

# Turtle Talks Activity Book

by Zander Srodes



*Linda Soderquist*



### About the Author

**Zander Srodes** grew up on Palm Island, a bridgeless, barrier island on the southwest Florida coast. When he was 11 years old, he began giving "Turtle Talks" - conservation presentations on sea turtles - at schools, libraries and nature events, and he hasn't stopped. Zander wrote *Turtle Talks* when he was 14, inspired early on by Linda Soderquist, who illustrated the book. He has received numerous awards for his outreach efforts. Zander currently lives in Gainesville, Florida, where he works with the Caribbean Conservation Corporation to raise awareness about sea turtles and the habitats upon which they depend.

You can visit Zander's Facebook page at **Turtle Talks Zander Srodes**.

### About the Illustrator

**Linda Soderquist** lives with her family on Little Gasparilla Island, another bridgeless, barrier island of southwest Florida. As the state's Principal Permit Holder for sea turtle monitoring activities there, she is responsible for collecting nesting data, investigating disorientation incidents, and gathering information on strandings of dead or debilitated sea turtles on the island. Linda is a watercolor artist, who regularly shows her work in galleries and exhibits, and until June 2010 when she plans to retire, she is teaching elementary school in Venice, Florida where she continues to be a source of inspiration for her students and for others.

You can contact Linda at **linist@hotmail.com**.

### Acknowledgments

This book would not have been possible without the support from its inception by many organizations and many "sea turtle lovers" and "nature lovers". Special thanks go to Maran Brainard Hilgendorf, Communications Manager, Charlotte Harbor National Estuary Program (CHNEP), and to friends at the Mote Marine Sea Turtle Conservation and Research Program, the Caribbean Conservation Corporation, and the Coastal Wildlife Club for their thoughtful comments on the text and to the many organizations and individuals whose funding, interest and encouragement have helped keep *Turtle Talks* and its Spanish translation *Charlas de Tortugas* in print.

Thank you to Dr. Supraja Dharini of the Tree Foundation in Chennai, India for asking that the Olive Ridley sea turtle be added to the activity book. Her vision will make it possible for children along the coast of India to enjoy and learn about pelagic reptiles.

Special thanks to Elsa Holderness for her design expertise. With Elsa's talent to arrange each page and upload my text into the computer, *Turtle Talks* is being read by thousands of students around the world in three languages.

Many thanks to Linda Soderquist, who beautifully illustrated both the sea turtle book and the gopher tortoise book printed in 2008. Since I was eleven years old she has been my mentor and made me believe that a kid can make a difference in the environment. Now that I'm older, I want to pass that message on to you!

*Zander*

January 2010

For more information, visit: [www.cccturtle.org](http://www.cccturtle.org), [www.coastalwildlifeclub.org](http://www.coastalwildlifeclub.org), [www.darksky.org](http://www.darksky.org), [www.islandturtles.com](http://www.islandturtles.com), [www.mote.org](http://www.mote.org), [www.MyFWC.org](http://www.MyFWC.org), [www.oceanconservancy.org](http://www.oceanconservancy.org), [www.seaturtle.org](http://www.seaturtle.org), and [www.seeturtles.org](http://www.seeturtles.org)

Turtle Truth... Sea turtles have been on earth for 150 million years... since before the time of the dinosaurs!

