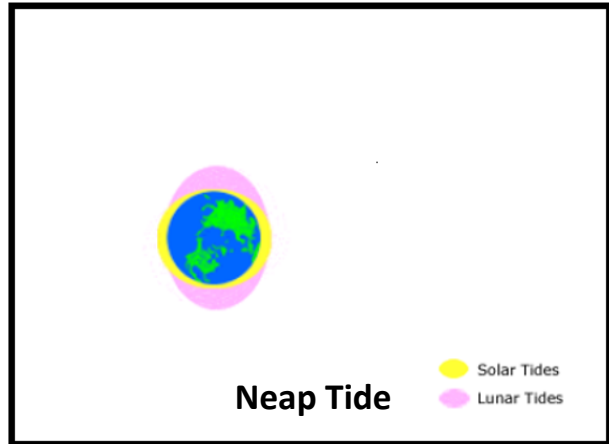
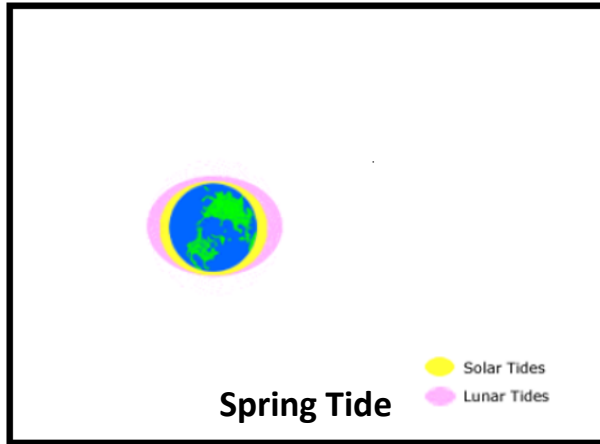


Charting the Tides Worksheet

Name: _____

Section 1: Sketching Spring and Neap Tides

Draw the correct position of the Moon and Sun for a spring tide and a neap tide:



Section 3: Analyzing Tidal Data

1. Pick one day on the tidal graph and write down both high tides and both low tides that that day as well as the time they are to occur (include AM or PM).

