



## Welcome to the Tennessee Aquarium!



While enjoying your visit today, look closely at the animals, graphics and exhibits as you search for answers to the following questions.

Grades 6 - 8

# Ocean Journey



## Tropical Cove

The Tropical Cove recreates a rainforest habitat in a 30-foot tall sunlit space filled with lush tropical plants.

1. The hyacinth macaws are the largest members of the parrot family. Name one way they use their powerful beaks. \_\_\_\_\_

2. The epaulette sharks in Stingray Bay are a small, non-aggressive species of shark. All sharks are covered in small teeth called \_\_\_\_\_.



3. Name an animal you touched in Stingray Bay. \_\_\_\_\_

**Fun Fact:** Hyacinth macaws can apply 300 pounds of pressure per square inch with their beaks!



## Butterfly Garden

Butterflies make use of the color, shape, pattern and motion of their wings to create some of the most effective and dazzling visual displays in nature.



4. Find a butterfly that is brightly colored.  
How do you think bright colors help this animal?

5. Some butterflies have circles on their wings called eyespots. Find a butterfly with eyespots. What do you think the purpose of eyespots is?



## Penguins' Rock

Step into Penguins' Rock to experience life in a penguin colony. Learn amazing facts about gentoo, macaroni and other species of penguins.



6. How many species of penguins are there worldwide?      a. 2    b. 17    c. 71    d. 217

7. Penguins have black and white body colors to help protect them from predators. What is this type of camouflage called? \_\_\_\_\_

8. Penguins live only in which hemisphere? (circle one)      southern      northern

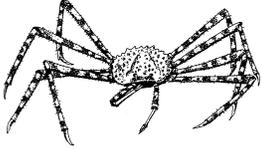
9. Name 5 predators that penguins have on land and in the water?

**Fun Fact:** Macaroni penguins have been known to dive to depths of 300 feet!

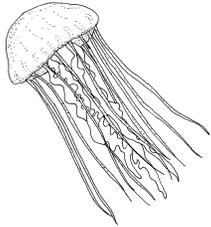
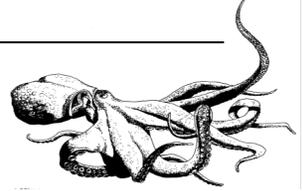
**Boneless Beauties**

10. The giant spider crab is the world's largest known crustacean in the world. How much can it weigh when full grown? \_\_\_\_\_

11. The giant Pacific octopus is a very intelligent animal. The aquarists give them things to play with to keep them active. Write the name of one of their toys. \_\_\_\_\_



**Fun Fact:** The giant Pacific octopus has the learning ability of a three year old child!

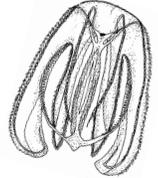


**Jellies: Living Art**

12. Jellyfish go through many stages of a life cycle. What is the adult stage called?  
\_\_\_\_\_

15. Circle the jelly not found in the gallery?

- a. lagoon
- b. moon
- c. umbrella
- d. lion's mane



13. Name at least five different types of food a jelly may consume?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

16. Number the parts of a jellyfish in the order they are used to collect food.

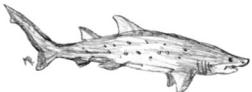
- \_\_\_ mouth
- \_\_\_ tentacles
- \_\_\_ oral arms
- \_\_\_ stomach

14. Ctenophores, like sea walnuts, do not have stinging cells. How do they catch prey?  
\_\_\_\_\_

17. Upside down jellyfish primarily receive their food from a symbiotic algae. What kind of algae is this? \_\_\_\_\_

What other animal, found in Boneless Beauties, lives symbiotically with this type of algae?  
\_\_\_\_\_

**Fun Fact:** The Lion's Mane jelly is the largest true jellyfish. Its bell may grow to be eight feet in diameter and its tentacles may reach more than 100 feet long!



**Secret Reef**



18. What place does the Secret Reef represent? \_\_\_\_\_

19. How do you think color helps a fish survive in a reef? \_\_\_\_\_

20. Name the two types of sharks found in the Secret Reef and tell one characteristic about them that is different. \_\_\_\_\_

**Fun Fact:** The Secret Reef contains over 600,000 gallons of artificially created saltwater and is home to about 3,500 fish!

## Seahorse Gallery



Seahorses, pipefish and seadragons are all fish but they sure do look different! Look for some of their unique characteristics as you go through this exhibit: tube-like mouths, rigid bodies, eyes that rotate independently and the ability to change colors to match their surroundings.



21. Seahorses are actually fish even though they don't look like it. What characteristics do they share with other fish? \_\_\_\_\_

22. What is different about seahorse reproduction compared to other animals? \_\_\_\_\_



**Fun Fact:** Seahorses have no stomachs, so they must eat often. We feed our seahorses several times each day.



## Cove Forest

The Cove Forest exhibit recreates a small, remote, ancient forest found high in the Appalachian Mountains.



23. Observe the snakes in the Cove Forest. What do you think most use as a means of survival? \_\_\_\_\_

24. There are three species of trout in the Cove Forest: the brook trout, which is the only trout native to East Tennessee, the brown trout and the rainbow trout. Take a moment to observe each trout and write a distinguishing feature of each fish.