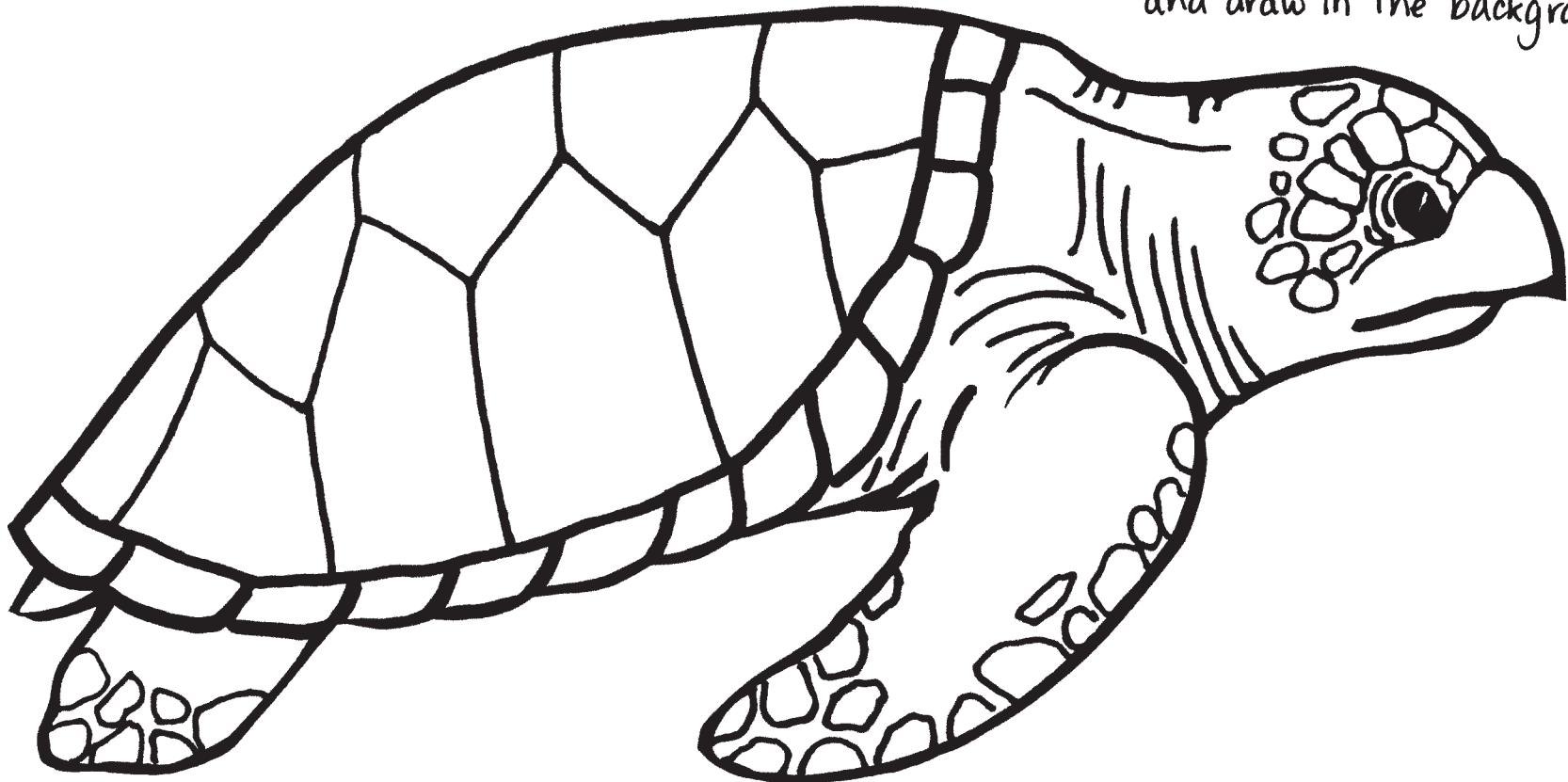


## Loggerhead

*Caretta caretta*

The loggerhead gets its name from its enormous head that is very oversized compared to the rest of its body. The loggerhead uses its strong jaws to crush the shells of clams, snails, and crabs so it can eat the animal inside. This turtle is very well adapted to its marine environment. The loggerhead is the third largest sea turtle and can weigh more than 136 kg or 300 pounds. They are one of the least endangered in comparison to the other species and seem to be everywhere from the oceans around Australia and off the coast of California to the Gulf of Mexico. They can be found in inland bays and as far as thousands of miles off shore. This turtle is very widespread, yet declining in numbers worldwide.

This loggerhead is just returning to the sea after nesting. Color the turtle and draw in the background.

