# Name: ID:

## Sunrise/set Locations Worksheet

**Activity Instructions:**

Over the course of the year, the position of the track of our Sun as it crosses our sky will change. In the northern hemisphere, the Sun will be located in the southern part of the sky during the winter and move towards the north as spring and then summer approaches. This results in the Sun rising and setting at different positions along the eastern and western horizons, respectively, over the course of the year.

The goal of this activity is for you to track the movement of the Sun over the course of the semester, paying particular attention to where the Sun rises or sets. Using the diagram on page 2 to keep your records, here is what you should do:

1. Decide if you want to observe the Sun rise or set over the course of the semester. This might depend on if you have time in the mornings or evenings to make your observations.
2. Find a spot outside where you have a good view of the eastern (sunrise) or western (sunset) horizon. You might want to mark the exact spot with something.
3. On the diagram, label the central box with either E or W (for East or West), depending on which direction you choose to look. Then label the boxes to the left and right with N and S (for North or South) depending on which way you are facing.
4. Standing in your “spot”, draw in some reference points along the horizon such as trees, poles, buildings, etc. in the box labeled “Draw horizon landmarks”. Don’t use things that might move! You want to have a good stretch along the horizon referenced.
5. The goal is to stand in this same spot and note the position of the rising/setting Sun with respect to your chosen reference points ***at least 6 times*** during the semester. *Space your observations about two weeks apart and make an observation* ***at least once during each of the months of September, October, and November.***
6. You should also note that the ***time*** that the Sun will rise/set will change as well. On your

diagram, in the area labeled “Draw arrows…”, draw an arrow pointing to the position along the horizon where the Sun rises/sets for each observation you make, labeling the arrow itself with the **date and time** of your observation. You should have at least 6 arrows when you are finished.

## Post-Activity Questions:

1. Briefly describe how the position at which the Sun rises/sets changes over the course of the semester, from August thru November.
2. How does the time of sunrise/set change over this same time period? Try to account for daylight savings time!
3. On what day did the Sun rise/set directly east/west? If you didn’t observe this, from your observations, what day would you predict this should have happened? What is the significance of this day?
4. What do you think causes these changes?

