

Welcome to the Tennessee Aquarium! We hope you enjoy your visit today. As you search for answers to the following questions, carefully read the information found on signs throughout the galleries and look closely at the animals and their exhibits. You'll be surprised what you can learn from observation – you might learn where an animal lives, how it eats or how it protects itself. Good luck, and have fun exploring the Tennessee Aquarium!

Ocean Journey

Tropical Cove

The Tropical Cove recreates a rainforest habitat in a 30-foot tall sunlit space filled with lush tropical plants and 20-foot tall palms. Engage all of your senses as you encounter the sights and sounds of animals from the treetops to forest pools.



Hyacinth Macaw

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

2. The bamboo sharks in Shark Island are a small, non-aggressive species of shark. All sharks are covered in small teeth called

3. There are different species of sharks in Shark Island. How can you tell them apart?



Brown banded Bamboo shark



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.



Tiger Swallowtail

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



Monarch

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 FACTS

Macaroni penguins have been known to dive to depths of 300 feet.

Secret Reef

Deep in the waters of the Gulf of Mexico lies a coral reef teeming with life. The Secret Reef exhibit contains over 600,000 gallons of artificially created saltwater. About 3,500 fish make their home among the corals and sponges in the exhibit.

10. What place does the Secret Reef represent and where is it located?

11. How do you think color helps a fish survive in a reef?

WOW!



It takes around 100,000 pounds of salt to make the water in this exhibit like ocean water!

Boneless Beauties

Drastically different in appearance, the creatures found in Boneless Beauties all have one thing in common: they lack a backbone. From the jellies to the giant crabs, these animals represent a vast array of shapes, sizes and colors.

12. The giant Japanese spider crab is the largest known crustacean in the world. How much can it weigh when full grown?

13. The giant Pacific octopus is a very intelligent creature. The aquarium staff put toys and food in sealed jars for the octopus to open. Why do you think they would put toys in the exhibit?

River Journey

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.



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

15. What is different about seahorse reproduction compared to other animals?

WOW!

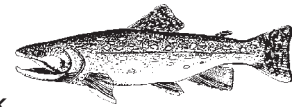
Seahorses have no stomachs, so they must eat often.

Cove Forest

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

16. Observe the snakes in the Cove's snake exhibit (first exhibit on your right). The timber rattlesnake and copperhead are venomous. The black rat snake is nonvenomous. How do you think venom helps a snake to survive?

17. 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.



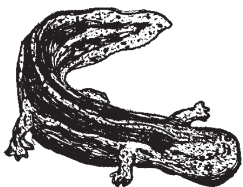
Discovery Hall

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

18. 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.

19. Touch one of the sturgeon carefully. What does it feel like? _____

20. Name two threats amphibians face. _____



FUN FACTS

The Hellbender is the largest salamander in North America. It can reach 29 inches in length. Its Japanese relative can reach 60 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.

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

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



23. 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?



FUN FACTS

When frightened, hooded mergansers will sink in the water so only their heads are showing.

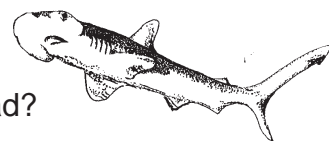
*Hooded Mergansers
Female & Male*

Gulf of Mexico

The Gulf of Mexico is the ultimate destination of waters from the Tennessee, Ohio and Mississippi Rivers. Notice the transition from the mangrove trees found near the shoreline to the open ocean in the Gulf exhibit.

24. Observe the smaller fish in the exhibit. How do they use the mangrove roots?

25. Stop and observe the bonnethead shark. What advantage does the shark possess by having its eyes on the outer edges of its head?



WOW!

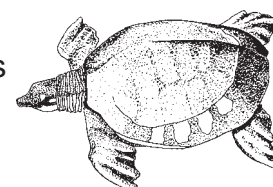
Sharks have 8 to 15 rows of teeth that are continually replaced throughout life. As the front teeth are broken, the back teeth move up to take their place. Some types of sharks may have as many as 20,000 teeth in one lifetime.

Rivers of the World

Rivers are very important to the people, plants and animals that live around them. The one thing they all have in common is that they carry freshwater. Take a look around this gallery and see how different rivers can be.

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

27. 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?



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. Look carefully and see if you can find some of them in the exhibit.

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

WOW!

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 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.

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



30. What natural phenomenon in 1811 and 1812 caused the Mississippi River to run backwards (reverse flow), forming Reelfoot Lake?

FUN FACTS

The word Tennessee originates from the Native American word for river – 'Tanasi.'

Lake Nicaragua

Observe behaviors among the different cichlid species. Look carefully for signs of parental care. Can you find the babies (fry)?

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

32. How do the parents protect their offspring?

Flooded Amazon Rainforest (canyon)

Here in the temperate United States we experience four seasons. Tropical areas experience only two seasons, rainy and dry. During the rainy season in the Amazon, between 80-120 inches of rain can fall. This causes rivers to flood out of their banks and into the forests. Some fish species in this area are adapted to eat the seeds and fruits from the trees when water is high.

33 The *Arapaima gigas* can grow to 14 feet in length. Look at its mouth. How do you think this fish catches its prey?

Note: A question may have more than one correct answer. Answers are available on our web site at: <http://www.tnaqua.org/KidsTeachers/KidsTeachers.asp>.