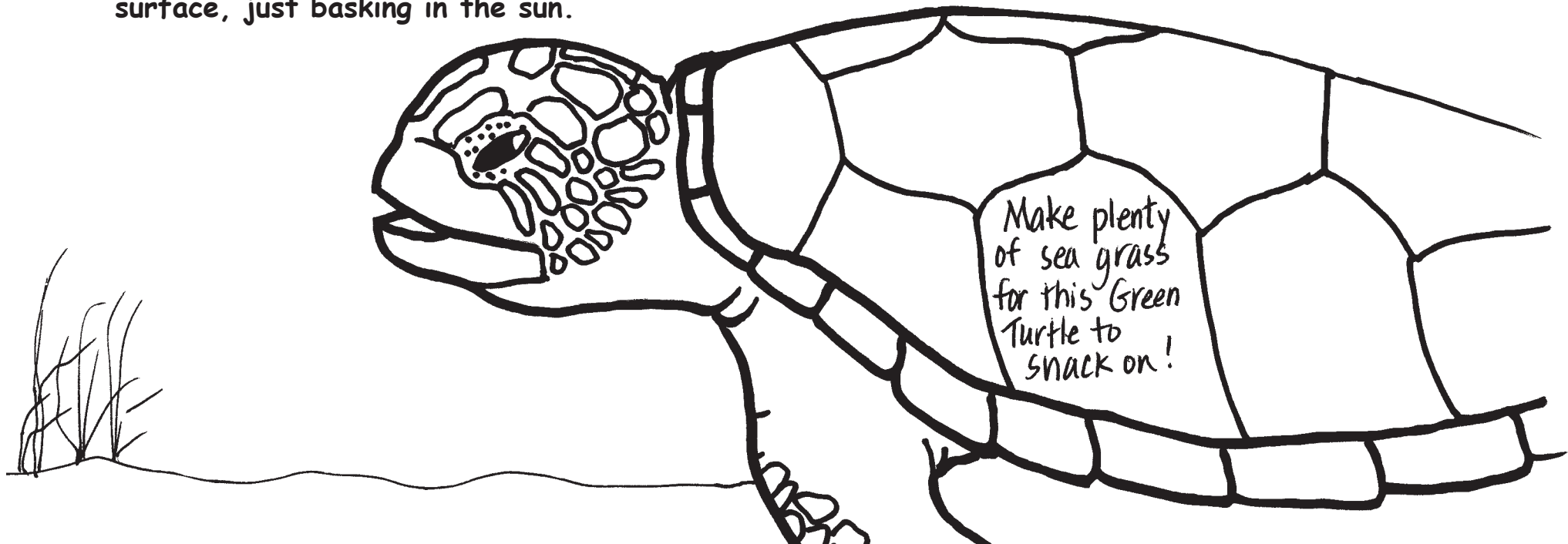


# Green Sea Turtles

*Chelonia mydas*

"Turtle truth... Sea turtle season on Florida's Atlantic coast starts March 1st and continues through October 31st. On the Gulf Coast the season begins on May 1st."

When ocean traders sailed hundreds of years ago, many depended on green sea turtles for meat. Early sailors would capture green turtles, haul them into their ships, and turn them over. The sea turtle would stay alive a long time, and the sailors would have a fresh supply of meat. The green turtle forages in coastal waters and feeds on the sea grasses. The green is about 91 cm or 3 to 4 feet in length and weighs about 159 kg or 350 pounds. Green sea turtles are the second largest sea turtle. The largest concentrations of nesting green turtles occur along the northeastern coast of Australia and off the Caribbean coast of Costa Rica. The green gets its name from the color of its fat, because of its strict dieting habit, with adults eating only sea grasses. This makes the fat an olive green color. One of the odd characteristics of the green turtle is its use of an underwater sleeping shelter that it often returns to each night. The greens have picked up the name "sun bather" because they will sit on the ocean's surface, just basking in the sun.

