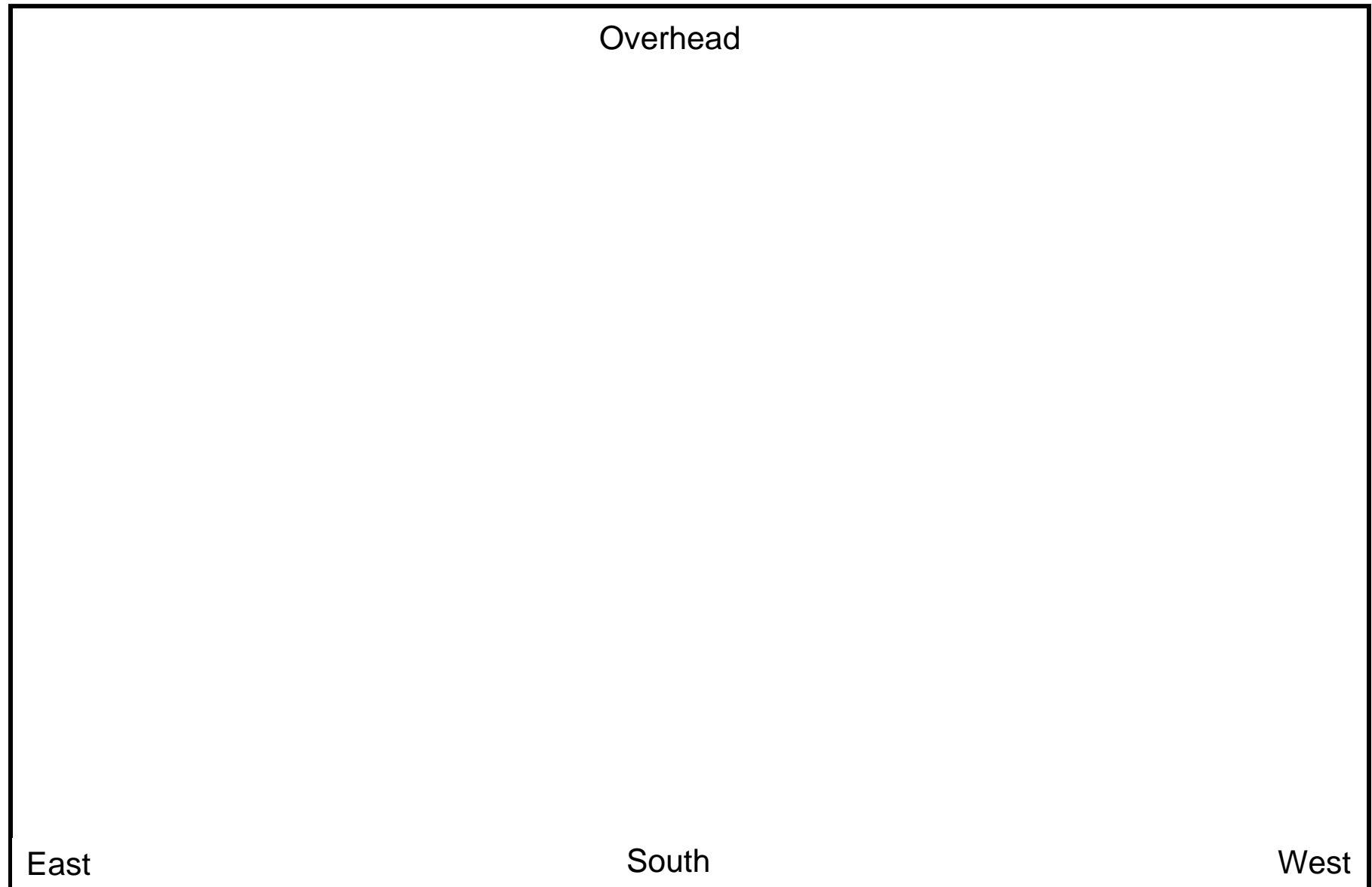


## Moon Phases and Eclipses Worksheet

1. What occurs when the Moon is directly between the Sun and the Earth?
  - a. a solar eclipse
  - b. a lunar eclipse
  - c. a low tide
  - d. a crater
2. The diameter of the Sun is how many times larger than the diameter of the Moon?
  - a. 4
  - b. 40
  - c. 400
  - d. 4,000
3. Which statement is true?
  - a. the Moon does not rotate
  - b. the Full Moon rises at sunrise
  - c. a solar eclipse happens every month
  - d. it is perfectly safe to view a lunar eclipse without eye protection
4. How long does it take for the Moon to complete one cycle of phases?
  - a. about one day
  - b. about one week
  - c. about four weeks
  - d. about one year
5. Which of these is not a phase of the Moon?
  - a. Dark Moon
  - b. Third Quarter Moon
  - c. Full Moon
  - d. Big Moon
6. Which statement is false?
  - a. the Earth's atmosphere refracts sunlight
  - b. the Earth's atmosphere scatters blue light
  - c. a solar eclipse occurs when the Moon passes through the Earth's shadow
  - d. the Moon orbits the Earth

KEY: 1(a) 2(c) 3(d) 4(c) 5(d) 6(c)

7. In the space below, sketch the appearance of the Moon on three consecutive nights. Try to include foreground details to help identify where the Moon appears in the sky from your viewing location.



8. Observe the Moon *at the same time of night* for as many nights in a row as you can. Number the squares with the date. In the spaces below sketch the Moon's appearance paying careful attention to its shape. Try to draw it as accurately as you can and note the general direction (north, east, south, or west) you are facing. Draw foreground object or nearby bright stars if they will help pin down the Moon's location. For best results (and to ensure convenient, early evening viewing times) start your project on the a day or two after New phase. (Hint: Look for the Moon low in the West after sunset.)

- How much does the Moon's shape change from one night to the next?
- How far does it move from one night to the next?
- Assuming it was clear each night, how many nights in a row can you see the moon?
- Would you have to stay up to observe later to continue your project?
- When would the 3<sup>rd</sup> quarter moon rise?

Observation #1	Observation #2	Observation #3	Observation #4	Observation #5	Observation #6	Observation #7
Observation #8	Observation #9	Observation #10	Observation #11	Observation #12	Observation #13	Observation #14
Observation #15	Observation #16	Observation #17	Observation #18	Observation #19	Observation #20	Observation #21
Observation #22	Observation #23	Observation #24	Observation #25	Observation #26	Observation #27	Observation #28

