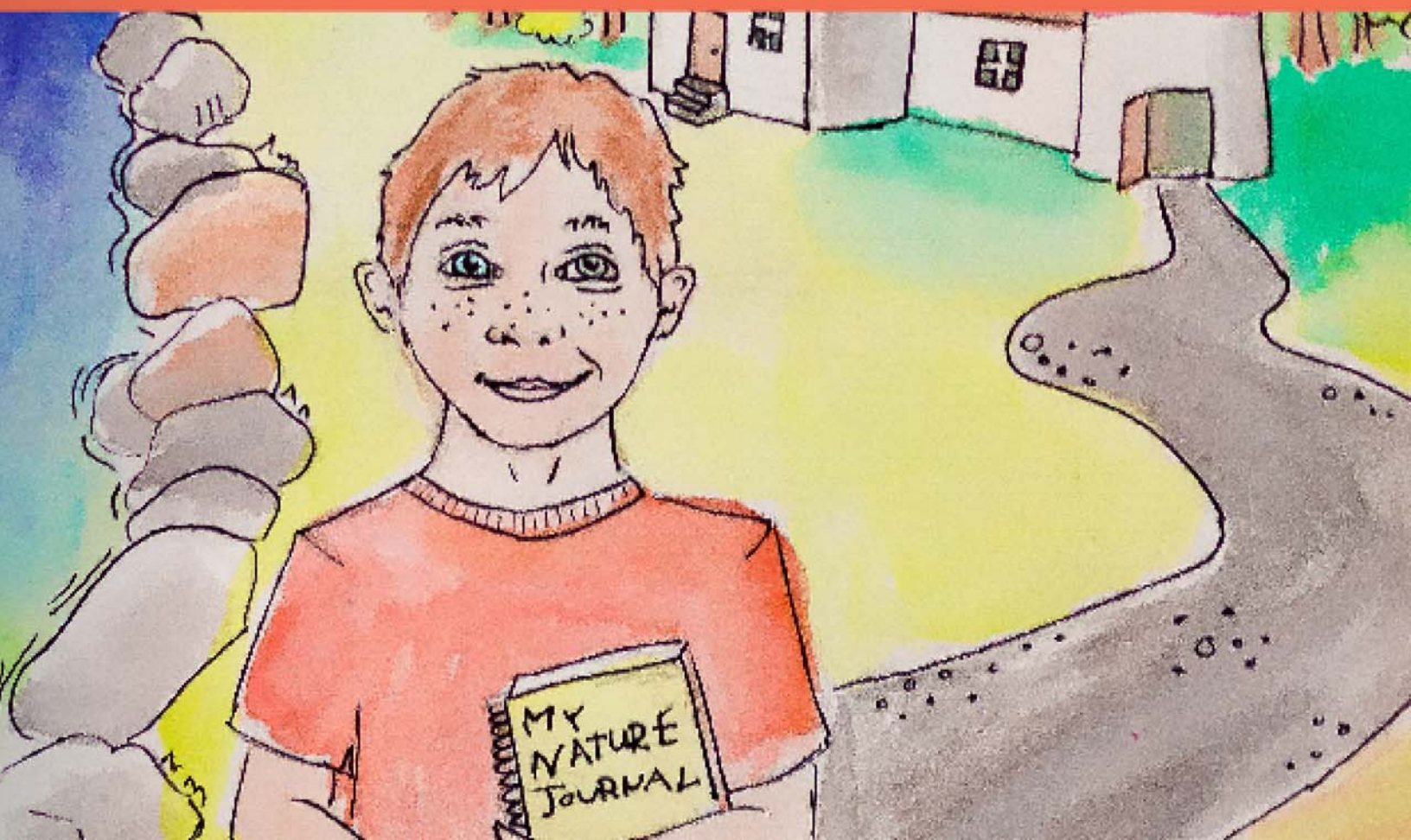


A LUCKY TURTLE

THE JOURNEY OF A COLD-STUNNED SEA TURTLE

GRACE COLLINS



A Lucky Turtle was written and illustrated
by **Grace Collins**
as a service project in support of NOAA
Fisheries Greater Atlantic Regional
Fisheries Office.