Date: _____

High Tide

Low Tide

Time: _____ Height (ft): _____

Time: _____ Height (ft): _____

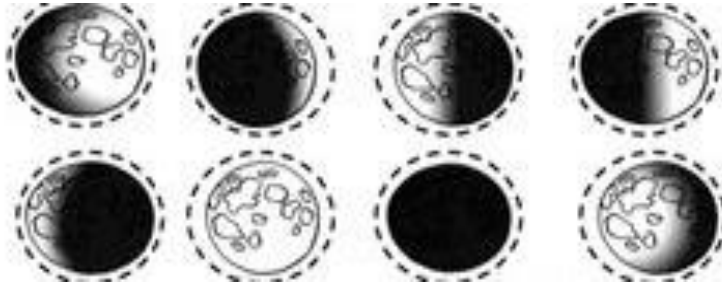
Time: _____ Height (ft): _____

Time: _____ Height (ft): _____

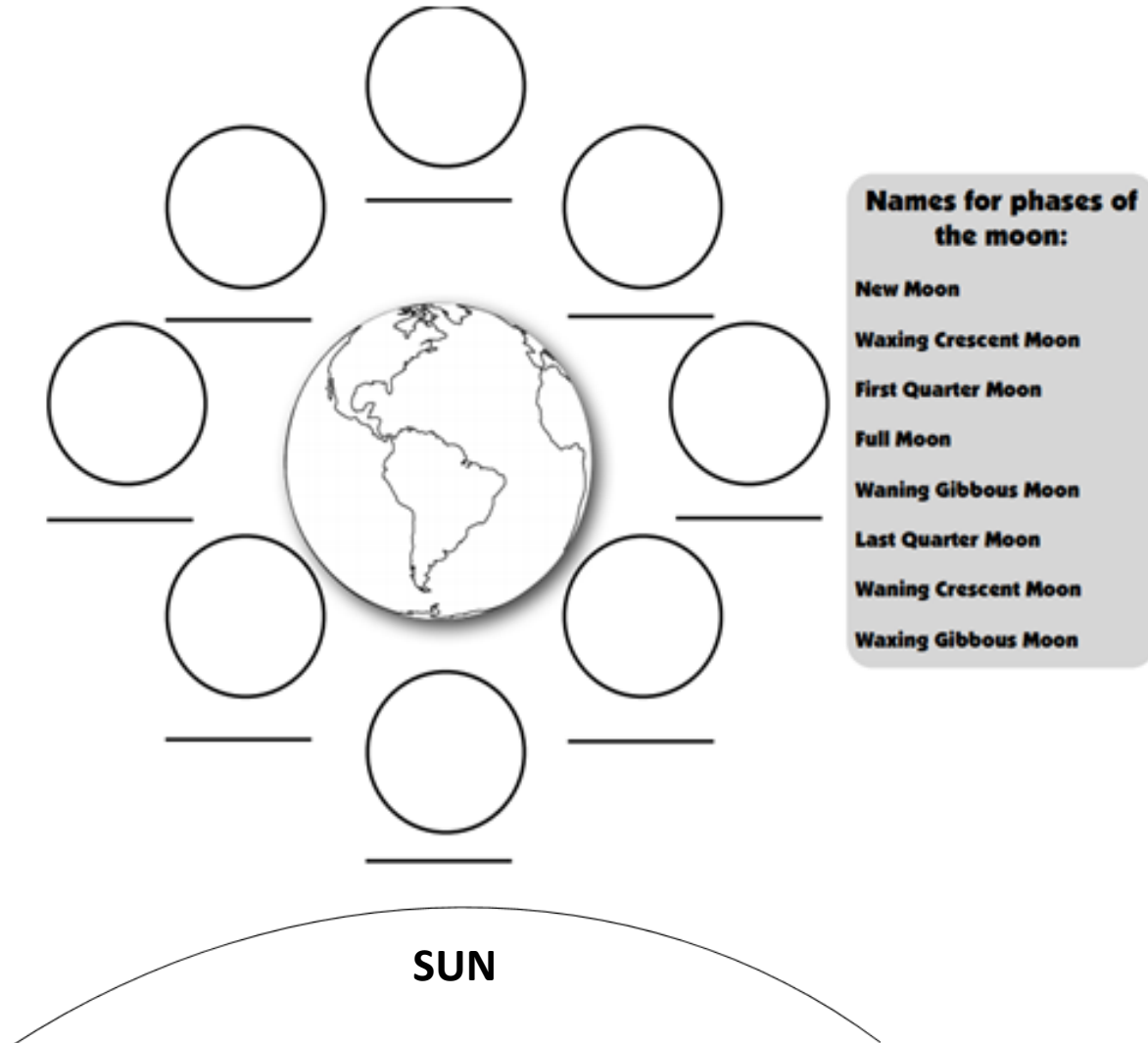
2. What is the highest tide on the graph and what day does it occur?
3. What is the lowest tide on the graph and what day does it occur?
4. What is the tidal range for the time period on the graph?
5. What was the average tidal height on the day you selected for question #1?

Section 2: Phases of the Moon

While conducting the activity with the moon (ball) and sun (flashlight), look for the following phases being created during the moon's orbit.



