



GRADES 3-5

THE biologist's DAILY ROUTINE

Adventure Aquarium biologists are required to check on all of the animals in the aquarium on a daily basis. They are working on a special project today, so we need your help to cover some of their duties. Use this log book to record your observations and interactions.

Today, **YOU** are an assistant biologist. As you travel through the aquarium, make sure you:



OBSERVE



THINK



TOUCH



READ



DISCUSS

Today's Date:

Assistant Biologist's Name:

Assistant Biologist's School:

Assistant Biologist's
Favorite Marine Animal:

Adventure Aquarium is home to many animals and they are here to remind you that animals in the wild need our help. As you travel around, think about what you can do to make a difference.





Start at the Amazon River Exhibit.

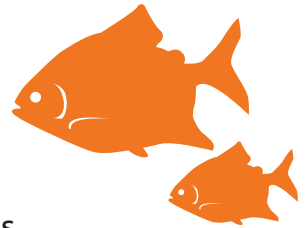


Observe the different species found in the waterfall exhibit. Each day, the biologists need to check to be sure all animals are present and accounted for. Take a few minutes to do a census of the larger fish by counting the number of each species that reside in the exhibit. The pictures on the signs will help you identify them.

HOW MANY OF EACH DO YOU SEE?

(It's trickier than you think)

- _____ Ocellate River Stingray
- _____ Banded Leporinus
- _____ Black Pacu
- _____ Ripsaw Catfish
- _____ Silver Flagtail Prochilodus



The fish in this exhibit are found in the Amazon River, not the ocean. What kind of water is in this exhibit. (Circle one)

Salt Water

Fresh Water

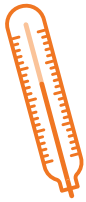
Brackish Water





Continue through Zone A to the Rainbow Reef Exhibit

Coral reefs are usually found in warm water. Some of the most colorful fish live in and around a coral reef. As you observe the fish in the exhibit, write down all of the different colors that you see.



The temperature in the exhibit ranges from 74 to 76 °F. Here are several fish and the temperature range they prefer. Circle the fish that could live in the Rainbow Reef Exhibit.



Firefish
72 to 88 °F



Striped Bass
55 to 65 °F



Pot-bellied Seahorse
48 to 53 °F



Next visit the Ocean Realm Exhibit



The biologists can learn a great deal about how an animal is doing just by observing. We need to do a visual inspection of several animals today to be sure everything is normal. Find and check off the following species:



Loggerhead Sea Turtle
Caretta caretta



Zebra Shark
Stegostoma fasciatum



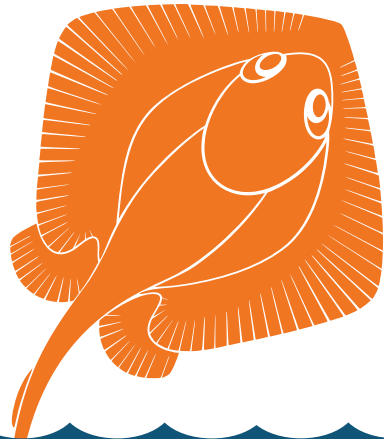
Great Hammerhead Shark
Sphyrna mokarran



Next head into Stingray Beach Club

PICK THREE

There are several species of stingray that are found here. How they move depends on the species. Pick 3 different species, then fill in the chart. Aquarium staff can help you identify each species.



SPECIES	DESCRIBE HOW THEY LOOK	DESCRIBE HOW THEY FEEL	DESCRIBE HOW THEY MOVE
1.			
2.			
3.			





Next visit Gill's Grotto and Creature Feature

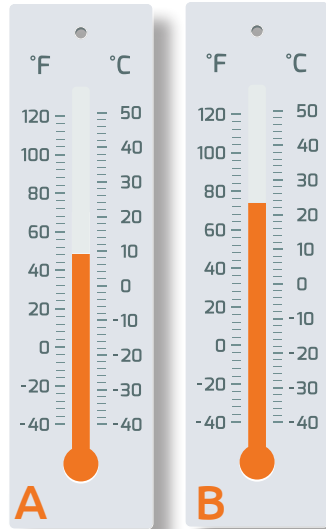


These two exhibits are home to tide pool animals but one is tropical and the other would be found in a much cooler region. The species in each exhibit live in different conditions.

