



North Carolina
Coastal Federation
Working Together for a Healthy Coast

ESTUARY ESCAPADES

What is an estuary?

An estuary is coastal habitat where fresh water meets the salty ocean water. It attracts many small and young aquatic animals, migrating birds and coastal shore animals because it provides food and shelter away from larger fish and predators.

Fish Friendly

The estuary is home to fish, shrimp, crabs, clams and oysters that are able to adapt to the mix of fresh and salt water, or brackish water.

Brackish water is water that is saltier than fresh water, but not as salty as ocean water.

Estuaries come in different shapes and sizes, and different types of estuaries are found all over the world. In North Carolina, there are 2.2 million acres of estuarine habitat.

Why estuaries are important.

Estuaries not only provide habitat for animals, but also contain a variety of plants that help keep our planet healthy. The plants in the estuary can trap and filter pollutants from rainwater runoff. This helps keep the water clean for you and the animals to swim in!

PLUS, plants help the estuaries act like huge sponges and soak up extra water from boat waves, wind and storms. They also protect the shore from wearing away or eroding due to these activities.

Estuaries are always changing due to the seasons, winds, tides, inlets, currents and more. Go explore one today, you might discover something new!



DO THIS!

Take a look at a map, and find a river or stream that is closest to where you live. Trace it with your finger and find where it goes! Does it connect with any areas you'll be visiting or live near on the North Carolina coast?

FUN FACT
12 North Carolina Rivers flow into the Atlantic Ocean, **7** of these empty into estuaries along the coast.

Did you know?

Along the coast of North Carolina is the Pamlico Sound that is the second largest system of estuaries in the United States, with a surface water area of about 3,000 square miles.

Who Lives in the Estuary?

Meet the Team! Here are few animals that call the estuary home.

Eastern Oyster

Can you do two things at once? Oysters can! They are filter feeders and can clean the water while eating their lunch! Oysters also provide food and habitat for other animals.



Great Egret

These graceful birds have long legs and large feet they use to walk around the estuary. They can often be seen in shallow water searching for fish, crabs or shrimp to eat.



Blue Crab

Can you walk sideways like a crab? Try it! Blue crabs have 10 legs. 2 of their back legs are similar to paddles and allow them to be great swimmers. These crabs will eat fish, shrimp, snails, and even other crabs.



FUN FACT

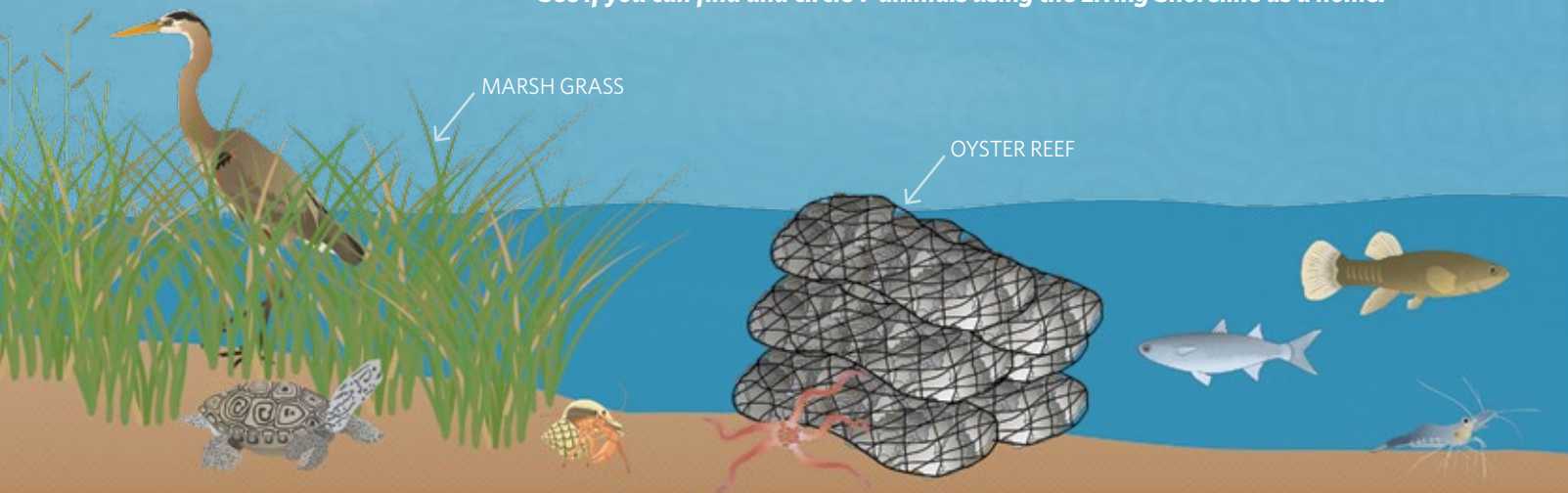
An adult oyster can filter up to **50 gallons** of water a day!