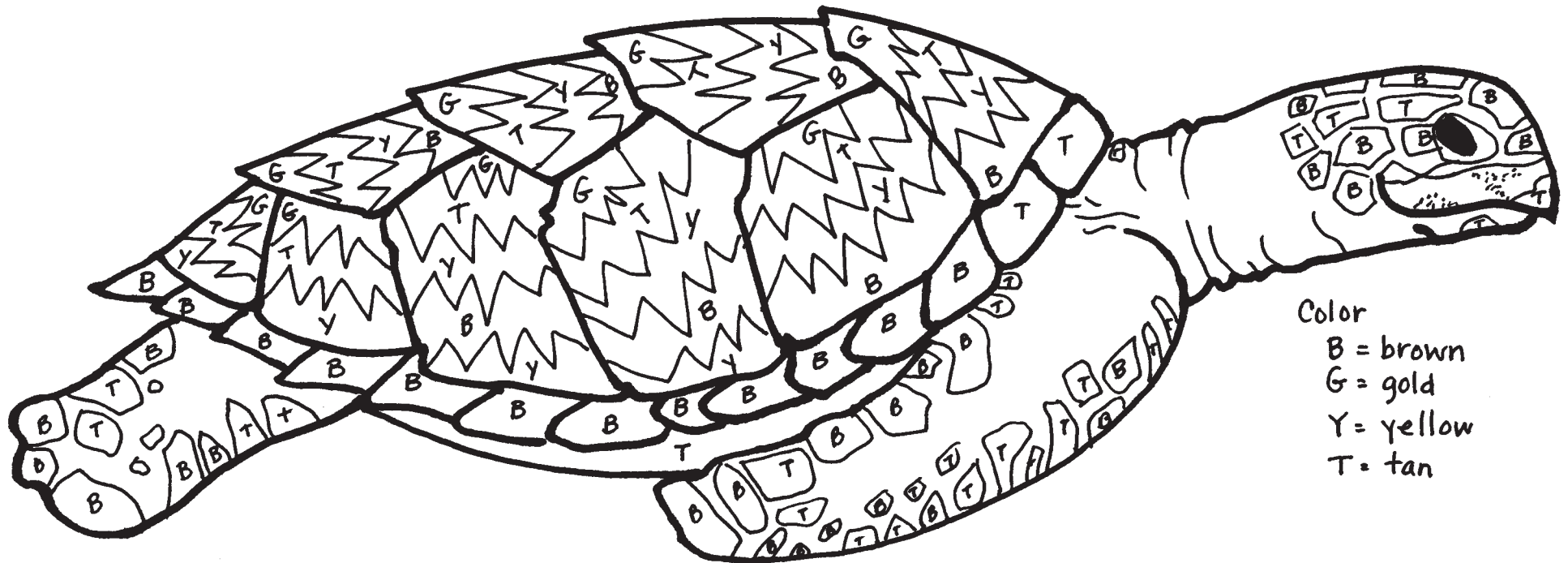


Turtle truth... hatchlings will be boys if the eggs have a cooler temperature surrounding them... and hatchlings will be girls if there are warmer temperatures in the nest.