**Fun Fact:** Otters are crepuscular.

They are most active during the morning and early evening hours, sometimes feeding through the night. They actually spend half of their lives asleep!



## Discovery Hall

Explore wetlands, estuaries and other watery habitats in Discovery Hall. You will encounter many small creatures that are often overlooked.

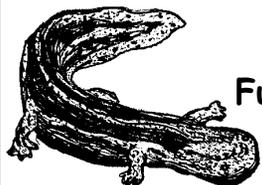


25. Alligators are one of the few reptiles to provide any form of parental care for their young. Name one of the ways mother alligators take care of their young. \_\_\_\_\_

26. Touch one of the sturgeon carefully. What does it feel like? \_\_\_\_\_



27. Name two threats amphibians face. \_\_\_\_\_



**Fun Fact:** The hellbender is the largest salamander in North America. It can reach 29 inches in length!

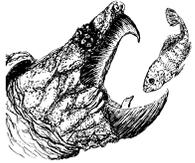
### Delta Swamp

The Delta Swamp immerses visitors in a cypress swamp habitat. Swamps are important because they act as nature’s sponges. By absorbing excess water and then slowly releasing it into rivers, swamps help prevent flooding.



28. What causes the water in wetlands, such as cypress swamps, to be dark brown or black?

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29. The alligator snapping turtle has a very unique way of eating. Describe this technique and what part “luring” plays in the process.

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30. When ducks preen, they take a bit of thin oil from a gland near their tail and rub it over their feathers. Why is it important for them to spread this oil around?

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**Fun Fact:** Alligators lay eggs in a large mound of decomposing vegetation. The temperature inside this nest determines the sex of the hatchlings. Lower temperatures produce females and higher temperatures produce males.



### River Giants

From the jungles of southeast Asia to the outback of Australia, river giants from around the world require clean water to survive. River giants are an indicator of a healthy, diverse ecosystem.

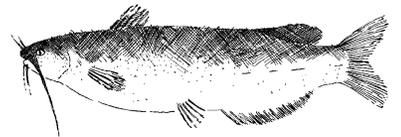
31. List three environmental impacts that could cause river giants to vanish from the wild in your lifetime:

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32. Stop and observe the animals in the tank. What does the fish’s mouth tell you about how it eats?

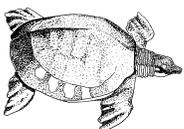
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**Fun Fact:** Catfish barbels (whiskers) have a high concentration of taste buds which allows them to find food in often dark, murky waters.



### Rivers of the World

Rivers are very important to the people, plants and animals that live around them. All rivers carry freshwater; however, they can be very different. Take a look around this gallery and discover how different rivers can be.

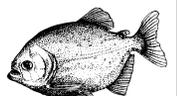


33. The pig-nosed turtle is different from other freshwater turtles because it has paddle-like forelimbs. What other turtle in the aquarium does it resemble?

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34. Piranha are not always the ferocious fish they are made out to be. When do you think the piranha might become most aggressive?

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**Fun Fact:** The Amazon River supports an estimated 2400 fish species - more species than are found in the entire Atlantic Ocean!

### Turtle Gallery

Turtles are beautiful and interesting creatures that are found all over the world. The shape of a turtle shell often can tell us where it lives. Species with high domed shells usually live on land, while flatter shells help aquatic turtles swim more easily. Of course, there are always exceptions!



35. What are two physical characteristics of pancake tortoises that allow them to hide in crevices?

**Fun Fact:** The alligator snapping turtle’s beak is designed to be sharpened every time the turtle opens or closes its mouth.

### Tennessee River

The Tennessee River has undergone many changes. Before dams were built, the river was very dangerous and hard to navigate in many areas. When the dams were built, the water was slowed, deepened and controlled, allowing the river to be used as a main source of transportation.

36. How many species of darters are in danger of becoming extinct in Tennessee?

37. Notice the tank with lots of unnatural items. These items were taken from the river just outside the Aquarium. How did these items end up in the Tennessee River?



38. What natural phenomenon in 1811 and 1812 caused the Mississippi River to run backwards, forming Reelfoot Lake?



**Fun Fact:** Paddlefish are archaic fish whose fossil relatives are found as far back as the Paleocene. Today, they are found mainly in large, silty river systems such as the Mississippi River system.



### Lake Nicaragua

Observe behaviors among the different cichlid species. Look carefully for signs of parental care.



39. Why do you think cichlids have so many babies?

40. How do the parents protect their offspring?

**Fun Fact:** Lake Nicaragua was formed over thousands of years as volcanic land along the Pacific coast rose and cut off this body of water from the ocean. What was once a saltwater bay of the Pacific Ocean is now the largest lake in Central America!

### Flooded Amazon

During the rainy season in the Amazon, between 80 - 120 inches of rain can fall. This causes rivers to flood into the forests. Some fish species in this area are adapted to eat the seeds and fruits from the trees when water is high.



40. Can you name one of the herbivore species in this exhibit adapted to feed on fruits and seeds?