Place your hand in the water at each exhibit.

Which thermometer shows the temperature of Gill's Grotto?

Which thermometer shows the temperature of Creature Feature?



MATCH THE ANIMALS

Circle the animals below that are found in Gill's Grotto.

Draw a line through the animals below that are found in Creature Feature.



Cleaner shrimp



Ocre sea star



Engineer goby



Chocolate chip sea star



Powder blue tang



Green sea anemone



Visit the Jellyfish Exhibits when you get to Zone D

Jellies are invertebrates that are 75% water, which makes them very delicate. They use ocean currents to help them catch food so their exhibit has a current to keep them and their food in constant motion.

Draw a picture of one of the jellies, labeling the "bell" and the "tentacles," and describe how their body moves.

Jelly species: _____

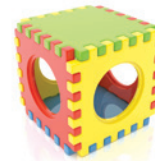
Describe how it moves: _____



Continue to the Octopus Exhibit

The giant Pacific octopus is the most intelligent invertebrate. It opens jars, solves puzzles and explores new things. Enrichment "toys" keep this very smart animal occupied. Describe enrichment items you see in the octopus exhibit today.

Here are several enrichment items that the biologists give to the octopus. Circle the item you would like to give to the octopus today. Why did you choose that item?



PUZZLE



ICE BLOCKS



JAR WITH LID





Your Final Destination: Shark Realm

The biologists help the aquarium veterinarian care for the animals to keep them healthy. It is important that you know the difference between the 3 species of shark that are in the Shark Realm Exhibit. Try to find all three and use the signs to find something unique about each species.



Sandbar Shark

UNIQUE FEATURE



Sand Tiger Shark

UNIQUE FEATURE



Nurse Shark

UNIQUE FEATURE

The biologists visually check the sharks each day for scrapes, growths and unusual markings. Take a few minutes to observe the sharks. Write down any unusual marks or growths that you see.

SHARK SPECIES	OBSERVATION



Now that you've completed your rounds, here is one more thing for you to do.



SOME THREATS TO OCEAN ANIMALS:

- Pollution –
Especially Plastics
- Overfishing
- Climate Change
- Oil Spills

HOW CAN YOU HELP?

Name 3 things you can do to help protect our oceans and the animals that live there:

1. _____
2. _____
3. _____



ANSWER KEY

ZONE A

Amazon River

- 4 stingray, 2 pacu, 2 catfish, number of leporinus and prochilodus will vary (some are always hidden).
- Fresh water is in the exhibit.

Rainbow Reef

- Colors: black, white, brown, red, blue, purple, yellow, orange, green
- Only the firefish can live in this exhibit.

ZONE B

Stingray Beach Club

- Answers will vary. Stingray species: cownose, southern, blue-spotted, Atlantic and leopard whipray

ZONE C

Gill's Grotto

- Thermometer B. Species: cleaner shrimp, engineer goby, chocolate chip sea star, powder blue tang

Creature Feature

- Thermometer A. Species: ocre sea star, green sea anemone

ZONE D

Jellyfish/Octopus

- Answers will vary.

Shark Realm

- Sandbar shark – tall dorsal fin; sand tiger shark – open mouth with needle-like teeth; nurse shark - nocturnal, lays on bottom. Observations will vary.

CONTINUE THE ADVENTURE

The Center for Aquatic Sciences offers a variety of programs for the budding marine biologist. Visit www.aquaticsciences.org for more information.

- Summer Sea Camp
- Traveling Birthday Parties
- Deep Sleep Overnight Programs
- Scout Workshops
- Junior Marine Biologist Camp
- Outreach Traveling Programs
- Teen Marine Science Institute
- Educator Resources

EDUCATION STANDARDS

The activities in this booklet align with the following standards:

- PA 3.1 A1, A2, A9; 3.3 A4; 4.1 D; 4.5 C
- NJCCCS 5.1 A, C; 5.3 A, C
- NGSS LS1, LS3, LS4, ESS3

www.aquaticsciences.org





THE
biologist's²⁰¹⁶
DAILY ROUTINE

was created by

