

Water Clarity (Calm, Deep Water) Field Worksheet



Name: _____

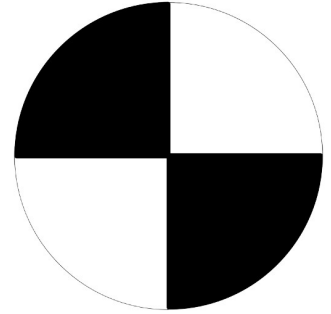
Class: _____

Date: _____

1. Constructing your Secchi Disk:

The Secchi disk is a common instrument for measuring water clarity. Follow the instructions below to create yours!

- Divide your disk into quadrants by drawing two diameter lines through the center that intersect each other at 90 degree angles
- Paint one set of opposite quadrants black, and the other white, as seen right →
- Attach the screw-eyes to the center of the disk, one on the top and the other on the bottom. Tighten them as much as possible with your fingers so they are secure.
- Tie your long rope securely to the top screw-eye. Use a marker to mark every 10 cm along the rope, starting at the disk. Make the marks bolder for every 50cm and 1m mark. This will make measuring easier later.
- Tie your weight (this may be a metal pipe, or a bag of rocks) securely to the bottom screw-eye.



Your Secchi disk is now ready to go! Time to head over to the research site!

2. Site Name: _____ Site Location: _____

Site Notes: _____

3. Place the tip of the thermometer into the water. Wait two minutes, then record the result on the table provided.

4. Position yourself above the site you wish to test. If this involves wading out into the water, wait a few minutes after arriving to allow for particles to settle.

5. Place the disk on the surface of the water. If you can reach the surface of the water, this will serve as your starting point. If you cannot reach the surface of the water (if, perhaps, you are on a dock or boat), mark a "reference point" on the line with a clothespin. A reference point may be where the line reaches the edge of the dock, a person's hip, etc.

6. Slowly lower the disk in 10 cm increments. When you can no longer see the disk, move it slowly up and down to find the exact point that it disappears. When you find that depth, mark the line with a clothespin. If you used a reference point, make sure to place the clothespin at that height. If you didn't use a reference point, place the clothespin on the line at the surface of the water.

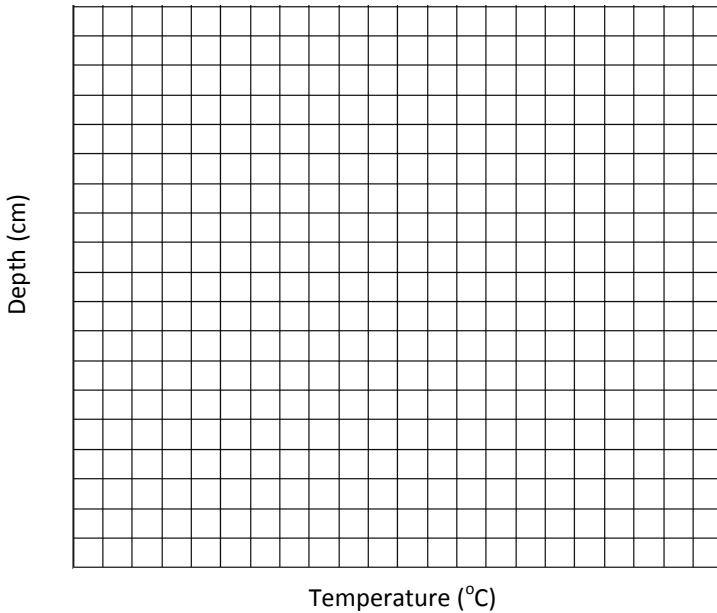
7. Pull the disk back out of the water, and measure the distance between the two points. Record the value on the table provided on the last page.

8. Repeat the experiment two more times, with different people serving as observers. Record each on the table, and calculate the average for the day.

9. Repeat the process once a month for at least six months.

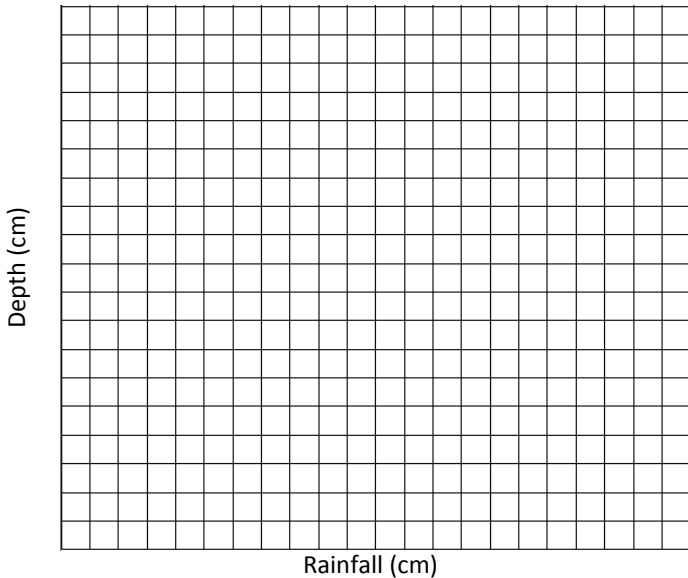
1. Did water clarity vary with temperature? On the graph provided, plot water temperature on the x-axis and average measured depth for each sampling occasion on the y-axis. Do you notice any trends? Speculate on hypotheses that could explain your data.

Title: _____



2. Did rainfall affect the clarity of the water? Do some research to determine the total rainfall in the month prior to your samples. Plot the result on the graph below. Do you notice any trends?

Title: _____



3. What other factors could contribute to the clarity or cloudiness of water? Do some research and answer below.

Name: _____

Site: _____ Location: _____ Date: _____

Date	Water Temp	Depth 1 (cm)	Depth 2 (cm)	Depth 3 (cm)	Average Depth	Rainfall	Notes