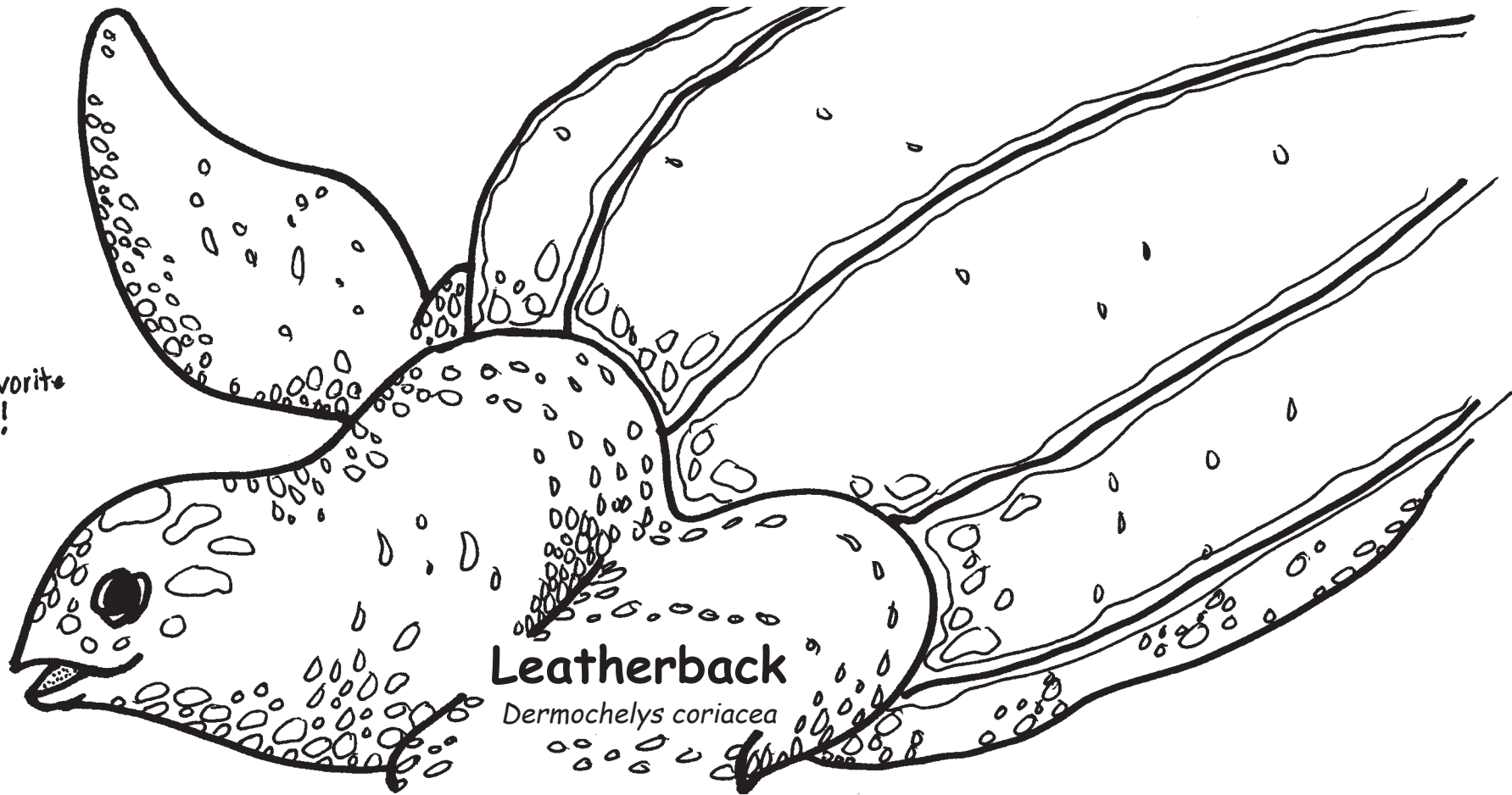
## Hawksbill

*Eretmochelys imbricata*

The hawksbill is often sought after by poachers because of its beautiful carapace, or top shell. The carapace itself is yellow and brown. The scales overlap like roof shingles to make a very ornate pattern. This sea turtle measures about 75 cm or a little less than 3 feet long and usually weighs around 45 kg or 100 pounds at adulthood. Their diet consists of poisonous sponges. Scientists have not figured out yet how hawksbills can eat these without any ill side effects. When a hawksbill chooses a nesting site, it tends to select a very isolated spot where there are lots of roots and shrubs. They do this to make it more difficult for predators to get their nest.



Draw the  
Leatherback's favorite  
food right here!



## Leatherback

*Dermochelys coriacea*

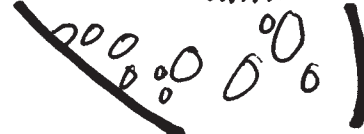
The leatherback is the largest in the sea turtle family, growing to be almost 2.4 m or 8 feet long and weighing up to 912 kg or 2000 pounds. The turtle's overall color is black, and it is the only sea turtle that does not have a hard carapace. The leatherback is a great traveler going for thousands of miles, and a deep diver. A female may nest on a beach in South America and then follow the Gulf Stream all the way up into Nova Scotia, Canada. Some leatherbacks do nest in Florida on the east coast and sometimes even in the Panhandle. The leatherback's diet consists of jellyfish, and one of its favorites is the poisonous Portuguese Man-o-war.


Turtle truth...



...sea turtles may live to be the oldest living

100 0 0000  
be 100 years old. That makes them among  
vertebrate animals!



 Turtle Truth... Birds, crabs, raccoons, armadillos, foxes, ants, bobcats, coyotes, and humans are possible predators hatchlings must avoid.

## Kemp's Ridley

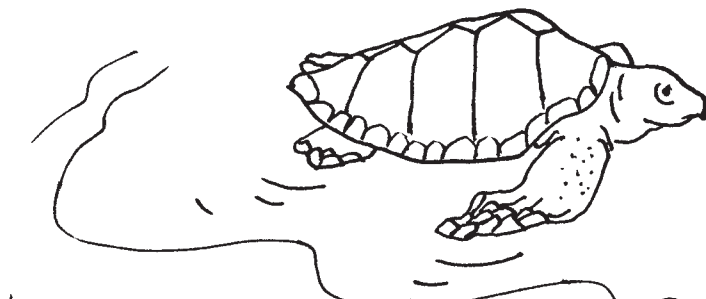
*Lepidochelys kempii*

The Kemp's ridley is the smallest sea turtle, at about 71 cm or 28 inches in length. The hatchlings are only about 5 cm or 2 inches and dark in color. When they become adults, their color changes to an olive green. This turtle is known for its heart-shaped carapace, which is about as wide as it is long. The Kemp's ridley has only been identified as its own species since 1963. Unlike most other sea turtles, the Kemp's ridley nesting event takes place during the day and in a large group, called an "arribada", mostly on a single beach in Mexico. This sea turtle feeds on small crustaceans. The Kemp's ridley is on the verge of extinction and is the most endangered of the sea turtles.

