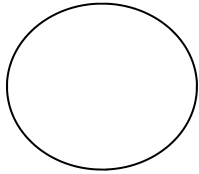


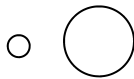
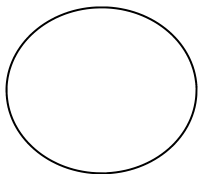
## As the Tide Turns

Name: \_\_\_\_\_

1. Label the Sun, Moon and Earth and draw the appropriate tidal bulges in the two diagrams below. Then, identify which diagram shows a **spring tide** and which shows a **neap tide**.



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2. Explain how the moon affects the ocean tides.

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3. Using a printed or Internet source, find out how many times a day you have **low tides** in your region. If you do not live near the ocean, choose the nearest coastal area to investigate. Be sure to include the name of the area you investigated.

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4. Why would it be important for people to know whether the tides will be high or low at specific times?

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Tampa Bay, FL Tidal Date March 2011								
Date	Time	Height (ft.)	Time	Height (ft.)	Time	Height (ft.)	Time	Height (ft.)
3/10/2011	11:38 pm (3/09/11)	L -0.07	5:48 am	H 1.3	9:51 am	L 0.77	4:10 PM	H 2.7
3/11/2011	12:40 am	L -0.05	7:23 am	H 1.17	10:19 am	L 0.93	4:51 pm	H 2.66
3/12/2011	1:57 am	L -0.06	9:03 am	H 1.18	10:51 am	L 1.11	5:42 pm	H 2.55
3/13/2011	4:15 am	L -0.15	-	-	-	-	7:50 pm	H 2.41
3/14/2011	5:22 am	L -0.28	12:34 pm	H 1.49	2:56 pm	L 1.45	9:35 pm	H 2.34
3/15/2011								

- Plot this sample tidal date from Tampa Bay, Florida on a separate sheet of graph paper, using colored pencils.
- Complete the missing date for 3/15/2011 by predicting the next high and low tides in Tampa Bay according to the pattern seen in the chart. Graph your predictions on the same sheet of graph paper as before, but use a different color.
- What phase was the moon in on 3/13/2011? Was it waxing or waning? What do we call this tidal phenomenon? Explain your answer.

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**TIDAL CHALLENGE**

Choose a date from the data above and illustrate the phase of the moon in the space provided below.