

name \_\_\_\_\_

## Monterey Bay Aquarium Field Trip

This is a fun, exciting, and educational trip to the Aquarium. You must answer all questions in the lab handout. You may not find all the other questions in the order I have written them—use your curiosity and explore! However, because of the closures for renovations, I suggest you look at the cannery exhibit first, then the Kelp Forest and the upstairs part of that exhibit, and then go to the Outer Bay wing.

In particular, I want you to look at each of the habitats and think about the substrate (what is on the bottom of the ocean there—if the bottom is important), depth, primary producers, and basic food chain. I want you to examine the defense strategies (camouflage to look like something, teeth, swimming speed, body shape and size, coloring, etc.) used by the animals in each of the habitats and compare them between habitats. This is more interesting when the other exhibits are open, but it is still fun to think about between the kelp forest, outer bay, jellies, and sharks.

Feel free to work together, discuss your answers and observations, and ask questions of me or any Aquarium volunteers. HAVE FUN!

### **Be sure you see all of these exhibits and habitats:**

**Cannery exhibit**

**Kelp Forest**

**Outer Bay—**

**Schooling fish**

**Pelagic fish tank**

**Jellies and plankton**

**Sharks: Myths and Mysteries**

Other things to see, if you have time (schedule may change, so check at the desk):

Penguin feeding 10:30 and 3:00

Otter feeding/show 10:30, 1:30, 3:30

Kelp feeding show 11:30 and 4:00

Movie on sharks (auditorium) 12, 12:30, 2, 2:30, 4

Movie on the white shark project (auditorium) 11:30, 1:30, 3:30

Mysteries of the deep (auditorium, live link with MBARI) 11:00, 1:00, 3:00

## **Cannery exhibit**

1. Why is there an exhibit about canneries in the Monterey Bay Aquarium? In other words—why is this relevant to the aquarium and to Monterey?
2. What types (more than one!) of fish were canned here? Which was the most important to the canneries?
3. When did the canneries open here?
4. Why are there no more canneries in Monterey?

## **Kelp Forest and Associated Monterey Bay Habitats**

NOTE: BE SURE YOU SEE THE 2<sup>ND</sup> FLOOR OF THIS EXHIBIT TOO!

5. Describe the following about this habitat:
  - Substrate—
  - Depth—
  - Primary producers—
  - Basic food chain (BE SPECIFIC and give names of organisms, not just “fish”)—
6. What makes this habitat different than the others? In other words, what is unique about it?
7. The water in the kelp tank is constantly moving. Why is moving water so important for the health of the kelp?

8. Kelp has holdfasts—it is part of what makes it different from other types of algae. What is a holdfast and why is it important? (Note: be sure to go upstairs for this one!)
9. What does kelp feel like? (Note: be sure to go upstairs for this one!)
10. The animals in this habitat use a specific defense mechanism to protect themselves from predators. What is it?

### **Jellies**

11. Please draw a jelly fish and label its anatomy. Be sure to include: tentacles, mouth, stomach/gut, and sex organs

### **Outer Bay**

12. Describe the following about this habitat:

Substrate: NONE (this is the water column, the bottom doesn't matter)

Depth—

Primary producers—

Basic food chain (BE SPECIFIC and give names of organisms, not just “fish;” be sure to look in “Exploring the Outer Bay” for this one)—

13. What makes this habitat different than the others? In other words, what is unique about it?

**Label each of the following organisms as holoplankton (H), meroplankton (M), or nekton (N).**

14. Tuna

18. Zoea (crab larvae)

15. Diatom

19. Copepod

16. Anchovy larvae

20. Sea turtles

17. Jellyfish

21. Hammerhead shark

22. Name a few of the schooling fish. Why do fish swim in schools?

23. What is different about the animals in the pelagic tank compared to all the other animals you have seen here? What do they use as defense?

24. Tuna are really fast, long distance swimmers. What adaptations do they have to let them swim so fast?

### **Sharks: Myths and Mysteries**

This exhibit really shows the stories about sharks from different cultures around the world. Enjoy the movies, the artwork, and of course the animals!

25. Please describe two stories of sharks in different cultures.

26. Touch a couple of the animals in the touch tank here. What did you touch? What does it feel like?

27. Is there anything about this exhibit that surprised you? Tell me something interesting from this exhibit that you didn't know before you came today. Make this something totally unique—don't share this answer with your classmates.