

Name: _____

Aquarium of the Pacific Field Trip (50 pts)

Guidelines for the Trip:

1. Please bring \$8.50 cash for admission to the aquarium.
2. Parking in the aquarium parking structure costs \$8.
3. Pick up a visitor's guide and the handout listing the exhibit show times. Your visitor's guide contains pictures and names of animals that you will be seeing. Use this information to assist you with this handout. View at least one of the exhibit shows and complete assignment below.
4. Use your class notes and information presented by the aquarium to answer these questions. (You'll notice that much of this information you've already learned from class.)
5. The aquarium closes at 6 pm so use your time wisely to **complete all questions for up to 5 points extra credit**. Turn assignment in at the beginning of the next class meeting.

Exhibit Show (Use handout in Visitor's Guide to determine show times) (5 pts):

1. What was the name of the presentation that you attended?

2. Give a brief summary of what the presentation was about.

3. State **two** facts that you learned in this presentation that you thought were the most interesting.

Southern California/Baja Gallery (1st Floor)

California's State Marine Fish (1 pt)

Name this bright orange fish that you see in this gallery.



The Amber Kelp Forest (4 pts):

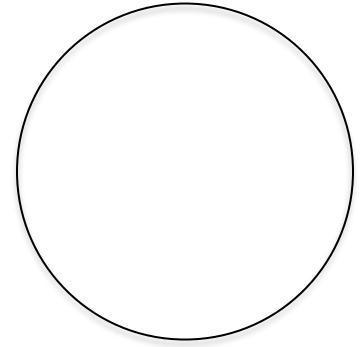
1. What phylum does giant kelp belong to? (Find in your class notes.)
2. What is the compound found in kelp that is processed and used in many foods and medicines? (Find in your class notes.)
3. Name an organism that you observed in these tanks living in the following levels of the kelp forest. Use fish I.D. guide in the visitors guide to assist you with fish names:
 - a) Top of kelp (canopy):
 - b) Middle of kelp:
 - c) Bottom of kelp:

Abalone (1 pt)

1. State the phylum and class that this animal belongs to (class notes) and state why it has been drastically decreasing.

Outside Exhibits: Pathways to the Pacific (to the left, behind the shark exhibit) (4 pts)

1. What is a watershed?
2. What has transformed the San Pedro Water Shed?
3. Create a pie chart showing how much different users consume (Ag., Government & Schools, Commercial & Industrial, Residential)
4. List two ways you can conserve water at home.
5. What are some of the consequences of declining water?
 - a. What are some solutions? (list at least two)



Outside Exhibits: Sharks (4 pts)

1. Touch a shark in one of the touch tanks. How does the skin feel? What kind of scales are found in most cartilaginous fish including sharks?
2. How can you tell a male from a female shark?
3. What are three senses found in sharks?
4. What is shark fining?
5. Name three types of sharks that you observed in the tanks.

Outside Exhibits: Seals and Sea Lions (4 pts)

Observe the seals and sea lions and describe how they differ in the presence or movement of the characteristics listed in the table below

Characteristic	Seals	Sea Lions
Front flippers		
Rear flippers		
Neck		
Ears		

Outside Exhibits: Magellanic Penguins (4 pts)

1. Watch the penguins swim. What body parts do they use to move through the water?
2. Draw a sketch of the face of a Magellanic penguin. Indicate which parts of the face are white, black, and pink on your drawing.
3. What percentage of all penguin species are either vulnerable to or threatened with extinction?
4. Why is overfishing a threat to penguins?
5. List at least 5 predators of penguin eggs.
6. What type of pollution are penguins especially vulnerable to?

Moving Inside from the Skate and Ray Exhibit (Upstairs) (2 pts)

1. Garden eels are in an exhibit just inside the doorway. How can you tell that the garden eels are plankton feeders? (Look at the behavior and the anatomy of these animals to answer this question.)
2. To the left of the garden eels is information on the Vaquita. What is the Vaquita and why are Vaquitas threatened with extinction?

