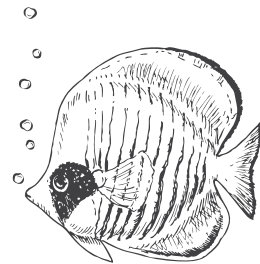


# TEACHER GUIDE: GRADES 3-5



## THANK YOU FOR CHOOSING BIRCH AQUARIUM FOR YOUR FIELD TRIP!

We hope these resources will help you and your students make the most of your time at the aquarium. Each activity sheet aligns with a different exhibit in the aquarium, and all the answers can be found within that exhibit. You can find the answer key and more exhibit information below.

### TIPS & TRICKS

- Print these activity sheets for your students before you arrive. They are not available for printing or pick up at the aquarium.
- Bring your own clipboards and writing instruments for each student. Exhibit windows cannot be used as writing surfaces.
- Give a copy of this guide to each chaperone so that they can best support their group of students.

There is no activity sheet for Tide Pool Plaza, as your students can touch local animals here! Be sure to put away all materials that could fall into the open water. Follow directions of aquarium staff and volunteers at all times.

### QUESTIONS YOU CAN ASK YOUR STUDENTS:

- Have you ever seen this animal before?
- What body parts help it survive in our local environment?
- What do you think the animal will feel like?  
What does it actually feel like?

### HAVE YOU BEEN ON YOUR FREE PRE-VISIT YET?

Teachers receive a **FREE** pre-visit prior to your program to help you in the planning process.

Call (858) 534-7336 to make a reservation in advance.



UC San Diego  
SCRIPPS INSTITUTION OF OCEANOGRAPHY



# EXHIBIT INFORMATION

## SHELIA MARIE DAVIS GALLERIA

- Don't forget to look up when you walk through the aquarium doors!
- Check out life size models of local shark species.

## HALL OF FISHES: PACIFIC NORTHWEST & CALIFORNIA COAST

- The Hall of Fishes exhibit follows the California Current down the West Coast. Ask students what similarities and differences they notice between the animals as they work their way down the coast.

## KELP FOREST

- Our Kelp Forest Exhibit holds 70,000 gallons of water! Fresh seawater for our exhibits is pumped up the hill from La Jolla Shores thanks to equipment on Scripps Pier.

## HALL OF FISHES: MEXICO & TROPICAL REEFS

- The Hall of Fishes exhibit continues into Mexico and the Tropical Seas.
- See if your students can spot Nemo and Dory!

## HEALTHY VS. BLEACHED REEF

- Coral reefs are home to more species than any other ocean ecosystem. Warming waters caused by climate change cause the algae that live within coral tissues to leave, resulting in coral bleaching. This impacts all the species that depend on the coral as their habitat or food source. Scripps scientists are always researching new ways to reduce the impact of climate change on our planet.

## EXPEDITION AT SEA: R/V SALLY RIDE

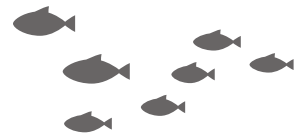
- Visit the interactive displays to see what the inside and outside of a research vessel really look like and hear from scientists and crew members!

## SHARK SHORES

- Sharks and rays are both cartilaginous fishes.
- This means their skeletons are made of cartilage as opposed to bone.

## BEYSTER FAMILY LITTLE BLUE PENGUINS

- Little Blue Penguins are native to Southern Australia, New Zealand, and Tasmania.
- Their climate is actually very similar to our own here in San Diego!
- There is always an education naturalist in the Research Station who can answer any questions you or your students have.





# ANSWER KEY

## HALL OF FISHES: PACIFIC NORTHWEST & CALIFORNIA COAST

The most important thing that determines where marine organisms live is water TEMPERATURE.

## KELP FOREST

The Giant Sea Bass lives in the canopy. Garibaldi, Sheephead, and Opaleye all swim through the understory. You can find Horn Sharks and Swell Sharks resting on the ocean floor.

## HALL OF FISHES: MEXICO & TROPICAL REEFS

ACTIVITY SHEET ANSWER: Fish have bright colors to blend in with the colorful coral reefs. Patterns, such as spots and stripes, confuse predators as to the fish's actual size and location. Many reef fish have a thin body shape to fit between tight spaces in corals, and large fins for turning.

## EXPEDITION AT SEA: R/V SALLY RIDE

### SPACE

Answer: North exhibit wall below Sally Ride photo.

### 238 FEET

Answer: North exhibit wall in Scripps ship descriptions

### R/V ROGER REVELLE

Answer: North exhibit wall in Scripps ships descriptions

### COLD WATER

Answer: East exhibit wall

### REMOTELY OPERATED VEHICLES

Answer: North exhibit wall in the Deep Discovery

## SHARK SHORES

Sharks: Gills, countershading, streamlined body, dorsal fin, mouth on underside of head, tail (caudal) fin Rays: gills, flat body, countershading, stinging barb, mouth on underside of head

## SEADRAGONS & SEAHORSES

Seahorses are fish! Though they may look quite unique, they do possess all the characteristics of a fish including fins, gills, a backbone, and a two-chambered heart. Some relatives of seahorses and seadragons are seamoths, cornetfishes, trumpetfishes, pipefishes, shrimpfishes, and snipefishes. Some of these relatives can also be found in the exhibit!

## BEYSTER FAMILY LITTLE BLUE PENGUINS

HELP THE STUDENTS STAY ON TIME DURING THEIR ETHOGRAM. AFTER THE ACTIVITY, they can go to the Research Station to find out the name of the penguin they observed!

