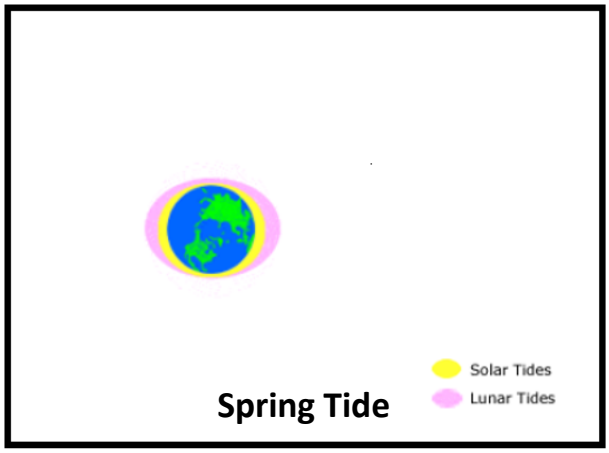
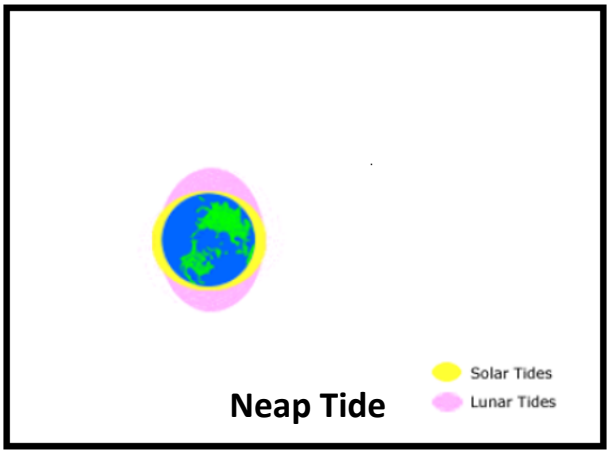
Charting the Tides Worksheet

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 chart and write down both high tides and both low tides that are predicted 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 predicted tide on the chart and what day does it occur?

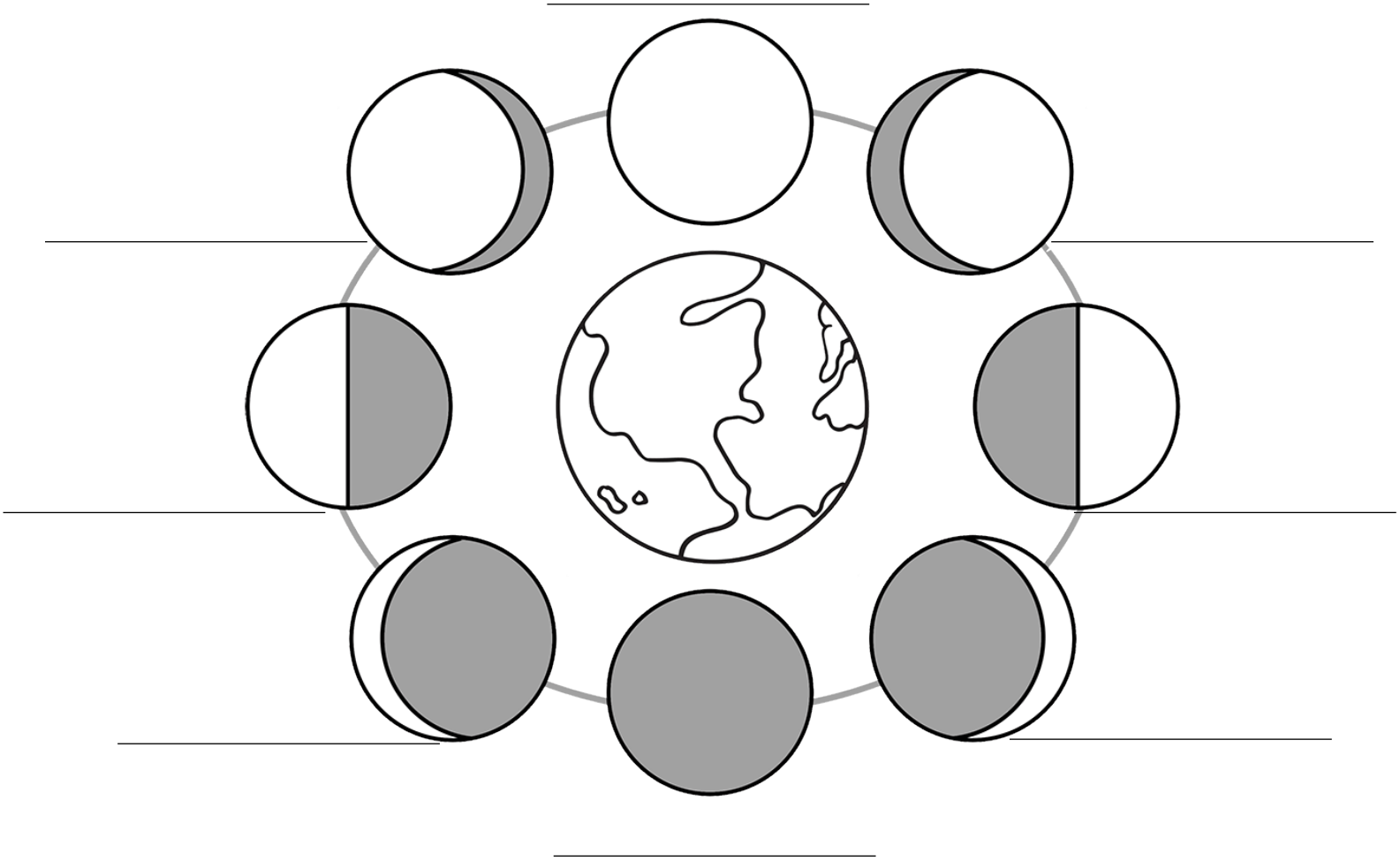
3. What is the lowest predicted tide on the chart and what day does it occur?