## Olive Ridley


*Lepidochelys olivacea*

The average adult Olive ridley weighs around 35 to 45 kg or 75 to 100 pounds. They have rows of 6 or more scutes on the carapace that measures 62 to 70 cm or 2 to 2.5 feet. They can be found in the tropical and subtropical waters of the Pacific, Indian, and Atlantic Oceans. The Olive ridley gets its name from the olive green color of its carapace. Like its cousin the Kemp's ridley, Olive ridleys nest in large groups, but at night. The beaches of Orissa, India and of Nancite, Costa Rica are among the world's major sites of Olive ridley "arribadas". The Olive ridley's diet consists of crustaceans, squid, small fish and sea grass. They swim great distances, thousands of miles across the ocean, to come back to their nesting beaches. The number of Olive ridleys nesting during an "arribada" is a measure of the ocean's health and ecological balance.



Draw the favorite food of the Ridleys in the water!



 Turtle Truth... Olive Ridleys nest on the beaches between December and March





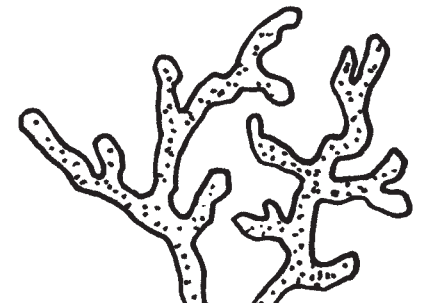
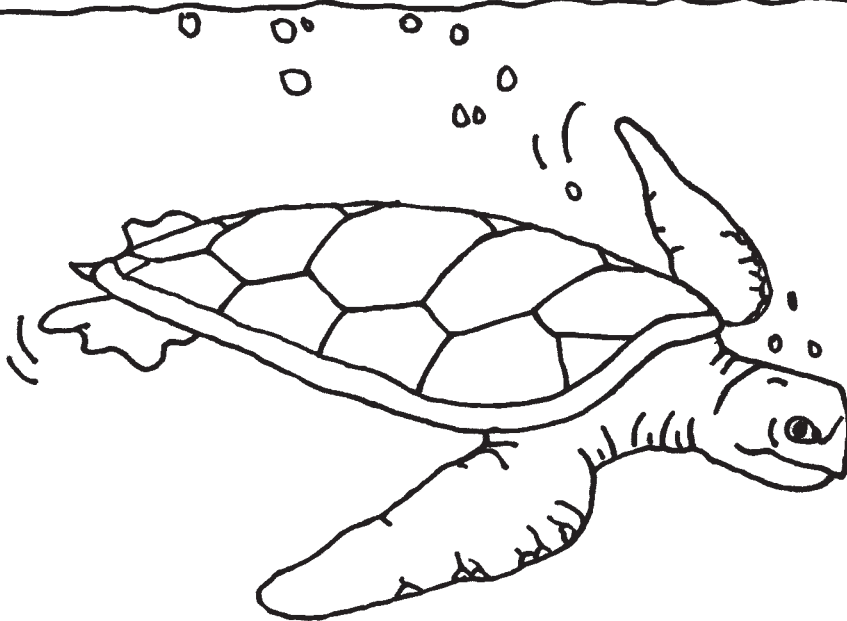
Turtle Truth... Australian Flatbacks were once considered Green Sea Turtles.

## Australian Flatback Sea Turtle

*Natator depressus*

The elusive Australian Flatback sea turtle is only found in the waters off northern Australia. Their range is very limited; they never travel far from their nesting area. The Flatback is different from most sea turtles, which are oceanic and swim vast distances throughout their lives.