NOAA FISHERIES

About the author: Grace Collins is an 11th grade high school student who wrote and illustrated this book as a service learning project for NOAA Fisheries. She lives in Rockport, Massachusetts, a small town by the ocean, and enjoys sailing and spending time at the beach. Grace loves all animals and is passionate about protecting the environments where they live.

About NOAA Fisheries Greater Atlantic Regional Fisheries Office (GARFO): GARFO is responsible for the stewardship of living marine and diadromous resources from Maine to North Carolina, and includes the Great Lakes under its authority. GARFO's vision is a future in which the American people continue to benefit from healthy ocean and coastal ecosystems in the Greater Atlantic Region. GARFO's mission encompasses stewardship through science-based conservation and management, focused on protection and restoration of healthy coastal ecosystems.

Dear Reader,

This book is designed as a children's story and a nature journal. By reading the pages on the left, you will learn Jack and Lucky's story. The pages on the right are from Jack's nature journal. They provide more information on Jack's experiences and links to resources online. Comments on the book may be sent to my NOAA Fisheries mentor, Ellen Keane, at ellen.keane@noaa.gov.

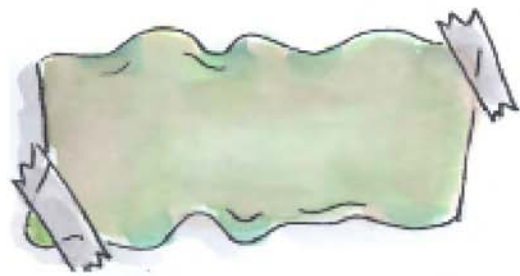
We hope you enjoy the story and that the journal may inspire you to keep one of your own. Happy journaling!

Grace



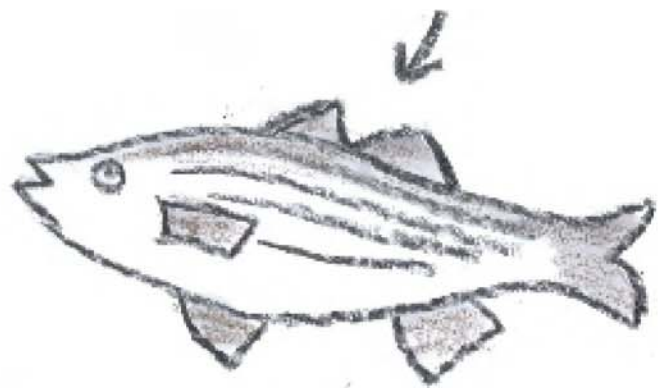
Hi! My name is Jack. I live in Cape Cod, Massachusetts, and I love going to the beaches here and swimming in the ocean. I also like to learn about the kinds of animals that live in the ocean near where I live. I record everything I learn in my nature journal.

MY NATURE JOURNAL

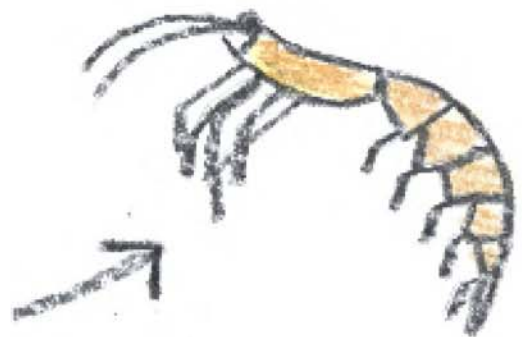


This seaweed
is called **kelp**.

My dad likes to
go fishing for
striped bass like
this one.



Today, I learned that
humpback whales eat up
to 3,000 pounds of tiny
animals called **krill** every
day!





This is my mom, and she is a volunteer with the Massachusetts Audubon Society. Today, she is taking me with her to the beach to show me what she and the other volunteers do.



