



2024 IESO Fieldwork Exercise

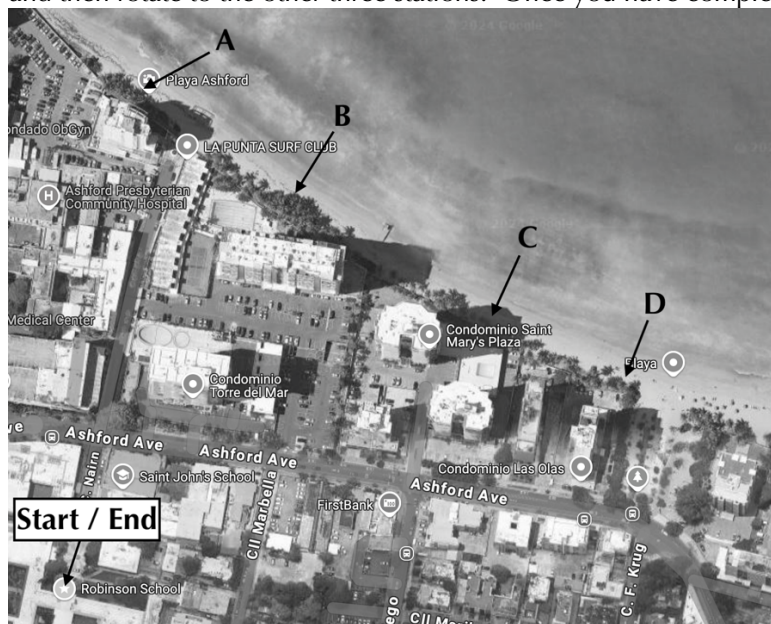
Name _____

Division _____

ID Number _____

General instructions – Follow the directions for each station and write your answers in the spaces provided. You will turn in this packet before you return to the school, but you will receive your packet back before you complete the written portion of the Fieldwork Exercise this afternoon. **ALL parts of this packet will be graded!** Most groups will NOT go to the stations in order, so make sure you turn to the appropriate page for each station. **Stay near your group at all times, and DO NOT go into the water!** You will need to approach the water to take some measurements and collect samples, but you should not go into the water for any reason. This is a public beach, so **be aware of other people at all times.** Do not pick up items from the beach and be careful where you step – there are sometimes sharp objects like glass or shells that may cut you if you step on them. At the end of your time at each station, report to your group leader to check in and for instructions on your next task.

Fieldwork map – Below is a map of the beach area where the Fieldwork Exercise will take place with approximate locations for each of the four stations. All groups will start at the Robinson School and walk to an area of the beach to begin their first station and then rotate to the other three stations. Once you have completed your tasks, you will return to the school with your group.



While you are walking on the beach, especially between stations B and D, take note of how humans are using this beach. What activities are people doing? Are they using the water? What are humans leaving behind on the beach? Look around you as you walk, including on the ground, and take notes in the area below on what you observe. [20 points]

Station A [20 points]

For this station you will work in groups of three to take a measurement of the slope of the beach at three different points. When you arrive, find the people in your group with the same number on the back of their clipboard. Work with them to complete the following tasks. If you have just come from Station B you will continue with your same group. You will be sharing this station with other students to take turns!

1. Make a clinometer – Take a protractor, piece of string, straw, and binder clip. Tie the string to the hole in the protractor. Tie the other end to the binder clip. Tape the straw to the straight side of the protractor. Bring your clinometer to the first yardstick at the top of the beach.
2. Follow the instructions you were given to take measurements with your clinometer. Take measurements of the angle of the beach at ALL THREE sets of yardsticks and record them below. **Share the results with your group members!**
3. When you have taken your measurements, go back to the table and disassemble your clinometer. Give the parts back to the staff and go back to your group leader.

Yardstick 1 angle _____ **Yardstick 2 angle** _____ **Yardstick 3 angle** _____

Station B [20 points]

For this station you will work in groups of three to take a measurement of the width of the beach at three different points. When you arrive, find the people in your group with the same number on the back of their clipboard. Work with them to complete the following tasks. If you have just come from Station A you will continue in the same group. You will be sharing this station with other students so take turns!

1. Use the provided tape measures to measure the distance between each pair of yardsticks in meters and centimeters. One group member should hold the tape measure at the top yardstick, one should take the end of the tape to the bottom yardstick, and one should record the results. **Share the results with your group members!**
2. While other groups are taking measurements, observe the wave action on this section of the beach and record your observations below. Are the waves larger than in other areas? More or less frequent? Take note of anything you think might be important.

Wave action observations

Yardstick 1 distance _____ **Yardstick 2 distance** _____ **Yardstick 3 distance** _____

Station C [20 points]

For this station you will be collecting water samples and performing water quality tests on your samples using test strips. You will work individually at this station.

1. Take a sample tube from the box. Go down to the water and fill your tube – try not to get sand in it if possible. **Be very careful near the water and DO NOT GO IN!**
2. Take ONE test strip from the container. Hold it by the plastic part at the top and dip it into the water for 2 seconds. Take it out and wait for 1 minute before you read the results. Part of your strip will not fit into the sample tube which is fine.
3. Compare your test strip to the color chart on the table and record the readings below. Record **ONLY** the readings requested below. Take your time and be as accurate as possible!

pH _____ Total Alkalinity _____ Zinc _____ Free Chlorine _____ Iron _____
Copper _____ Lead _____ Mercury _____ Nitrate _____ Nitrite _____

Station D [20 points]

For this station you will be spending time looking at birds and bird activity near your station. There will be bird guides available at the station to help you identify species, and there will be some binoculars available to share. Ask your proctor if you need help or have any questions. You will work individually at this station.

1. Spend your allotted time trying to identify as many bird species as you can in this area of the beach. Record any bird species you see in the space below. You may not use all of the blanks.
2. While you are looking for birds, make observations about the behavior of the birds you see. Record your observations in the space provided.

Bird species	Bird behavior observations
1. _____	
2. _____	
3. _____	
4. _____	
5. _____	
6. _____	
7. _____	
8. _____	
9. _____	
10. _____	
11. _____	
12. _____	