

# Visiting the Alabama Aquarium

For the Teacher - Grades 3-5

## Before Your Visit:

### 1. First-timers

Teachers may want to preview the Alabama Aquarium before bringing students. Contact our scheduling coordinator at (251) 861-2141 x7511 or [schoolvisit@disl.edu](mailto:schoolvisit@disl.edu) for more information or a free teacher's pass.

### 2. Student Activities:

- Discuss local plants and animals familiar to students.
- Discuss observation: shapes, colors, patterns, similarities, differences, etc. Practice describing plants and animals using observations.
- Discuss student interaction with the Mobile Delta, Mobile Bay, Dauphin Island, or Gulf of Mexico, e.g. vacation, fishing, eating seafood, etc.
- Make a class or individual list of questions they might find answered at the Alabama Aquarium.

### 3. Student Vocabulary: discuss the following terms.

invertebrate      vertebrate      food chain/food web      salinity      estuary

### 4. Handouts

Make copies of the attached activity for students to complete while visiting the Alabama Aquarium. Bring pencils and crayons (for rubbings).

## During Your Visit:

- Complete handout.

## After Your Visit:

- Have students make a list of the animals they saw. Then divide the class into several groups, and have each group classify the animals according to different criteria. One group can organize them as invertebrates/vertebrates; another could place them into correct habitats - delta, bay, gulf, or land; another could identify animals as predators/prey, or where they live in the water column - top, middle or bottom. They could also make a food chain/web from the list.
- Use the field trip as inspiration for a creative writing/drawing activity.
- Have each student research the animal he or she chose from the Invertebrate Trail and write a paragraph about it.

## Grades 3-5 AL Course of Study Science Objectives addressed at the Estuarium

### Grade

- 3
- 3.) Describe ways energy from the sun is used.  
Examples: plant growth, light, heat
- Identifying fossil fuels as a source of energy.
- 7.) Describe the life cycle of plants, including seed, seed germination, growth, and reproduction.
- Describing the role of plants in a food chain
  - Identifying plant and animal cells
  - Describing how plants occupy space and use light, nutrients, water, and air
  - Classifying plants according to their features  
Examples: evergreen or deciduous, flowering or non-flowering
  - Identifying helpful and harmful effects of plants  
Examples:
    - helpful - provide food, control erosion
    - harmful - cause allergic reactions, produce poisons
  - Identifying how bees pollinate flowers
  - Identifying photosynthesis as the method used by plants to produce food
- 8.) Identify how organisms are classified in the Animalia and Plantae kingdoms.
- 10.) Determine habitat conditions that support plant growth and survival.  
Examples: deserts support cacti, wetlands support ferns and mosses
- 12.) Identify conditions that result in specific weather phenomena, including hurricanes.
- Identifying positive and negative effects of weather phenomena  
Examples:
    - positive - flooding deposits good soil when waters recede
    - negative - flooding kills crops
  - Identifying technology used to record and predict weather, including thermometers, barometers, rain gauges, anemometers, and satellites
  - Organizing weather data into tables or charts
- 13.) Describe ways to sustain natural resources, including recycling, reusing, conserving, and protecting the environment.
- Recognizing the impact of society on human health and environmental conditions
- 4
- 5.) Describe the interdependence of plants and animals.
- Describing behaviors and body structures that help animals survive in particular habitats  
Examples:
    - behaviors - migration, hibernation, mimicry
    - body structures - quills, fangs, stingers, webbed feet

- Describing life cycles of various animals to include incomplete and complete metamorphosis

6.) Classify animals as vertebrates or invertebrates and as endotherms or ectotherms.

- Describing the organization of cells into tissues, organs, and organ system
- Describing the grouping of organisms into populations, communities, and ecosystems

- Classifying common organisms into kingdoms, including Animalia, Plantae, Protista, Fungi, Archaeobacteria, and Eubacteria

- Tracing the flow of energy through a food chain

Example: producer, first-level consumer, second-level consumer, and third-level consumer

- Identifying characteristics of organisms, including growth and development, reproduction, acquisition and use of energy, and response to the environment

7.) Describe geological features of Earth, including bodies of water, beaches, ocean ridges, continental shelves, plateaus, faults, canyons, sand dunes, and ice caps.

5 9.) Describe the relationship of populations within a habitat to various communities and ecosystems.

- Describing the relationship between food chains and food webs
- Describing symbiotic relationships

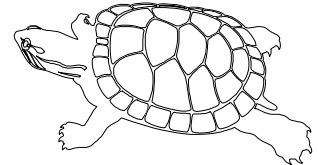
3<sup>rd</sup>-5<sup>th</sup> Grade Activity Answer Sheet  
Answers are bold.