Mass Audubon

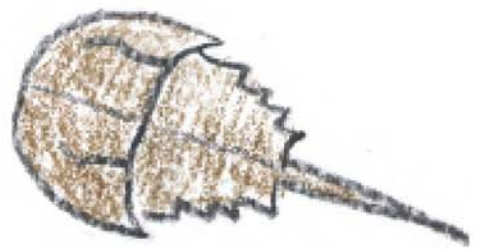
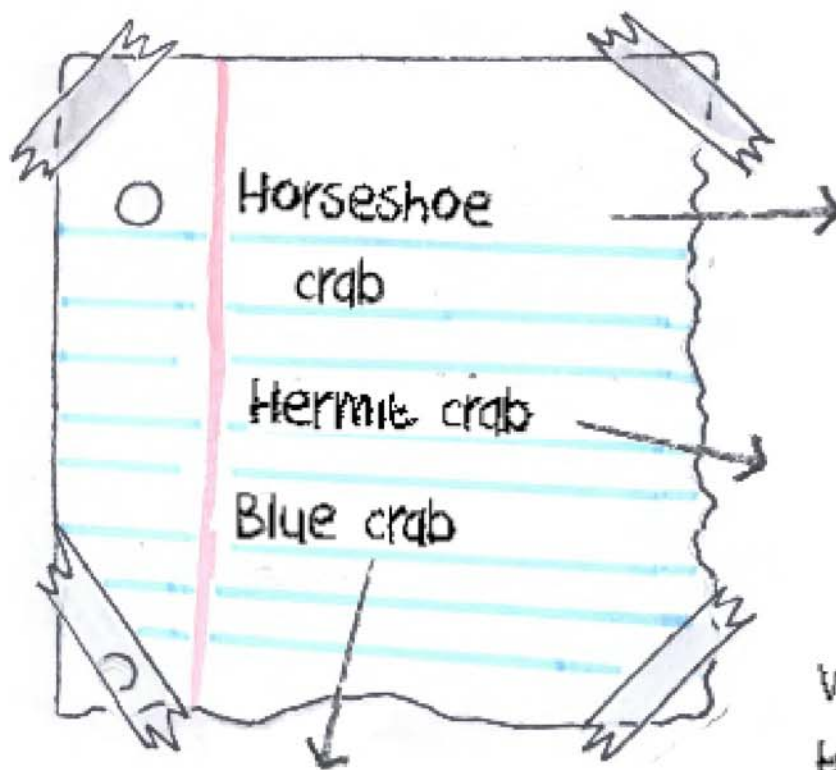
Mass Audubon is an organization that works to protect the wildlife of Massachusetts. They protect 35,000 acres of conservation land where you can go hiking or birdwatching. Mass Audubon also provides many other fun activities like summer camps for kids!

Volunteers do many different things to help the animals and environment of Massachusetts, including helping to build boardwalks and leading hikes to educate people about the local wildlife. Some volunteers hike the beaches of Cape Cod to find and rescue cold-stunned sea turtles. Hard-working volunteers are very important in helping to protect the environment and all the animals that live in it!

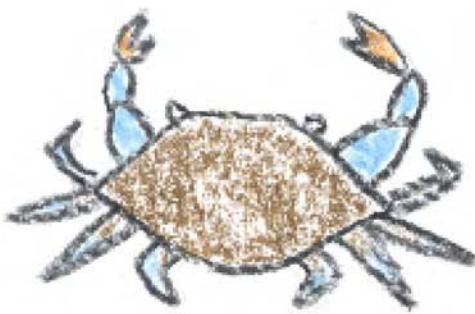
Learn more at
massaudubon.org/wellfleetbay.

Today it is very cold on the beach, so Mom and I bundle up to stay warm. It is high tide, and there are many things to find on the beach! See what I found today!





When a hermit crab gets too big for its shell, it moves into a new one.



Clam



Razor clam



Herring gull



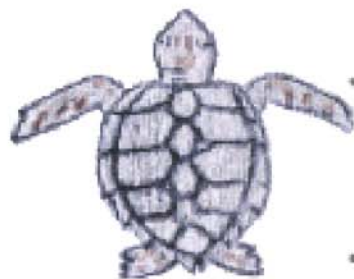
Sand dollar



Mom finds something big as we walk down the beach. It's a sea turtle!

