TIDE GRAPH

For this assignment you will graph the heights of all of the tides of the Venice Inlet for the month of **October, 2006**. To set up the graph, you will need to combine and align two sheets of 8 ½" x 11" graph paper. The lengths of the two sheets should be arranged end to end (lengths in landscape mode) with the ends overlapping slightly. Be careful to align the last graph line of one sheet with the first line on the other sheet. Scotch tape the two sheets together on the back side of the graph paper only.

On the side with the graph lines use a **#2 pencil** to set up the axes and make your graph. On the 3rd line from the bottom and 3rd line from the left (landscape mode) place a pencil point to begin your X (horizontal) and Y (vertical) axes. From this point draw a pencil line all of the way to the right and from the same point draw a vertical line all of the way to the top of the graph paper. Below the X axis label the first line on the left with the letter M (corner of graph, X/Y intersect). Label the next line with the letter N. The lines should be labeled on this graph and not the spaces because you will be making a line graph and not a bar graph. Keep alternating the labeling of the lines with M and N across the page to the right until you have 31 M's and 31 N's. Below every letter "N" label the numerical dates in chronological order (1 - 31). Label the X axis with a legend identifying the dates as October 2006 and the M's as representing midnight and the N's as representing noon for each day.

To label the Y axis, label the X/Y intersect line as -0.3. Each line should represent an increasing increment of 0.1. Therefore, the next line will be labeled -0.2, then -0.1, then 0, then 0.1, then 0.2 …….and so on up to the last available line. Label the Y axis as "Tide Height in Feet." Draw a line all of the way across the page on the "0" line and label is as sea level.

At the top of the page write the title of the graph. The title should be "Venice Inlet, Florida Tides – October, 2006." Draw vertical lines from each letter "M" on the X axis to the top of the page. This will help you identify each day more clearly.

Using the tide table that is provided, plot all of the tide heights for every tide on every day with the appropriate time of day. The time points can be approximated fairly close. For example: 06:18 AM is barely beyond ½ way between M (midnight) and N (noon). The height of 2.12 feet is slightly above the 2.1 graph line and below the 2.2 line. As you plot each tide, connect the points with a line. Continue with this until you finish plotting all of the tides. This will help you avoid errors.

Answer all of the 15 questions provided with this assignment when you have finished making your graph. After you finish answering all of the questions, staple the paper of answered questions to your graph. Make sure that your name is on the graph and on the question sheet and turn in the assignment to the teacher.