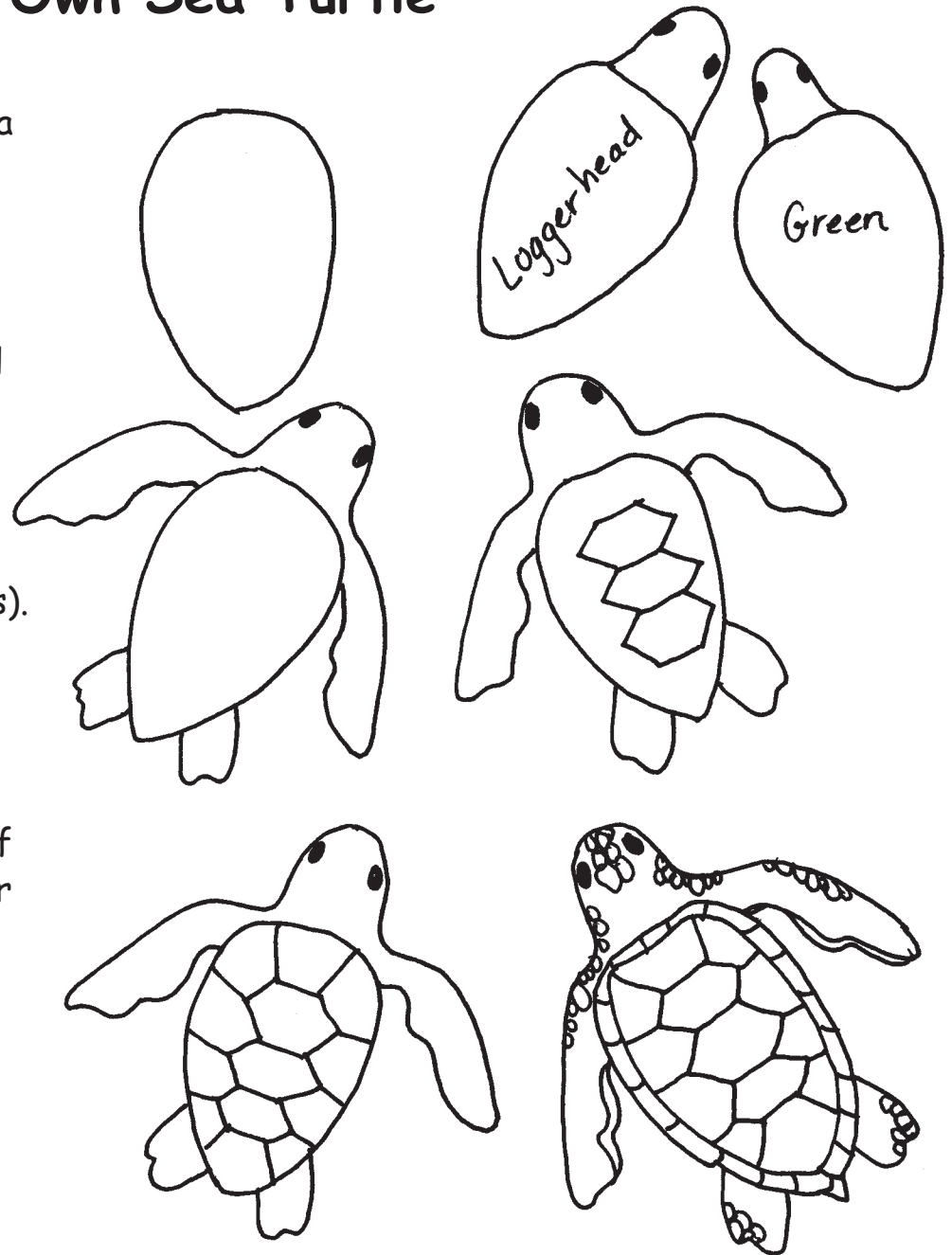
The adult Flatbacks are rarely seen. This is due to the fact that the aquatic surroundings they inhabit are very murky. The Flatbacks share their marine environment with a fierce predator, the saltwater crocodile. Flatbacks have a unique ability to stay submerged under water longer than most other species of sea turtles. This allows them more time to hunt for their favorite crustaceans. The Flatback is a very isolated species only being identified as a separate species in the last twenty years.






# Draw Your Own Sea Turtle

1. Make an oval with a flat top.
2. Add a head. If you are making a loggerhead sea turtle, make the head **BIG**, like a log! If you are making a green sea turtle, the head will be smaller.
3. Add eyes.
4. Front flippers are next. Sea turtles cannot pull their flippers and head into their shells, so there will be more forelimb (flipper) showing.
5. Next come the "scutes". Scutes are hard scales on the sea turtle's shell. Start with three hexagons (hexagons are six sided shapes).
6. Add line segments from your hexagons.
7. If you've done this part right, your turtle will have thirteen scutes. All sea turtles have scutes, except leatherbacks.
8. If you want to get fancy, you can add a band of smaller scales around the thirteen scutes. Your sea turtle will have "leatherly" looking skin.
9. If you want a boy turtle, add a big tail, but if your is a girl, the tail will just poke out a bit from under the shell.