Mom says, "This is a loggerhead sea turtle. That's a bit unusual as it is more common to find Kemp's ridley sea turtles in the fall. All sea turtles are protected so they don't go extinct."

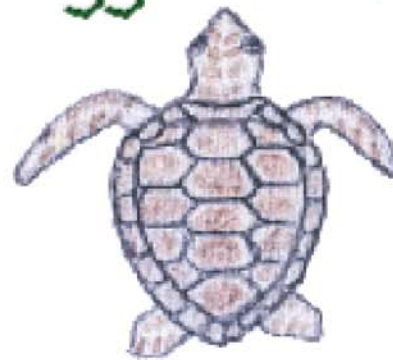
Kemp's ridley



Shell length:
up to 28 inches

- * **Weight:** up to 100 pounds
- * **Shell:** Round, grey-green
- * **Diet:** Crabs, fish, jellies, mollusks
- * **Smallest** marine turtle

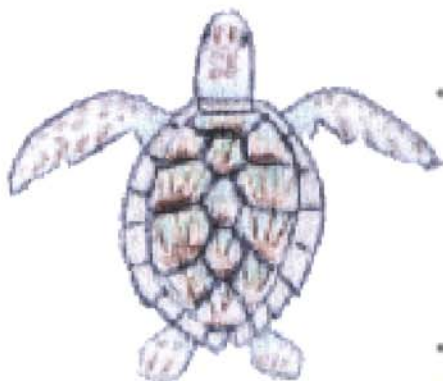
Loggerhead



Shell length:
up to 36 inches

- * **Weight:** up to 250 pounds
- * **Shell:** Oval, reddish-brown
- * **Diet:** Whelks, conchs
- * **Named** for their large head and strong jaws

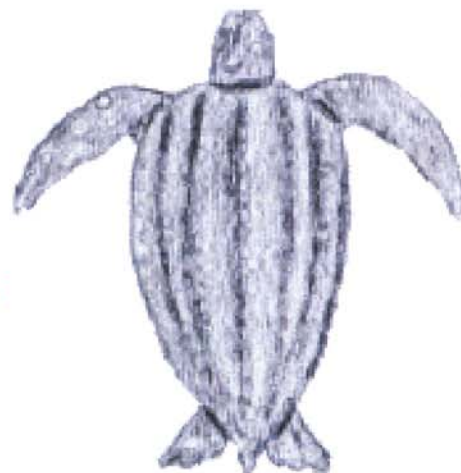
Green



Shell length:
up to 39 inches

- * **Weight:** up to 350 pounds
- * **Shell:** Oval, brown with streaks
- * **Diet:** Seagrasses, algae
- * **Largest** hard-shelled sea turtle

Leatherback



Shell length:
up to 72 inches

- * **Weight:** up to 2000 pounds
- * **Shell:** Bony plates covered with black, rubbery skin
- * **Diet:** Jellies, salps
- * **Largest** sea turtle

I'm confused. "But Mom, I thought sea turtles only lived in warm places, like in Florida where we vacation."

Mom says, "Sea turtles do live in warm places, but they also swim up the coast to places like Massachusetts in the summer when the water here is warm. In the fall, they swim back south to warmer waters. The journey these turtles take is called migration."

