



ADAPTATIONS AROUND THE AQUARIUM

Pre-Aquarium Visit

1. Define adaptation. Answers vary
2. Make a list of animal adaptations. Answers vary
3. How do adaptations help an organism survive? Answers vary

Animal Planet Australia: Wild Extremes

4. This snake has a black head. How do you think this snake uses its head to regulate its body temperature? Black headed python. Black absorbs heat from the sun.
5. In the *Australia* exhibit, there is a fish that is born male and then becomes female. Locate this fish and write its name. Barramundi
6. Find the archerfish. What do you notice about its lips? How do these lips help the fish survive? Long, lower lip, which helps the fish to collect and spit water to catch prey.
7. Which Australian fish can survive out of the water? Lungfish

Blacktip Reef

8. What are some benefits of living in a coral reef? Shelter/hiding places, serves as a food source, clean/high quality water, etc.
9. Blacktip reef sharks are considered apex predators. This means they are at the top of the food chain. What would happen if all blacktip reef sharks were removed from their environment? The large fish would overpopulate and not have enough smaller fish to feed on. The whole food chain would collapse.
10. Is coral a living organism? Yes. Coral reefs are made up of small organisms living together in a colony.

Blue Wonders: Reefs to Rainforests

11. In the *Coastal Beach* exhibit, how does the flounder defend itself? It uses camouflage to hide in the sand.
12. Fish with a mustache! Lake sturgeon are called bottom feeders. How do they use their “whiskers” to find food? They use taste buds on their whiskers to search through the sand to locate small prey.
13. Why do puffins have bright orange feet and a bright beak? To attract females during breeding season.

Amazon River Forest

14. Come eye to eye with the silver arawana. What is unique about its eyesight? Ability to see prey above water.

Upland Tropical Rain Forest

15. Climb to the top of the rain forest. Can you find a sloth? What adaptations does a sloth possess to be able to live in the rain forest? Long arms and claws to hang for long periods of time in the trees. Very slow moving, so sloths burn fewer calories, don't need as much to eat.
16. What does bright coloration on insects or frogs usually mean? Poisonous—stay away!

Atlantic Coral Reef/Shark Alley

19. Find a stingray and watch it move. How does its body shape help it to glide through the water? Aerodynamic, flat body, long fins.

20. What is the advantage of having gills and a mouth underneath your body, like a stingray? Protected, can find food in the sand.
21. Why do fish swim in a school? To appear larger and protect themselves.
22. What is the function of a “saw-like” mouth on the large-tooth sawfish? Catching prey (stabbing), searching in sand for food.

Dolphin Discovery (Hint: You can ask a dolphin trainer for help)

23. A dolphin is darker on the top and lighter on the bottom. This is called counter-shading. Watch the dolphins and predict how counter-shading helps a dolphin survive in its environment. Camouflage—blends in with ocean when seen from above, blends in with sun when seen from below.
24. What adaptations do dolphins have that help them survive in their environment? Good vision, echolocation (clicking sounds), good hearing, fast swimmers, strand feeding, hydroplaning, etc.

Jellies Invasion: Oceans Out of Balance

25. What adaptation does the spotted lagoon jelly use for protection from predators? Swarm together to stay in rays of sunlight to appear as a large animal.
26. How are jellyfish surviving the algae blooms created from global warming? They can survive with a lower oxygen intake than most organisms.
27. What allows Pacific sea nettles to stay in or around sunlight? Light-sensitive cells allowing them to swim toward the light.

Post-Aquarium Visit

28. What was the coolest adaptation you saw during your visit to the Aquarium? Answers vary
29. What was your favorite part of your Aquarium visit? Why? Answers vary

VSC Standards:

GOAL 3.0 LIFE SCIENCE:

The students will use scientific skills and processes to explain the dynamic nature of living things, their interactions and the results of the interactions that occur over time.

GOAL 6.0 ENVIRONMENTAL SCIENCE:

Students will use scientific skills and processes to explain the interactions of environmental factors (living and non-living) and analyze their impact from a local to a global perspective.

5 EXPECTATIONS FOR ALL CHAPERONES

Welcome to the National Aquarium! As a chaperone, you have a very important job. If you follow these tips, your trip will be safe, educational and fun!

1. **Keep your group together.** Chaperones are required to stay with their students at all times! Students must enter *Dolphin Discovery* and 4-D Immersion Theater with a chaperone.
2. **Food, drinks, gum and smoking are not permitted in the Aquarium.**
3. **If you must leave the Aquarium, get your hand stamped for re-entry** at the exit door. Students do not need their hands stamped, only chaperones.
4. **Use caution.** Please limit or eliminate the use of cell phones. Please exercise caution on the escalators.
5. **Be respectful.** Please do not tap or bang on the exhibit windows, as it can disturb the animals. Please be courteous around other Aquarium visitors.

Thank you for complying with these expectations.

We hope you and your group have a fun and educational field trip! Due to the large number of students touring our facility, we regret that we cannot check coats, book bags or other storage containers.