

## **A Journey along the California Current:** **Middle School Self-Guided**

### **Tank #1 in Galleria:**

What animals are found in tank #1?

What habitat are these animals best adapted to?

List the adaptations they have to this habitat:

What are the benefits of swimming in a school?

Look at the sign “Your Journey through the Aquarium.” List the four regions featured in the Hall of Fishes:

- 1.
- 2.
- 3.
- 4.

For each of these regions, you will be recording your observations in the OBSERVATIONS section.

Before you begin:

What is the single most important influence on the distribution, diversity and abundance of marine organisms?

What other physical factors can also have an influence?

What is the name of the current that has a large effect on the waters off the California coastline?

## Region 1. Northwest Coast (Tanks 1-7):

Draw/ describe upwelling. What does it do to the abundance of marine plants and animals along our coast?

What are two characteristics of marine life in the Pacific Northwest?

Define productivity?

What temperature waters support high productivity?

What is the range of the Giant Pacific Octopus? (Use the digital display for information)

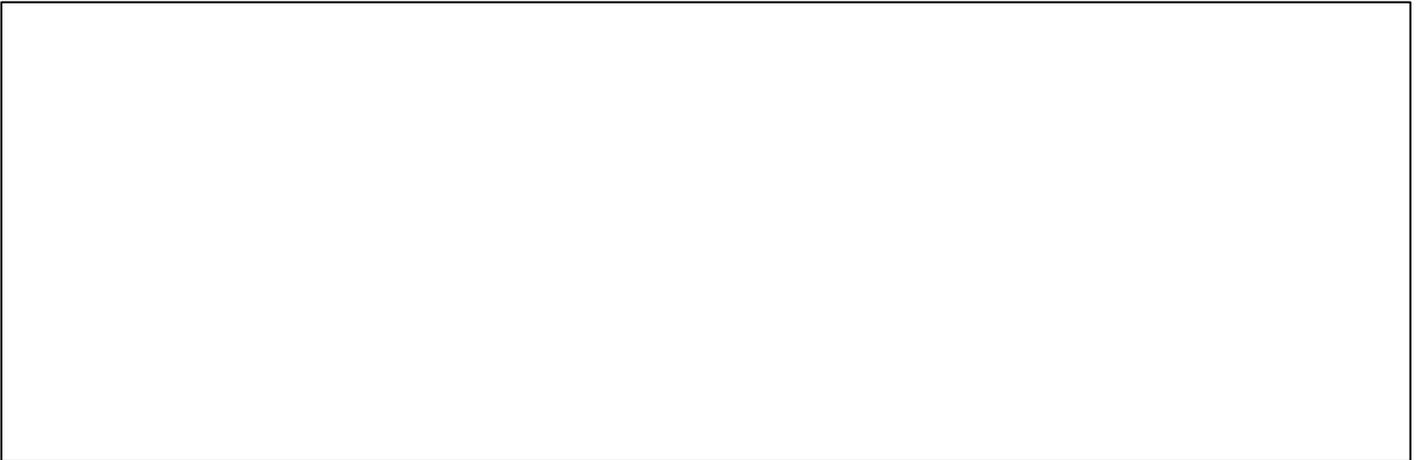
## OBSERVATIONS

How does the California Current affect this region?

List the types of habitats you observe in this region:

What adaptations do the animals have to these habitats?

Please label and draw 2 animals commonly found in this region:



## REGION 2. SOUTHERN CALIFORNIA (Tanks 8-19):

What is one adaptation of the stingray/ flatfish? What is the reason for this adaptation? (tank 10)

How do the Seahorse and Pipefish differ?(tank 11)

What are some ways that jellies have adapted to life in the open ocean? (tank 8)

How does the moon jelly swim? What are some potential disadvantages to this?

What are the reasons for State Marine Reserves? (tank 15)

The Garibaldi is the state marine fish of CA. What color will an adult become? What does this coloration usually mean? (tank 15)

List 2 animals in each section of the kelp forest: (tank 19)



Canopy:

\_\_\_\_\_

\_\_\_\_\_

Holdfast:

\_\_\_\_\_

Why are kelp forests important? (tank 19)

What does giant kelp need to survive? (tank 19)