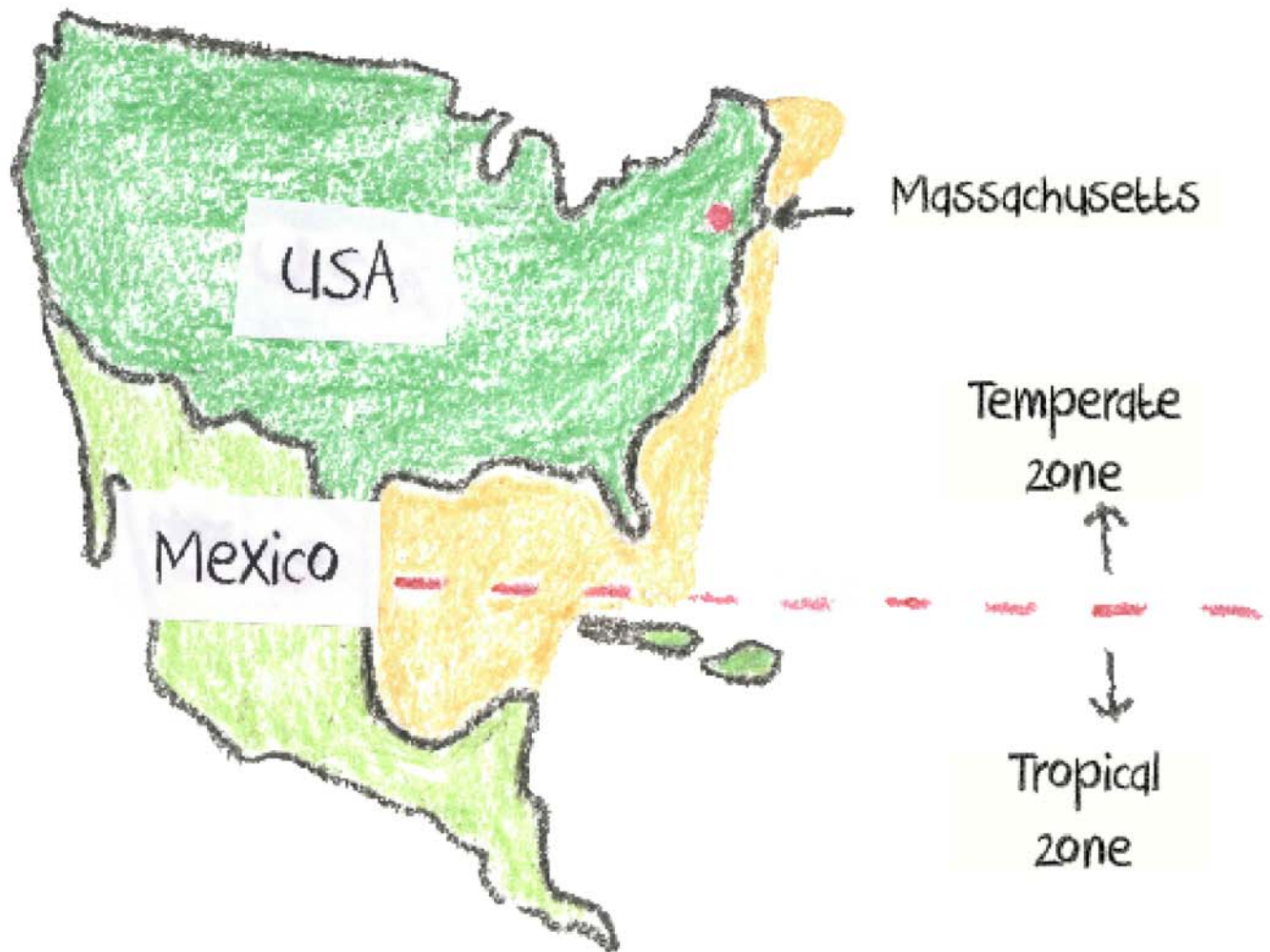


I ask Mom, "It's so cold out; shouldn't this turtle be on its way back south?"

Mom nods. "That's right. Sea turtles that stay in the cold too long can cold stun. Their body temperatures become too low, and they can get very sick and wash up on the beach. We can get warm by bundling up, but turtles depend on the temperature of the water to keep them warm. This is because they are cold-blooded and can't heat themselves."