MARSH MADNESS

One habitat on the edge of the estuary is a salt marsh. Plants in the marsh provide food for many animals. Smaller creatures also hide in their leaves to escape from larger predators. One neat thing these plants do is hold sand and mud in place so that less erosion happens.

A Living Shoreline is one way people can protect estuarine beaches from erosion. Living shorelines use things from nature to keep soil in place when waves come. Planting marsh grasses or building oyster reefs with recycled oyster shells are some examples of Living Shorelines. We call them "living" shorelines since they also create habitat for other plants and animals!

See if you can find and circle 7 animals using the Living Shoreline as a home.



NATURE'S NURSERY

Many baby sea animals grow up in the estuary. They provide a safe place for these species to hatch and grow. See if you can match these baby animals with their adult parents.

Draw a line to connect the baby with its parent below.



Baby oysters, called **spat**, like to grow on top of hard surfaces. Their favorite place to grow is on the back of their family members—other oyster shells! Placing recycled oyster shells back in the estuary gives the spat more places to call home.

In the U.S., estuaries are nurseries to over **75% of all fish and shellfish** harvested. Much of the seafood we eat relies on having clean and healthy estuaries. **What's your favorite kind of seafood?**



Diamondback Terrapins are the only turtles that live their whole lives in the estuary!

Be a friend to the estuary

When you visit the beach, would you rather find seashells—or trash?

Litter can be tossed along the road, blown out of a truck, discarded at the beach, or lost from a boat. Although litter initially may be released far from the coast, it can travel downstream and enter the estuary or ocean, where it becomes marine debris.

Human activities can be harmful to animals and their habitats by damaging water quality, polluting the land and animals may mistake trash for food.

We are all responsible for protecting and maintaining the health of these special places. No matter where you live, you can do your part to keep waterways free of debris.



LEND A HELPING HAND.

Everyone can contribute to the solution of a healthy planet. Give it a try!

Drink from a reusable water bottle.

Always recycle the aluminum cans and plastic bottles and containers you pack in your cooler for the beach.

Reduce your trash by using reusable containers to store the things you pack for your lunch.

Litter cleanups can be found in many communities, and make the environment a cleaner, safer place for people and animals. Look for a cleanup in your area!

And remember it's windy at the beach, so don't let your picnic blow away and become trash!

SOLVE THIS!

Most of the seafood we eat spends some part of its life in an estuary. We want to protect our wetlands by keeping them clean and safe for the animals that live there and for the people for visit.

Use the pictures to unlock the code and reveal the message below!

 = A

 = D

 = E

 = F


 = L

 = N

 = O

 = S

 = T

 = W



Answer key: Nature's Nursery: 1C; 2D; 3B; 4A
Seafood code: No Wetlands, No Seafood



North Carolina
Coastal Federation
Working Together for a Healthy Coast

Locations in Ocean, Wrightsville Beach and Wanchese, North Carolina.
For more information call: 252.393.8185 or visit: www.nccoast.org.