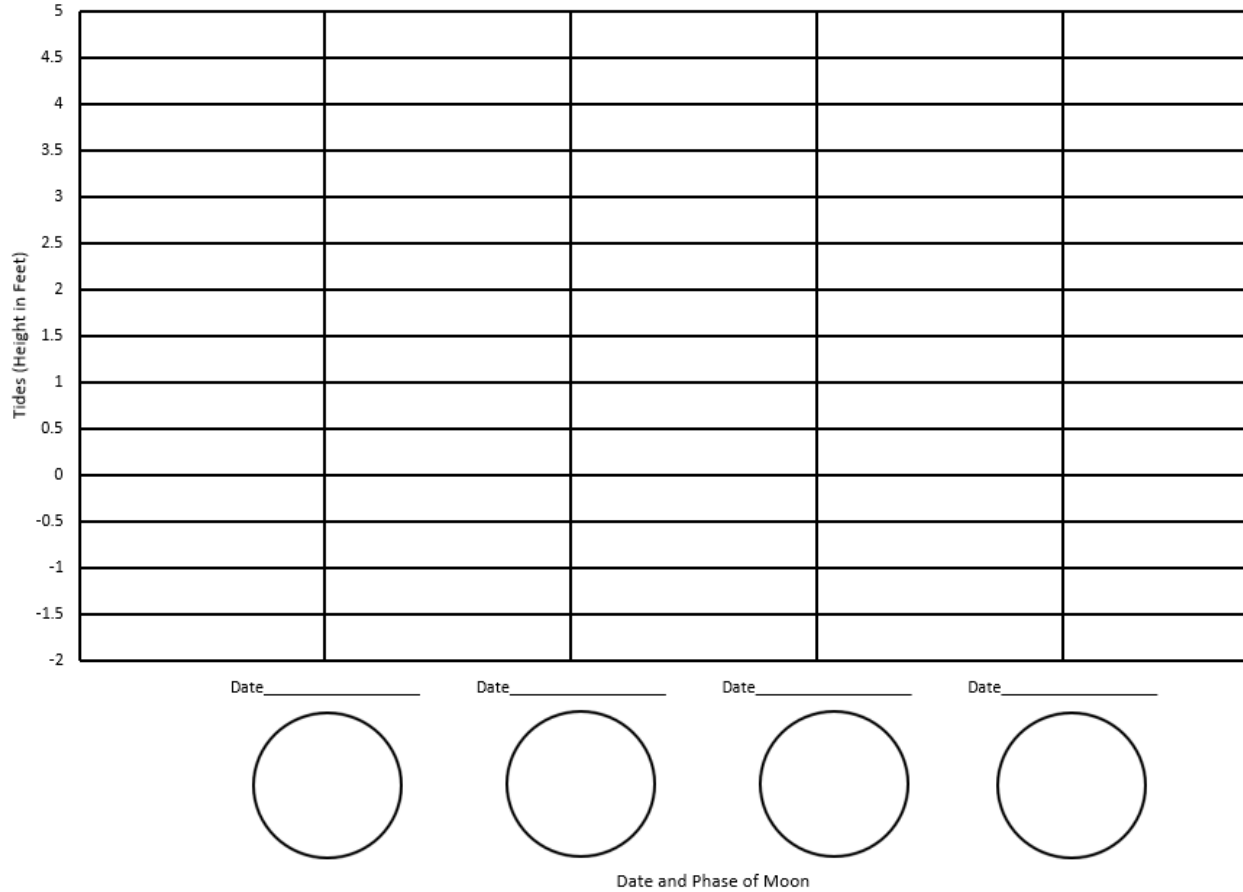
In the diagram below, color in the empty circles with the phases of the moon and label each phase of the moon in the blanks provided.



Section 4: Charting Tidal Data

Find out what dates the moon was Full, New, First Quarter and Last Quarter during the month that your tidal data are from. In the graph below, plot both low tides and both high tides on each of the four days. Color in the blank moons with the correct phases for the dates that month. You may want to color low tide dots in blue and high tide dots in red.

Tides During Different Phases of the Moon



- 1) What day did the highest tide occur?
- 2) What day did the lowest tide occur?
- 3) Which phase of the moon produced the largest tidal range?
- 4) Explain why you are seeing differences in tidal ranges during different phases of the moon. Hint: Think about Spring Tides and Neap Tides!