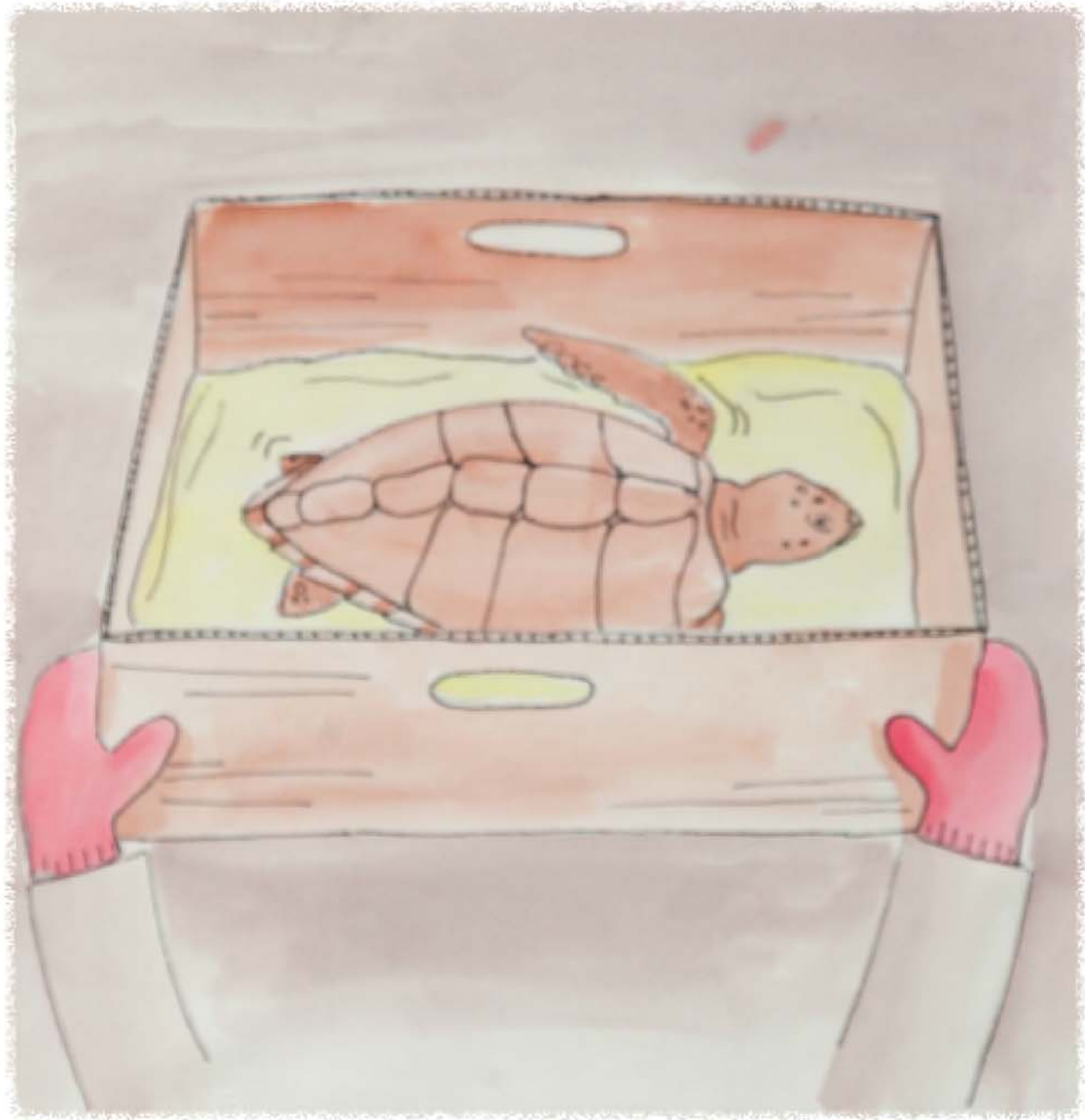
Kemp's Ridley Habitat Map

 = Area where Kemp's ridley sea turtles are found



Kemp's ridleys and other sea turtles migrate north in the summer months when it is warm there. Loggerheads and leatherbacks can swim all the way to Canada! In the fall when it begins to get cold, sea turtles migrate back south where they spend the winter.

The turtle looks sick and very sleepy. I wish I could make him feel better.
"How can we help him?" I ask Mom.



"Don't worry, Jack. We are going to take him to a place where he can get better." I help Mom carry the turtle to our car. Mom carefully puts the turtle in a box with a soft towel inside.

"Can I name him, Mom?" I ask.

Mom laughs. "Sure, Jack," she says.

