Aquatic Homes Beach Program

The word “home” is one that everyone knows. We all have some place that we can call home, but these places can look very different from one another. A house can be a home, which can be made out of different things and be different shapes and sizes. Sometimes a home can be a place or a person, like friends and family. A home, no matter what it looks like, is a place where we feel safe.

Humans aren't the only species that needs a home; animals need to feel safe and have protection too. An animal’s home is **something they have or can create that protects them and helps them survive.** An animal’s home is probably going to look a lot different than the place that we call home. Its “home” depends on what they need to survive. For example, a turtle’s shell could be called its home. This is because turtles need their shell to protect them from predators. Listed below are some creatures in the Delaware Bay with aquatic homes. These animals all have special anatomies or adapted behaviors to protect themselves.

In this activity, we’ll meet some animals that live in the Delaware Bay and learn more about their aquatic homes.

Aquatic Homes Key Terms

Scavenge– to eat dead organisms rather than hunting

Predator– an organism that hunts other animals for food

Camouflage– use color, pattern, or shape to blend into one’s surroundings

Nocturnal– to be active during the night and sleep during the day

Spider Crab

The spider crab lives on the bottom of the Delaware Bay and **scavenges** for food such as dead fish or mollusks and algae. To disguise itself from **predators**, this crab will decorate itself with some of the things it finds on the bay floor as it walks along.

Common Octopus

The common octopus is a very smart marine animal. They are fast and can hide from their **predators** in plain sight by changing color to **camouflage** with their surroundings. They can also use a spray of ink to distract and confuse a **predator** if they get too close. This octopus can be found all over the world and eats things like crabs and mollusks.

Ribbed Mussel

The ribbed mussel is a type of bivalve, which are mollusks with two (bi-) halves (-valves) making up their shell. Bivalves such as mussels are attached to their shell, growing it throughout their whole life and using it to protect themselves. Ribbed mussels can also attach to hard surfaces and each other using byssal threads, which are little string-like fibers with super glue strength.

Hogchoker

The hogchoker is an easy fish to identify; its body is flat and rounded and both of its eyes are on one side (the “right” side to be exact!). This fish is a bottom feeder, eating things like shrimp, worms, and crustaceans. Hogchokers can also hide from **predators** in the bay by changing their color to **camouflage** and by digging into the sand.

American Eel

The American eel is another fish that is easy to identify— it almost looks like a snake! This species is **nocturnal**, and can bury into the sand or mud to hide from **predators** during the day. Eels are interesting because they live in brackish water or freshwater but reproduce in saltwater. Most species only live in one or the other.

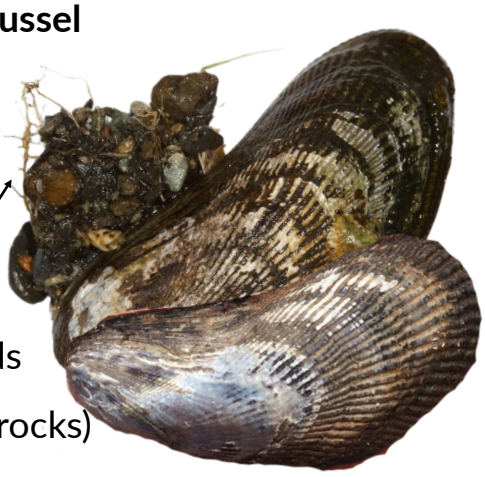
Spider Crab

Common Octopus

Hogchoker

American Eel

Ribbed Mussel



byssal threads

(attached to rocks)

Cut out the animal images provided on the previous page. Then, take them to the beach and follow the instructions below so that you can create the correct imaginary homes for our paper species!

1. Choose a species that would camouflage itself for protection.

Find something on the beach that your marine species can blend in with!

Answer: Common octopus or Hogchoker. The common octopus and hogchoker both use a special kind of **camouflage** to hide from predators. When an animal camouflages itself, it blends in with the things around it. These animals have learned how to change the color of their skin and hide in plain sight.

2. Choose a species that would dig a hole and hide in it for protection.

Dig a hole and help your species hide from its predators!

Answer: American eel. The American eel has learned to protect itself by digging a hole and **hiding deep in the sand or mud**. Hiding in the seafloor prevents predators from seeing and catching them.

3. Choose a species that would lay down in the sand for protection.

Dig a wide, shallow hole, place your species in it and cover it almost entirely with sand!

Answer: Hogchoker. One way hogchokers protect themselves by **burying gently in the sand and blending in**. This fish is very flat and can blend in well with the sand. This is a good example of a fish using both its body and its behavior to hide from predators.

4. Choose a species that would attach other objects to itself for protection.

Find some small rocks, shells, seaweed, etc. to attach to your species.

Answer: Spider Crab or Ribbed Mussel. The spider crab is an example of a decorator crab. Decorator crabs will **attach things like rocks, shells, and seaweed to their shells** so that they can blend in with their surroundings. Ribbed mussels can use their byssal threads to attach themselves to rocks and other mussels. This skill makes it more difficult for predators to grab them.

5. Choose a species that would hide under structures like docks, rock piles and reefs.

Build a small structure out of materials on the beach for your species to hide under!

Answer: Any! While all of the species we've talked about have special aquatic homes and ways of protecting themselves, any of them could benefit from the extra protection of lots of vegetation or a human-made structure such as a pier or dock. These structures give them an extra sense of security against predators.