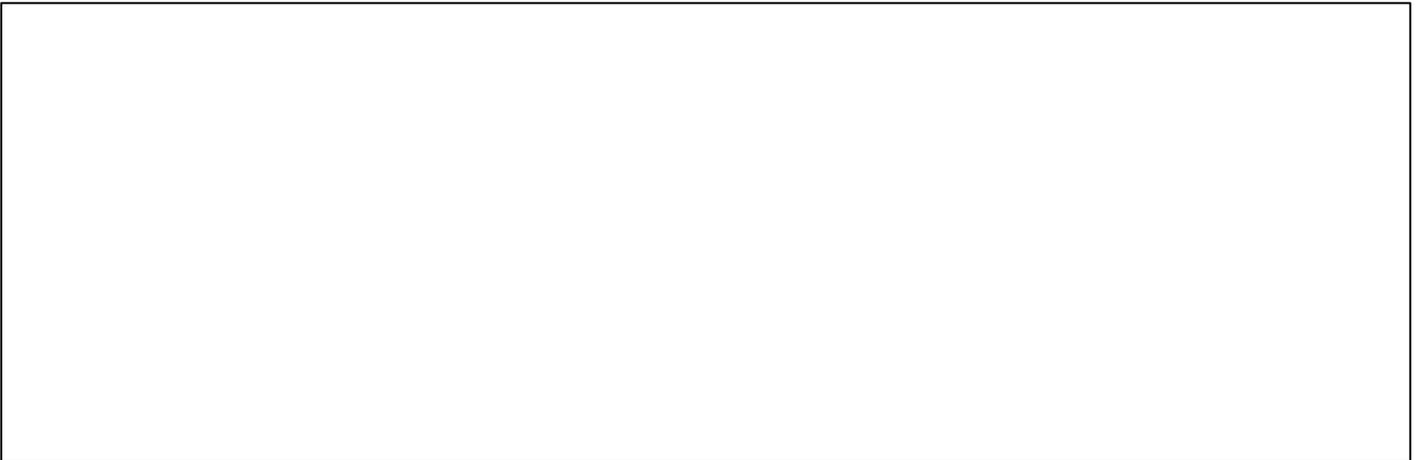
## OBSERVATIONS

What happens to the California Current in this region? Why?

List the types of habitats you observe in this region:

What adaptations do the animals have to these habitats?

Please label and draw 2 animals commonly found in this region:



## REGION 3. MEXICO (Tanks 20-22):

Temperatures are generally \_\_\_\_\_ in the Southern California bight, \_\_\_\_\_ in the zone of strong upwelling and \_\_\_\_\_ again along the central west coast of Baja.

### OBSERVATIONS

What happens to the California Current in this region?

List the types of habitats you observe in this region:

What adaptations do the animals have to these habitats?

Please label and draw 2 animals commonly found in this region:



What is the base of most ocean food chains? What does this word mean and how would the currents in the ocean affect them?

## REGION 4. TROPICAL SEAS (Tanks 23-32):

Describe how the fish in tank 22 interact with one another:

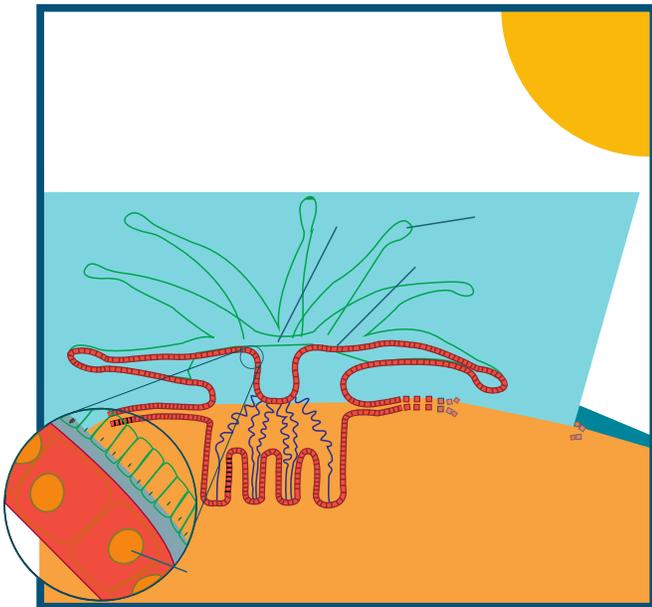
How does the shape of the Jewel Moray's body help it live in the rocky reef? (tank 24)

Compare the biodiversity (number of different kinds of organisms) and biomass (total number of organisms) of tank 25 and 26. Why do you think there is a difference?

Why is coral important?

What are threats and possible solutions to the conservation of coral?

Diagram of Coral:



Label the following:

Zooxanthelle  
Tentacles  
Mouth  
Epidermis  
Polyps  
Skeleton

How are corals adapted to the tropical environment?

Describe zooxanthelle. What happens to zooxanthelle when coral bleaching occurs?