3<sup>rd</sup> – 5<sup>th</sup> Grade Activity

Name: \_\_\_\_\_

**Before the Delta**

1. How long ago did mosasaurs live on earth? **89-65 million years ago**



**Mobile-Tensaw River Delta**

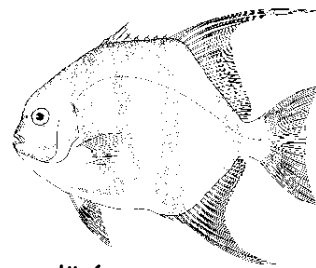
1. Are the animals in the Mobile Delta gallery living in fresh water or salt water?  
**fresh water**
2. Name one *amphibian* that is not a frog. **central newt, Red Hills salamander**
3. Name two Alabama plants that eat animals. **pitcher plants and sundews**  
What are two major threats to the long-term survival of the bogs these plants live in? **draining, development, and prevention of burning**
4. Name and draw the "King of the Delta." Why is it called the King of the Delta? **It's at the top of the Mobile Delta food web.**



**American Alligator**

5. Which *insect* in the Mobile Delta gallery is an *invasive species*?  
**fire ant**

## Mobile Bay Estuary



1. In the largest tank in this gallery, find the fish with a "beard" (more technically known as *barbels*, which taste). What kind of fish is it? *Hint: this is not a catfish.* **black drum**
2. Name, and describe or draw, your favorite animal at the touch table.

**Answers will vary.**

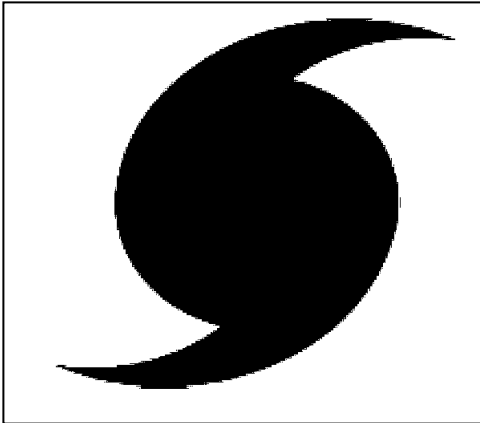
Is it a vertebrate or an invertebrate?

3. Name three things you can do to help ensure that seahorses don't go extinct in the wild. **Never buy wild-caught seahorses, never buy dried seahorses, and spread the word.**
4. What body part do oysters use to filter? **their gills** What do they filter out of the water? **Food, oxygen, and sediment**
5. Name four animals that live among salt marsh grasses. **shrimp, snails (marsh periwinkles), crabs (fiddler crabs, juvenile blue crabs), ribbed mussels**

## Barrier Island



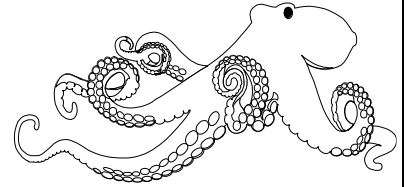
1. Draw a hurricane.



Does a hurricane form in warm water or cool water? **warm water**

3. Name a *reptile* that can be found in the *Maritime Forest* tank. **Eastern box turtle**

## Northern Gulf of Mexico



1. How many of the eight species of sea turtles are currently threatened or endangered? **seven** Name three predators of a sea turtle *hatchling*. **fish, crabs, raccoons, birds, humans**

1. **ARCOS Weather Stations:** Record current weather conditions for the Dauphin Island station.

**Answers will vary.**

Air Temperature \_\_\_\_\_ Water Temperature \_\_\_\_\_

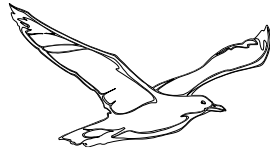
\* Don't forget to include units of measure.

## The Living Marsh Boardwalk

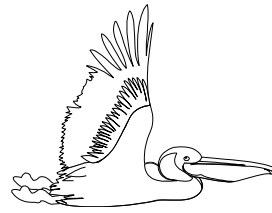
1. Circle the birds you observe while on the boardwalk. **Answers will vary.**



Great Blue Heron



Sea Gull



Pelican



Egret

2. Look at the area of water and grass. What kind of ecosystem is this? *Life in a Salt Marsh or Audiokiosk salt marsh* What are two benefits of these ecosystems? **They provide a nursery ground for many animals, and they serve as a filter between land and sea.**
3. What helps stabilize sand grains, leading to the building of sand dunes? *Mr. Sand and Friends, Part 2 dune grasses, like sea oats*  
How can we help sand dunes stay in place? *Mr. Sand and Friends, Part 3 We can avoid walking or driving on dunes, build sand fences, and plant dune grasses.*
4. How do plants and butterflies benefit each other? *Butterflies of Dauphin Island Butterflies deliver pollen from flower to flower so plants can spread. Butterflies use plants for all stages of their lives.*
5. 90% of floating marine debris is what kind of material? *Marine Debris plastic*  
Explain one way marine debris harms wildlife. **Animals can become tangled in marine debris, unable to eat, breathe, or swim. Animals might eat it and feel full, though they can't digest it and get no nutrients. Because they feel full, they don't eat, and they starve. Marine debris can disperse toxic substances that harm wildlife that eat or absorb the toxins. Mechanical cleaning of marine debris can cause habitat disturbances.**  
Explain one way marine debris harms people. **Marine debris can pose health and safety hazards, and endanger the livelihood of fishermen and recreational boaters by obstructing propellers or cooling intakes.**



## **Invertebrate Trail**

In the space below, make a rubbing of your favorite invertebrate from the Invertebrate Trail.