Cycle Period
08/02/2007	20:00	0 m	1.75 m	1.75 m	12 hrs