Northern Pacific Gallery (6 pts)

1. Describe the shape of a Common Murre's egg and explain how this shape ensures the egg's safety.
2. How are puffins adapted to their environment? (Watch them swim and look at their anatomy to answer this).
3. What hemisphere are puffins found in?
4. List the common names and phyla of two invertebrates that you observed in this gallery.
5. What phylum do sea jellies belong to?
6. Observe a swimming jellyfish and describe how it swims (What structure do they use to swim?)
7. What phylum do comb jellies belong to?
8. Observe a swimming comb jelly and describe how it swims (What structure do they use to swim?)

Coastal Corner (2 pts)

Observe and touch the organisms in this touch tank. State the common name and phylum of two organisms in this tank. Describe one adaptation that allows the organism to live in the intertidal.

Common Name	Phylum	Adaptation

Sea Otters: Watch the sea otters swim and play in the tank. Note that they spend a great deal of time grooming their fur. (2 pts)

1. How much do sea otters typically eat and what food items do they eat? (*Sea Otter Challenge* and *What's for Dinner* display info)

2. Why are predators such as sea otters important to coastal environments? (*Sea Otter Challenge* and *Keystone Species* display info)

Tropical Pacific Gallery - Coral Reefs (2 pts)

1. Look at a living coral polyp. What are the tiny photosynthetic organisms that live in coral polyps?

2. Why are coral reefs declining?

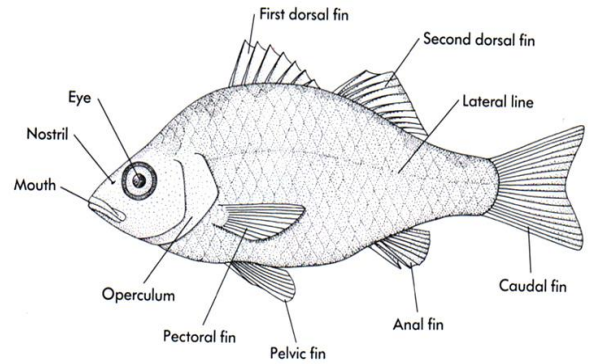
3. What is coral bleaching?

Tropical Pacific Gallery - Sex Change Exhibit (1 pt)

What is the common name of a fish that goes through a sex change?

Tropical Pacific Gallery (4 pts)

1. Fish Locomotion
 - a. Observe **TWO** different fish species living in this gallery and complete the following:
 - b. In the table on the next page, state the name of each fish. **(Use fish I.D. guide in the visitors guide to assist you with fish names)**
 - c. State what fins it is mainly using in order to swim or move around with (use the diagram to the right determine the names of the fins)
 - d. Describe its habitat (ex. pelagic (above sea floor), benthic (on sea floor), within reef, etc.). **In order to determine habitat, observe where the fish spends most of its time within the tank.**
 - e. Draw the fish that you observed.



Name of fish #1:	Name of fish #2:
Fins used	Fins used
Habitat	Habitat
Drawing	Drawing

Tropical Pacific Gallery - El Nino (2 pts)

1. What does El Nino mean?

2. What happens during an El Nino?

3. How often do El Nino's occur?

Go to the ground floor and find the wall where there is information on the blue whale (2 pts)

1. How long is the blue whale? _____
2. How much milk can a newborn blue whale drink in a day? _____
3. How many pounds can a blue whale gain when nursing? _____
4. How many gallons of water can enter a blue whale's mouth in one gulp? _____

Vanishing Animals: Loss of Biodiversity (5 pts)

1. Which animals on the "10 animals at risk of extinction" and "10 animals in North America at risk of extinction" are marine animals/plants?
2. Why are animals disappearing?
3. Vanishing Everglades- What was the consequence of the ecological extinction of the Everglade Alligator?
4. Endangered Species- Coral reefs cover only ____% of earth's surface but provide homes for about ____% of species.
 - a. Which fish help graze algae from coral surfaces to reduce competition for sunlight and space?
 - b. What is responsible for the decline of coral reefs?
5. Vanishing Atlantic Cod: Atlantic cod keep ice crystals from forming in their blood by producing a protein called _____.
 - a. What led to their commercial extinction?
6. What is "sustainable agriculture"?
7. Watch the video that's showing. Change is normal when it comes to evolution. However, the rate of extinction today is higher than ever before. What is contributing to this?