4. What is the tidal range predicted for the time period on the tidal chart? Hint: Subtract the lowest tide from the highest tide.

5. What phase was the moon on the day you selected for question #1?

Section 2: Phases of the Moon

Labels the different phases of the moon and shape the icing on your Mini Oreos to match the different phases.

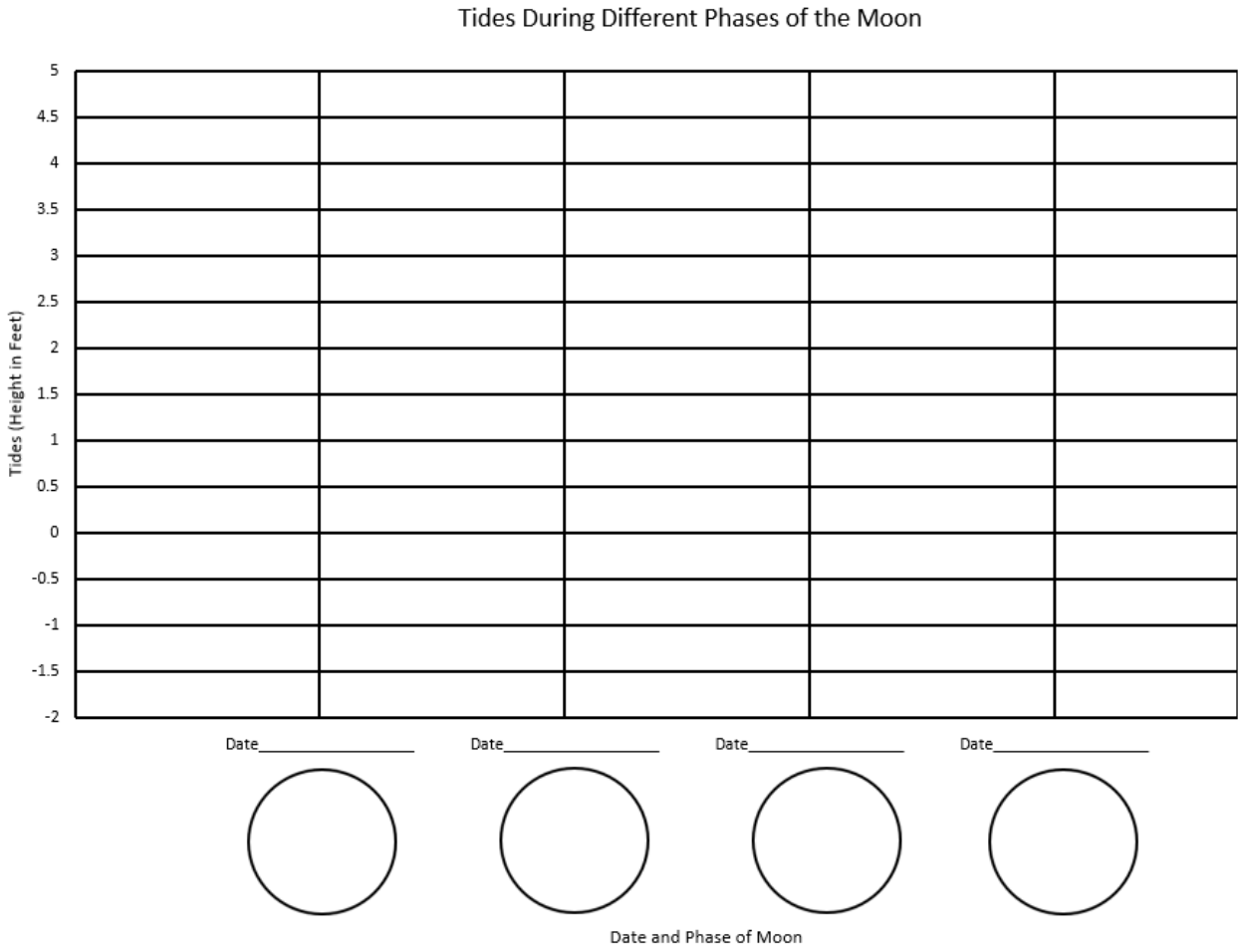


SUN

Phases of the Moon:	
New Moon	Waning Gibbous Moon
Waxing Crescent Moon	Last Quarter Moon
First Quarter Moon	Waning Crescent Moon
Full Moon	Waxing Gibbous Moon

Section 4: Charting Tidal Data

Pick four days on the tidal chart: a day with a Full Moon, a day with a Last Quarter Moon, a day with New Moon and a day with a First Quarter Moon. In the graph below, plot both low tides and both high tides on each of the four days. Color in the moons with the correct phases for the dates you choose. You may want to color low tide dots in blue and high tide dots in red.



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? Hint: Remember range is the difference between the highest and the lowest tides.

4) Explain why you are seeing differences in tidal ranges during different phases of the moon. Hint: Think about Spring Tides and Neap Tides!