I think that the turtle is very lucky to have so many people helping him get better. I decide to call him Lucky.

Warm-blooded Animal



Air temperature: 

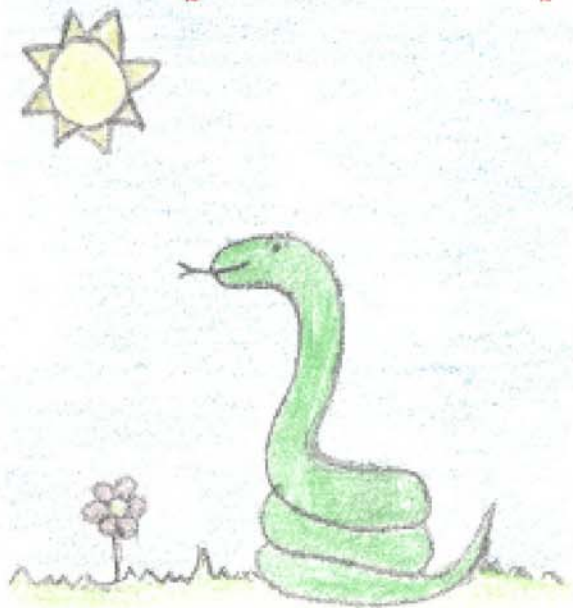
Body temperature: 




Air temperature: 

Body temperature: 


Cold-blooded Animal




Air temperature: 

Body temperature: 



Air temperature: 

Body temperature: 

We drive to Mass Audubon's Wellfleet Bay Wildlife Sanctuary. When we get there, I help Mom bring Lucky inside to a holding area. Inside, a man named Mr. Bob takes a look at Lucky.

"Is Lucky going to be okay?" I ask Mr. Bob.



Mr. Bob says, "Right now, he has hypothermia. That means that his body temperature is very low. For now, we are going to keep him at a safe temperature, and then we are going to send him to the New England Aquarium's Animal Care Center. The experts there will give him a checkup and try to make him feel better."

Many organizations have helped cold-stunned sea turtles from Cape Cod in the last five years!





I am happy that Lucky is going to get help from experts, but I will miss him.

"Will I be able to go visit Lucky?"

"Yes, I can talk to my friends at the Animal Care Center about letting you visit Lucky," says Mr. Bob. "But he might not stay there for long. When he gets better, he will get to fly in an airplane or be driven by a volunteer to where he will be released in the warm water down south."

Rescued from the beach!



Brought into rehab!



Heading home!



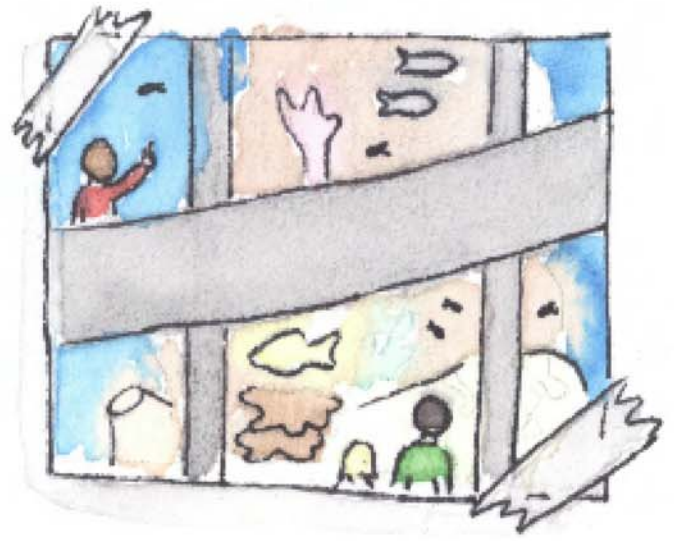
A few weeks later, Mom and I drive all the way to Boston to visit the New England Aquarium before we go to see Lucky in the Animal Care Center. It's a long drive, but the aquarium is so much fun! Before Mom and I go to visit Lucky, we look at all the cool animals in the tanks. We see fish, seahorses, seals, and even penguins!



