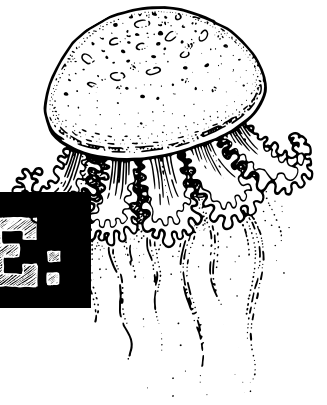


TEACHER GUIDE: GRADES K-2



Thank you for choosing Birch Aquarium at Scripps 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.

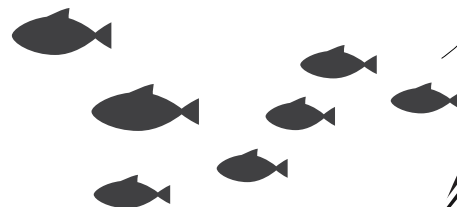
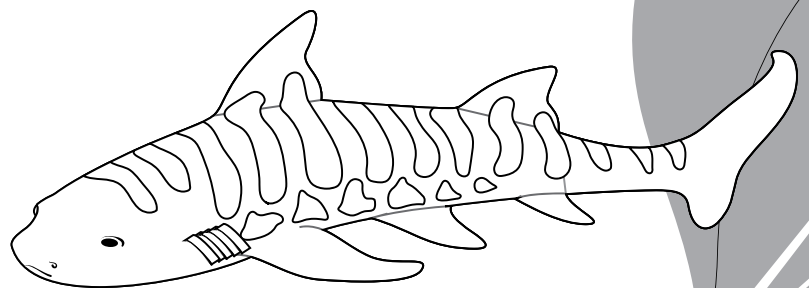
QUESTIONS YOU CAN ASK YOUR STUDENTS:

- 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.

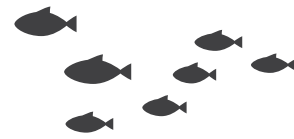
Call (858) 534-7336 to make a reservation in advance.



BIRCH
AQUARIUM

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

- 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.

ODDITIES: HIDDEN HEROES OF THE SCRIPPS COLLECTION

- All of these specimens come from the Scripps Institution of Oceanography collections. Their superpowers highlight adaptations that help them survive in a variety of environments!

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!

SHARK SHORES / SEADRAGONS & SEAHORSES

- Sharks and rays are both cartilaginous fishes. This means their skeletons are made of cartilage as opposed to bones.
- Seadragons and seahorses are bony fishes. All fishes have fins, gills, a backbone, and a two-chambered heart.
- Seahorses have prehensile tails, meaning they can grasp onto objects. Since they are not the best swimmers, this helps them stay in place.
- 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

- 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 may have.

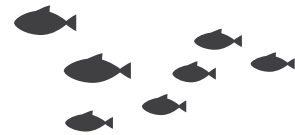
ANSWER KEY

ODDITIES: HIDDEN HEROES OF THE SCRIPPS COLLECTION

- Flying Fish: Found in the Speed and Strength section. Strong, wing-like fins propel them out of the water to escape predators.
- Slenderjaw Moray Eel: Found in the Jaws & Armor section. Moray eels have two sets of jaws to pull in their prey.
- Stonefish: Found in the Toxin & Venom section. They are masters of camouflage and the most venomous fish in the ocean! They have 13 venomous spines on their back.

SHARK SHORES / SEADRAGONS & SEAHORSES

- Shark fins help them swim through the water.
- Ray fins are flat and help them rest in the sand.
- Seahorse fins help them swim.
- Their tails wrap around coral and seaweed so they can rest.
- Seadragon fins help them blend in with seaweed.



BEYSTER FAMILY LITTLE BLUE PENGUINS

- There may be more than one body part the penguins use for their behavior.
- Encourage students to explain to you how they use that particular body part.
- After the activity, they can go to the Research Station to find out the name of the penguin they observed!

BIRCH
AQUARIUM

UC San Diego
SCRIPPS INSTITUTION OF OCEANOGRAPHY

