

OCEAN INSTITUTE FLOATING LAB BOAT TRIP (SUBTIDAL/PELAGIC COMMUNITY) REPORT (60 POINTS)

I. Title Page

- A. Title
- B. Name, date, and location of field trip

II. Introduction - See your lecture textbook (Ch. 10: Major Marine Lifestyles & Environments, Ch.13, & Ch. 15) for information on the following:.

- A. Discuss the following using complete sentences in paragraph format:
 1. Define what the subtidal zone, pelagic zone (realm), and epipelagic zone are (3 points) (Ch. 13 & 15)
 2. Define what plankton, nekton, and benthic organisms are (3 points) (Ch. 10)
 3. State the type of substrate (soft or hard) that dominates the world's continental shelves and the type of organisms (epifauna or infauna) that dominate this area (2 points) (Ch. 13)

III. Projects

A. Marine Mammal Identification

1. Photo of a pinniped and a cetacean (if seen) or other pelagic animal seen on the mammal hunt (2 points)
2. For each photo label the following (7 points)
 - a. Class, Order, and common name
 - b. Feeding strategy and general diet
 - c. Two adaptations that enable this mammal to successfully inhabit the marine environment

B. Benthic (Bottom) Fish Identification

1. Labeled photo of otter trawl net with description of how the net works and what the net is used for (1 point)
2. Photos of two fish (2 points)
 - a. For each photo label the following (4 points)
 - 1) Phylum, Class, and common name
 - 2) Key characteristics that would help someone identify the fish

C. Plankton Identification

1. Labeled photo of a plankton net with a description of how it is used to sample plankton (1 point)
2. Labeled photo of plankton on monitor (1 point)
3. Results of plankton sampling (4 points)
 - a. Most abundant type of plankton in sample (zooplankton or phytoplankton?)
 - b. Most abundant type of phytoplankton in sample (diatoms or dinoflagellates?)
 - c. Most abundant type of zooplankton in sample
 - d. Possible reasons for the results that we found

D. Invertebrate Identification

1. Photos of two invertebrates (2 points)
 - a. For each photo label the following (5 points)
 - 1) Phylum, Subphylum or Class, and common name
 - 2) Feeding strategy and general diet

E. Water Clarity and Color Analysis

1. Labeled photo of secchi disk with explanation of how it is used (1 point)
2. Labeled photo of forel-ule scale with explanation of how it is used (1 point)
3. Results (3 points)
 - a. Water clarity in meters
 - b. The forel-ule scale value and water color
 - c. Factors that affect water clarity and water color

F. Bird Identification

1. Photos of two different species of birds (2 points)
 - a. For each photo label the following (6 points)
 - 1) Phylum, Class, and common name
 - 2) Feeding strategy and general diet
 - 3) Key characteristics that would help one identify the bird

III. Completed Floating Laboratory Worksheet - 10 points

FIELD TRIP INFORMATION

The address of Ocean Institute:
24200 Dana Point Harbor Drive
Dana Point, CA 92629
(949) 496-2274

STUDENT SAFETY RULES

The Advanced Floating Laboratory takes place on the *R/V Sea Explorer*. When you arrive at the Ocean Institute, you will be met by an Ocean Institute Floating Laboratory Specialist who will review the following safety rules with you.

- Walk at all times while onboard the *R/V Sea Explorer*—running and horseplay are not permitted
- Keep both feet on the deck at all times, and remember to stay off the rails
- Keep off the upper deck and access ladder unless permitted by Ocean Institute instructors
- Keep hands off the equipment until instructed to do otherwise

STUDENT CLOTHING AND SUPPLY LIST

For safety reasons, students participating in the Advanced Programs need to have and/or wear the following clothing.

- Jacket
- Rubber-soled, closed-toe shoes
- Hat
- Sunscreen

Optional Items:

- Seasickness medication

AVOIDING SEASICKNESS

There are several things that you can do to avoid seasickness during your cruise:

- Eat a good breakfast or lunch before the cruise—make sure that you avoid sweets and greasy foods! Keep yourself well hydrated before and during the cruise. Bring healthy snack foods, like crackers, fruits, etc. with you on the boat and snack while on the boat. An empty stomach may actually make your queasiness worse.
- Take anti-motion medication at least one hour before boarding the vessel.