New England Aquarium

The aquarium has many cool exhibits like the Giant Ocean Tank, penguins, seals, and much more. There are

also shows where you can watch the animals being fed and learn all about them.

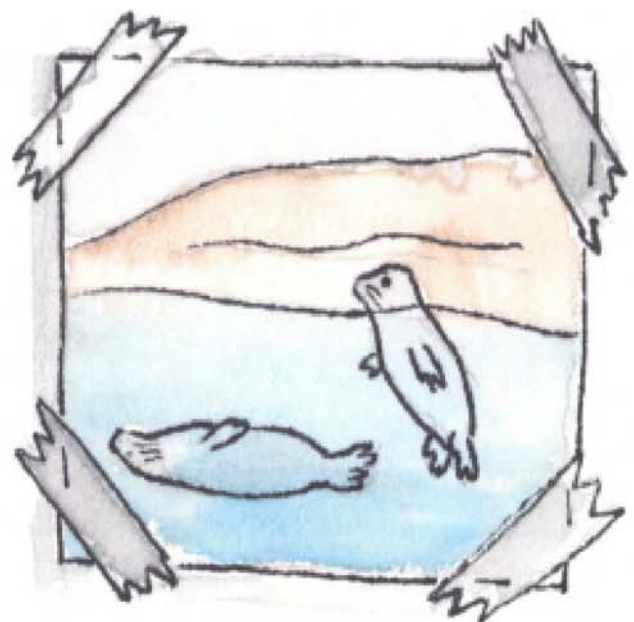


Lunch time for penguins



The aquarium helps to rescue and rehabilitate animals like sea turtles and educates visitors about marine life.

Harbor Seals





We drive for a while longer to the Animal Care Center in Quincy where the Aquarium takes care of the sick sea turtles before they are released. It is like a hospital for sea turtles. Inside, there is a huge room full of big tanks with all kinds of sea turtles swimming around in them. In this room, we meet Ms. Connie, a marine biologist. She is in charge of helping the turtles brought to the aquarium. Ms. Connie explains that a lot of the sea turtles in the tanks are Kemp's ridleys and loggerheads that were cold-stunned, just like Lucky.

It takes many people and groups to save a sea turtle.

Volunteers



Walk the beaches to find turtles and work at aquariums or Mass Audubon.

Drivers and pilots



Transport turtles between the sanctuary, rehab organizations and beaches where they are released.

Marine biologists



Study turtles, teach others about them, and work to protect them.

Veterinarians



Help sick and injured turtles to get better.

Store owners



Donate supplies like sturdy banana boxes for transporting turtles.

Local community



Report stranded turtles and donate supplies

Ms. Connie shows us where Lucky is swimming around. He looks happy and swims over to the side of the tank to say hello.

"Lucky is doing so much better!" says Ms. Connie. "He is taking his medicine and eating very well. As he gets stronger, he can swim longer and catch his own food. If he keeps doing well, we can release him soon. Lucky really is a lucky turtle."



Ms. Connie introduces us to a veterinarian named Dr. Charlie. He takes us into a smaller room and explains how they take care of cold-stunned sea turtles. The room has a metal table and a lot of special equipment in it.

Turtle Testing

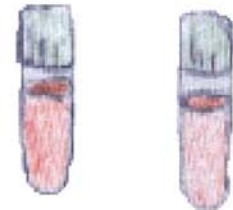
X-ray



Turtles are X-rayed to see if they have broken bones or pneumonia. If the turtle is sick with pneumonia, it will show up as white spots on the X-ray.

Blood tests

Turtles have their blood drawn and tested to learn about their blood sugar and chemistry. This allows veterinarians to see if their organs are functioning.



Heart rate and breathing rate



Turtles' heart rates are measured using a fetal heart monitor. A healthy turtle's breathing and heart rates are slower than a person's rates. A cold-stunned turtle's rates are even slower than a healthy turtle.

A veterinarian will look for external injuries like cuts or injuries to the shell. The vet may also drop a type of stain in the turtle's eyes to look for damage.

Physical exam



↑
a turtle's eye