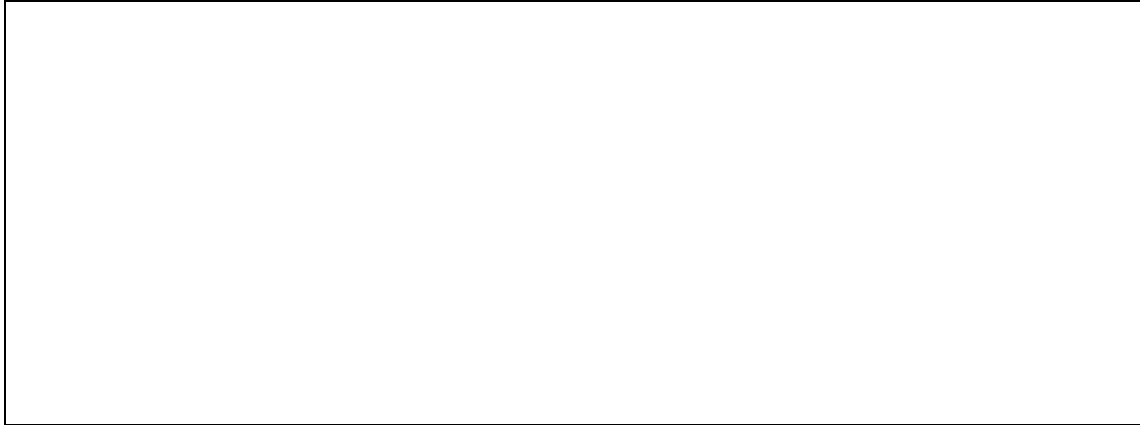


Name: _____ Date: _____

GPS Receiver Basics – Worksheet

Directions

1. Turn on the GPS receiver and look at the satellite page. Sketch the satellite visibility picture below and label the direction to the satellites in the sky.



2. Cover the receiver antenna with your hand. Does the reception change for the better or the worse? _____
3. Uncover the receiver antenna and move near a building or a tree. Describe what happens to the satellite signals as you move closer to the building or tree:

_____.
4. Are you able to predict which satellite signals get blocked by the obstacle? Try moving back and forth to various obstacles. Can you predict the blockage now? Why or why not?

_____.
5. Use a compass to determine the direction of one side of the field. Write the direction from the compass here: _____.
6. Using the GPS receiver, walk along the edge of the field. Record the direction from the GPS receiver here: _____.

7. How well do the GPS receiver and the compass match? Which is more accurate?

8. Check your speed on the compass page. How fast are you moving when you *walk* at a normal pace? _____ How fast are you moving when you *run* along the edge of the field? _____. What happens to the compass page if you stop over and over or walk slowly? Why do you think it happens?

9. Track the time of how long it takes you to walk the length of the field or room that you are in, then calculate your speed by using the following formula:

$$\text{Speed} = \text{Distance} / \text{Time}$$

What is your speed? How does it compare to what the GPS calculated?

(Note: 1 foot/sec. = 0.3 m/s = 0.68 mph = 1.1 kph)

10. Mark a location (waypoint) in the GPS receiver. Label this waypoint with the first three letters of your name. Walk across the field and label another waypoint with the first three letters of your last name.

11. Use the GOTO function to tell you how to get from waypoint 1 to waypoint 2. Are the directions good? Why or why not? _____

12. Stand in one spot with your receiver. Mark your location, in the SAME spot, on your receiver every three minutes. Does the waypoint change at all? Why? _____
