

Curriculum Guide Pre and Post Activities

THE FLORIDA
AQUARIUM 



Grades
6-8

Introduction

Welcome to the Florida Aquarium! This guide is designed to help you utilize your time efficiently and get the most out of your field trip experience. The following pages will provide you with suggestions for pre- and post-visit activities, in addition to things you can do while at The Florida Aquarium.

Use The Florida Aquarium to introduce students to “The Florida Water Story.” Trace a drop of rain beginning in the *Wetlands Gallery* as it travels from freshwater streams and rivers, to estuaries and beaches, and finally out to the coral reefs, and the open ocean. With The Florida Aquarium as your guide, explore these individual habitats and learn about the many different plants and animals that live there.

Aquarium Classes: Supplement your visit with one of our school programs!

- Balancing Act
- Inside Story: Behind the Scenes Tour
- Exploring the Bay boat tour
- Sleep with the Fishes sleepover

Traveling Programs: Bring The Florida Aquarium to you!

- Sharks!
- Wild Jobs: Working with Animals

Vocabulary to Consider

- **Adaptation** – Adjustment over time to environmental conditions.
- **Aquifer** – Underground rocks or soil that hold and release water.
- **Density** – How close water molecules are to each other.
- **Estuary** – a semi-enclosed body of water in which freshwater from rivers and streams mixes with saltwater from the ocean.
- **Food Web** – A way of describing the complex relationships between organisms and what they eat.
- **Invasive Species** – A non-native species, often with no natural predators, that disrupts the natural ecosystem, causing potentially significant ecological and economic impacts.
- **Plankton** – Organisms that are carried around by ocean currents, rather than swimming to determine their course; consists of phytoplankton (plant plankton) and zooplankton (animal plankton).

- **Photosynthesis** – The process by which plants use the sun’s energy to make their own food.
- **Salinity** – A measure of the amount of salt in the water.
- **Watershed** – A land area that contributes runoff, or surface water flow, to a water body. The water resources within a watershed are affected primarily by what happens on the land within the watershed.

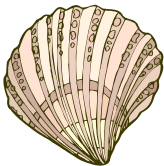
The key to getting the most out of your visit to The Florida Aquarium is to come prepared. By discussing relevant topics and incorporating fun and interesting activities into your classroom, students will better appreciate what they see at the Aquarium.

Pre-Visit Suggestions

- How can you conserve water? Discuss the concept of a watershed, and create your own. (1) Take a piece of paper, fold in half, and open (2) Crumple paper (3) Gently open paper (4) Using water based markers, mark high points with one color and low points with another color (mountain tops and valleys) (5) After all high and low points are marked, place in a aluminum tray and gently spray with water. The watershed is created when the colors run to the larger body of water (the first crease that was made in the paper when it was folded in half).
- Prepare to visit our estuary by visiting a virtual one at www.estuarylive.org.



- Have each student become an expert on a particular sea animal. Share some interesting facts on your animal with the class. See if you can find that animal while at the Aquarium.
- Divide the class into 3 groups: Wetlands, Bays and Beaches, Coral Reef. Have each group research their particular topic and come up with an activity that the class can do together to learn more about that particular habitat. This will allow students to become familiar with the plants and animals they will see while at the Aquarium.



- Help students to better understand the importance of classification. Give each student, or group of students, a variety of seashells. Using a taxonomic key, have students figure out the scientific names of the various shells.




- Compare and contrast freshwater and saltwater.
- Make a collage from magazine cut-outs that depict products, food, or industry that come from the ocean.



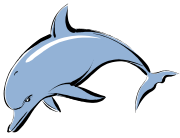
- Have each student develop a “ship’s log.” It can be a composition notebook, folder, sheets of paper stapled together and decorated, etc. and use it to record writings, research, and observations.

Now that students are familiar with the types of things they might see at The Florida Aquarium, it is time to get up close and personal. There are all sorts of programs to see and activities to do while on your field trip!