VENICE INLET TIDES – OCTOBER 2006

Date	Day	High Time/Height	Low Time/Height	High Time/Height	Low Time/Height	High Time/Height
Oct 1	Sun	**06:18 AM** / 2.12 ft	**03:27 PM** / 0.16 ft			
Oct 2	Mon	**01:21 AM** / 1.59 ft	**01:53 AM** / 1.59 ft	**07:55 AM** / 2.11 ft	**04:24 PM** / 0.12 ft	
Oct 3	Tue	**12:07 AM** / 1.55 ft	**03:48 AM** / 1.36 ft	**09:23 AM** / 2.14 ft	**05:10 PM** / 0.17 ft	**11:52 PM** / 1.57 ft
Oct 4	Wed		**04:48 AM** / 1.06 ft	**10:37 AM** / 2.15 ft	**05:48 PM** / 0.32 ft	**11:52 PM** / 1.67 ft
Oct 5	Thu		**05:39 AM** / 0.71 ft	**11:42 AM** / 2.11 ft	**06:19 PM** / 0.55 ft	
Oct 6	Fri	**12:02 AM** / 1.84 ft	**06:27 AM** / 0.37 ft	**12:43 PM** / 2.01 ft	**06:45 PM** / 0.82 ft	
Oct 7	Sat	**12:17 AM** / 2.05 ft	**07:14 AM** / 0.07 ft	**01:42 PM** / 1.87 ft	**07:04 PM** / 1.08 ft	
Oct 8	Sun	**12:38 AM** / 2.26 ft	**08:01 AM** / -0.14 ft	**02:44 PM** / 1.69 ft	**07:13 PM** / 1.28 ft	
Oct 9	Mon	**01:04 AM** / 2.43 ft	**08:50 AM** / -0.24 ft	**03:52 PM** / 1.51 ft	**07:06 PM** / 1.39 ft	
Oct 10	Tue	**01:35 AM** / 2.52 ft	**09:43 AM** / -0.23 ft			
Oct 11	Wed	**02:12 AM** / 2.52 ft	**10:43 AM** / -0.13 ft			
Oct 12	Thu	**02:56 AM** / 2.43 ft	**11:52 AM** / 0.01 ft			
Oct 13	Fri	**03:51 AM** / 2.27 ft	**01:11 PM** / 0.13 ft			
Oct 14	Sat	**05:05 AM** / 2.08 ft	**02:27 PM** / 0.21 ft			
Oct 15	Sun	**06:45 AM** / 1.93 ft	**03:29 PM** / 0.27 ft	**11:32 PM** / 1.48 ft		
Oct 16	Mon		**03:00 AM** / 1.32 ft	**08:28 AM** / 1.88 ft	**04:17 PM** / 0.34 ft	**11:21 PM** / 1.49 ft
Oct 17	Tue		**04:03 AM** / 1.07 ft	**09:48 AM** / 1.86 ft	**04:55 PM** / 0.45 ft	**11:18 PM** / 1.55 ft
Oct 18	Wed		**04:51 AM** / 0.81 ft	**10:50 AM** / 1.85 ft	**05:26 PM** / 0.59 ft	**11:18 PM** / 1.64 ft
Oct 19	Thu		**05:31 AM** / 0.57 ft	**11:41 AM** / 1.81 ft	**05:51 PM** / 0.76 ft	**11:25 PM** / 1.76 ft
Oct 20	Fri		**06:08 AM** / 0.36 ft	**12:26 PM** / 1.75 ft	**06:10 PM** / 0.93 ft	**11:36 PM** / 1.90 ft
Oct 21	Sat		**06:41 AM** / 0.18 ft	**01:08 PM** / 1.68 ft	**06:23 PM** / 1.08 ft	**11:52 PM** / 2.04 ft
Oct 22	Sun		**07:14 AM** / 0.04 ft	**01:48 PM** / 1.60 ft	**06:29 PM** / 1.20 ft	
Oct 23	Mon	**12:14 AM** / 2.17 ft	**07:48 AM** / -0.06 ft	**02:29 PM** / 1.52 ft	**06:29 PM** / 1.26 ft	
Oct 24	Tue	**12:40 AM** / 2.26 ft	**08:24 AM** / -0.11 ft	**03:16 PM** / 1.43 ft	**06:28 PM** / 1.29 ft	
Oct 25	Wed	**01:11 AM** / 2.31 ft	**09:07 AM** / -0.11 ft	**04:16 PM** / 1.34 ft	**06:24 PM** / 1.30 ft	
Oct 26	Thu	**01:47 AM** / 2.32 ft	**10:00 AM** / -0.08 ft			
Oct 27	Fri	**02:30 AM** / 2.29 ft	**11:05 AM** / -0.04 ft			
Oct 28	Sat	**03:22 AM** / 2.20 ft	**12:21 PM** / 0.00 ft			
Oct 29	Sun	**03:31 AM** / 2.07 ft	**12:35 PM** / 0.04 ft			
Oct 30	Mon	**05:03 AM** / 1.92 ft	**01:38 PM** / 0.10 ft	**09:28 PM** / 1.51 ft		
Oct 31	Tue		**01:44 AM** / 1.28 ft	**06:45 AM** / 1.80 ft	**02:30 PM** / 0.22 ft	**09:17 PM** / 1.59 ft

Name _____
Period _____

1. Use a calendar, the Internet, or other source and determine the dates for full moon, new moon, first quarter moon, and last quarter moon for October 2006.
   Full Moon –
   New Moon –
   First Quarter –
   Last Quarter –

2. On what day (date) was the greatest diurnal inequality in October, 2006?

3. What was the value of the greatest diurnal inequality in October, 2006?

4. On what day (date) did the smallest tidal range occur for October, 2006?

5. What was the value of the greatest tidal range for October, 2006?

6. Give the dates of the two most significant spring tides during October, 2006.

7. Give the date of the most significant neap tide for October, 2006.

8. Give the **date** and **time** of the lowest tide for October, 2006.

9. Are Venice tides classified as diurnal, semidiurnal, or mixed?

10. What **date** and **time** was the high or low tide exactly at mean sea level for October, 2006?

11. How can a tide height be less than zero (0)?

12. On average, how much later is a high tide from one day to the next?

13. What day in October, 2006, had the greatest number of tides for the Venice Inlet?

14. On October 7, 2006, St. Petersburg (Tampa Bay side) has a high tide at 2:06 AM while Venice has a high tide at 12:17 AM. What will be the approximate **time** for the corresponding high tide in St. Petersburg on October 8?

15. Naples is located approximately 90 miles south of Venice on the Gulf Coast of Florida. On October 1, 2006, Naples has 4 tides while Venice only has 2 tides. How is this possible?