What is the term for different species benefiting from living together? Describe the relationship between the anemone and anemone fish: (tank 29)

Both the stonefish and lionfish in tank 33 have venomous spines. What is the benefit of a fish being venomous? What do you think people taking care of these animals (aquarists) need to consider before feeding and cleaning the tank?

## OBSERVATIONS

Are the tropical seas affected by the California Current? How does this affect the habitats you observe?

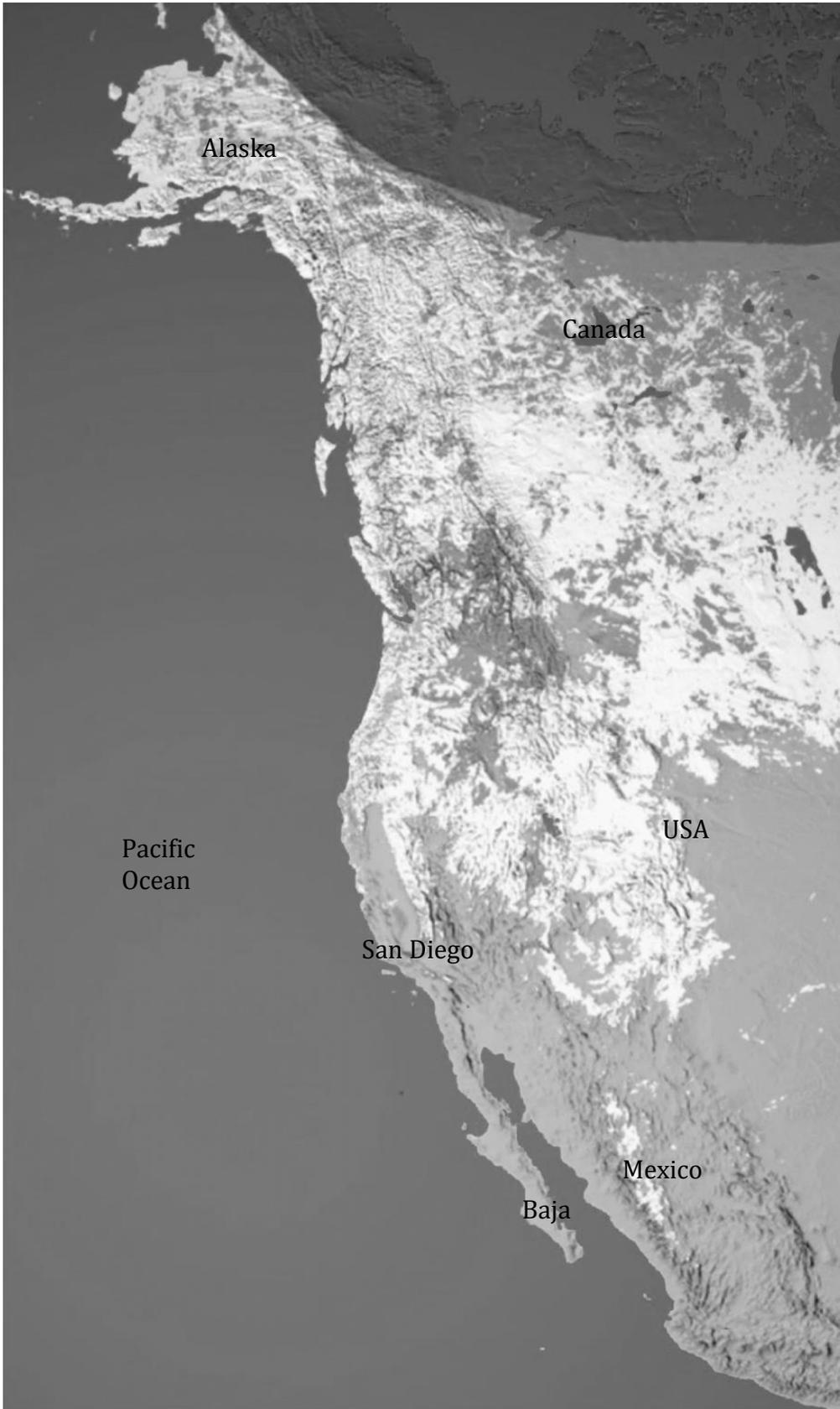
List the types of habitats you observe in this region:

What adaptations do the animals have to these habitats?

Please label and draw 2 animals commonly found in this region:



Please draw arrows to show all of the currents from the 3 regions on this map



For more information about the exciting research currently conducted in the California Current Ecosystem, please visit the CCE-LTER site:  
<http://cce.lternet.edu/>