While You Are Here


- Participate in one of our school programs! Call (813) 273-4015 to pre-register.
 - Balancing Act
 - Exploring the Bay
 - The Inside Story (Behind the Scenes tour)
- Watch a reef fish for one minute. Have each student describe to their group what it looks like. What does it do? Where does it go? After everyone describes a fish, discuss how they are different from and similar to each other. Do all fishes act alike? Why or why not?
 - Attend the Coral Reef dive show at 11 am
- Look at the bills and feet of three different birds. Are they all the same? Find the bird that can wade to the deepest depth for its food. Find the one that sits by the top of the Wetlands Dome. Did you see any birds swimming? 
- Observe the gar, red drum, snook, and striped mullet in the *Wetlands Gallery*. Determine approximately how many of each fish can be found in the exhibit. Are they swimming in freshwater, saltwater or brackish water? Describe the mouth of each species. How does it feed?
- See an animal show on the *Wetlands Stage*. What adaptations do the animals have to help them live in their environment? Can you find other animals around the Aquarium with similar adaptations?
 - Attend Truth or Tails at 11:30am
- See a dive show. Learn about coral reefs and the fish that make the reef their home. Visit *Shark Bay* and listen as Aquarium divers talk about sharks and many of the misconceptions associated with them. Learn what you can do to help prevent shark attacks.
 - Attend the Shark Dive Show at 12pm



- Check out our newest exhibit, *Ocean Commotion*. Explore the wonders of the deep through touch on our large interactive ocean wall, and meet some of our newest inhabitants. Don't forget to vote for your favorite Ocean Commotion character as you leave! If you have a smart phone you can access our gallery podcasts within the exhibit at this link: <http://sealife.flaquarium.org/Zones/OC/index.aspx?AspxAutoDetectCookieSupport=1>
- The Florida Aquarium may not have dolphins at the facility, but you don't have to go far to see them in their natural habitat in Tampa Bay. Take a trip aboard The *Bay Spirit II*, our 72ft catamaran, and learn about Tampa Bay and its many inhabitants. Call (813) 273-4015 to pre-register. 
- Have you ever wondered what a sea star feels like? How about a sea anemone? You may see stingrays at the beach on a regular basis, but have you ever actually touched one? Take some time to visit the lobby touch pool and the *No Bone Zone*. Do the animals feel as you imagined them to? Is there any advantage to being slimy, bumpy, or sticky?
- Visit *Aquariumania* in the upper level of the *Wetlands Gallery*, for a bird's eye view of the gallery, then check out the tanks of the ornamental tropical fish and learn how scientists use aquaculture to breed specific traits in fish. Find a fish in the exhibit and learn about one of its unique traits.
- The Aquarium conducts different research projects that help conserve and restore vital resources. Have students check out the sea turtle display in the *Bays and Beaches Gallery* and the Coral Farm located just outside the door to *Aquariumania* on the second level of the *Wetlands Gallery*. What are the key goals for each project? How will this help conserve nature?

Now is your chance to build on the concepts discussed before your visit to The Florida Aquarium. Take this opportunity to further explore the many different plants, animals and habitats you discovered on your field trip.

Back in the Classroom

- You've had a chance to observe our sandy beach, but how much do you really know about the sand? Look closely at a bag of sand using a magnifier. List the colors you see, and draw a picture of some of the sand grains (draw them BIG). Gently rub a magnet on the outside of the bag of sand. Are any of the grains attracted to the magnet? If so, what color are the magnetic sand grains? Are all the grains the same size? Same color? What do you think your sand is made of? How did it get to the beach? Where do you think it was collected? 

- Many marine plants and animals have medical uses. Algae, horseshoe crabs, coral, and sharks are just a few of the subjects scientists are studying. What benefit may there be to studying these? Can you think of any other plants or animals that are important to the medical field?



- Divide the class into constituencies and have them debate a particular subject from their constituencies' point of view (whether they agree with it or not). For example, cite or make up an endangered species. Generations of native people have been hunting it for food, conservationists want to protect it, government wants to drill for oil in its habitat, etc. Use Manatees as an example: conservationists want to protect them, fishermen want to be able to fish in areas where they are found, boaters do not want restrictions placed on where they can boat, scientists want to be able to study them freely, etc.

- All of the coral you saw in the *Coral Reef Gallery* was actually man-made. Discuss why The Florida Aquarium does not use live coral in its' large exhibit. What makes coral so special and in need of protection?



- Now that you have seen our sharks up close, discuss why sharks need protection and how the students can help conserve them.



- Discuss careers in marine science. Have students investigate a famous oceanographer, diver, or scientist.