 Turtle truth... Some females may nest many times in a season, laying hundreds and hundreds of eggs.

 Turtle truth... sea turtles migrate thousands of miles in a year!


## WORDSEARCH

See if you can find the words listed below in the WORDSEARCH. The words go up, down, across, diagonally, or backwards. Once you find all the words, think about what each has to do with sea turtles and efforts to protect them. Use your glossary to help you!

LOGGERHEAD	HAWKSBILL
KEMPS RIDLEY	OLIVE RIDLEY
HATCHLINGS	SEAGRASS
ENDANGERED	JELLYFISH
BEACH	SEA TURTLES
LIGHTS	SHORELINE
LEATHERBACK	PLASTRON
GREEN	CARAPACE
HABITAT	ESTUARY
POLLUTION	SCUTES
MIGRATE	POACHERS
NEST	PREDATORS

Can you find the extra mystery word?

S	L	E	E	I	U	I	F	D	U	L	C	N	C	D	L
N	O	R	T	S	A	L	P	S	Z	P	S	H	N	O	E
E	G	S	E	T	U	C	S	R	E	H	C	A	O	P	O
S	G	V	B	G	O	N	H	A	W	K	S	B	I	L	L
T	E	H	E	N	I	L	E	R	O	H	S	I	T	E	S
Y	R	A	U	T	S	E	I	G	E	N	O	T	U	E	E
I	H	C	A	E	B	P	T	V	E	Y	P	A	L	E	A
Y	E	L	D	I	R	S	P	M	E	K	P	T	L	N	G
H	A	T	C	H	L	I	N	G	S	R	R	E	O	D	R
I	D	E	C	A	P	A	R	A	C	U	I	S	P	A	A
T	E	T	A	D	L	I	G	H	T	S	N	D	G	N	S
K	C	A	B	R	E	H	T	A	E	L	N	E	L	G	S
M	S	R	O	T	A	D	E	R	P	N	C	A	E	E	E
Y	I	G	T	H	H	S	I	F	Y	L	L	E	J	R	Y
N	U	I	M	J	K	M	S	C	R	G	I	S	P	E	G
W	E	M	R	T	S	F	J	O	J	C	G	E	D	D	K

 Turtle truth... Female sea turtles provide no care for their eggs, once they are laid.

## The Life Cycle of the Sea Turtle

It all begins when the mother sea turtle works her way up the beach to lay her eggs. As the mother crawls in the sand, she leaves a very distinct track. When she finds the area where she wants to lay her eggs, she then begins to dig a hole with her rear flippers. She digs about two feet down. Once the hole has been completed, she starts to lay her eggs. The average number of eggs laid by a sea turtle is one hundred. When the mother has finished laying her eggs, she fills the hole up with sand and pats it down. She then uses her front flippers to throw sand over the nesting area, possibly to disguise the nest from predators. Finally, she begins to pull herself back down the beach to the water. She will not ever return to see her baby hatchlings. The eggs will sit in their nest, protected only by the sand that covers them, for about two months. During this time, nests can be destroyed by any one of many predators, including man. When the hatchlings begin to emerge from their eggs, they use a specially designed tooth called the egg tooth. It takes several days for all the hatchlings to break free from the eggs that have been their home. They remain in the nest together. When they are finally ready to head to the water, they crawl out of the nest at night when they have felt the sand cool. When the hatchlings make it to the surface, their instincts tell them to look for a bright light. In nature, the brightest glow comes from the open horizon over the water, which is reflecting light from the moon and stars. The baby turtles will move toward this lighter area until they reach the water. Even this part of their journey can be dangerous, with many predators attacking them as they crawl to the water. Once the hatchlings are in the water, and past the breakers, they begin to swim out towards the sargassum weed lines. There the turtles will stay for some years swimming with the ocean currents camouflaged by the seaweed, feeding and growing until they reach the size of a dinner plate. Most juvenile turtles then spend some years in nearshore waters and in estuaries and lagoons. An estuary is an area where fresh water of a river meets the salt water of a bay. Many years later, once a female turtle is at full size it will mate and hopefully come back to land to nest and start the cycle over again.

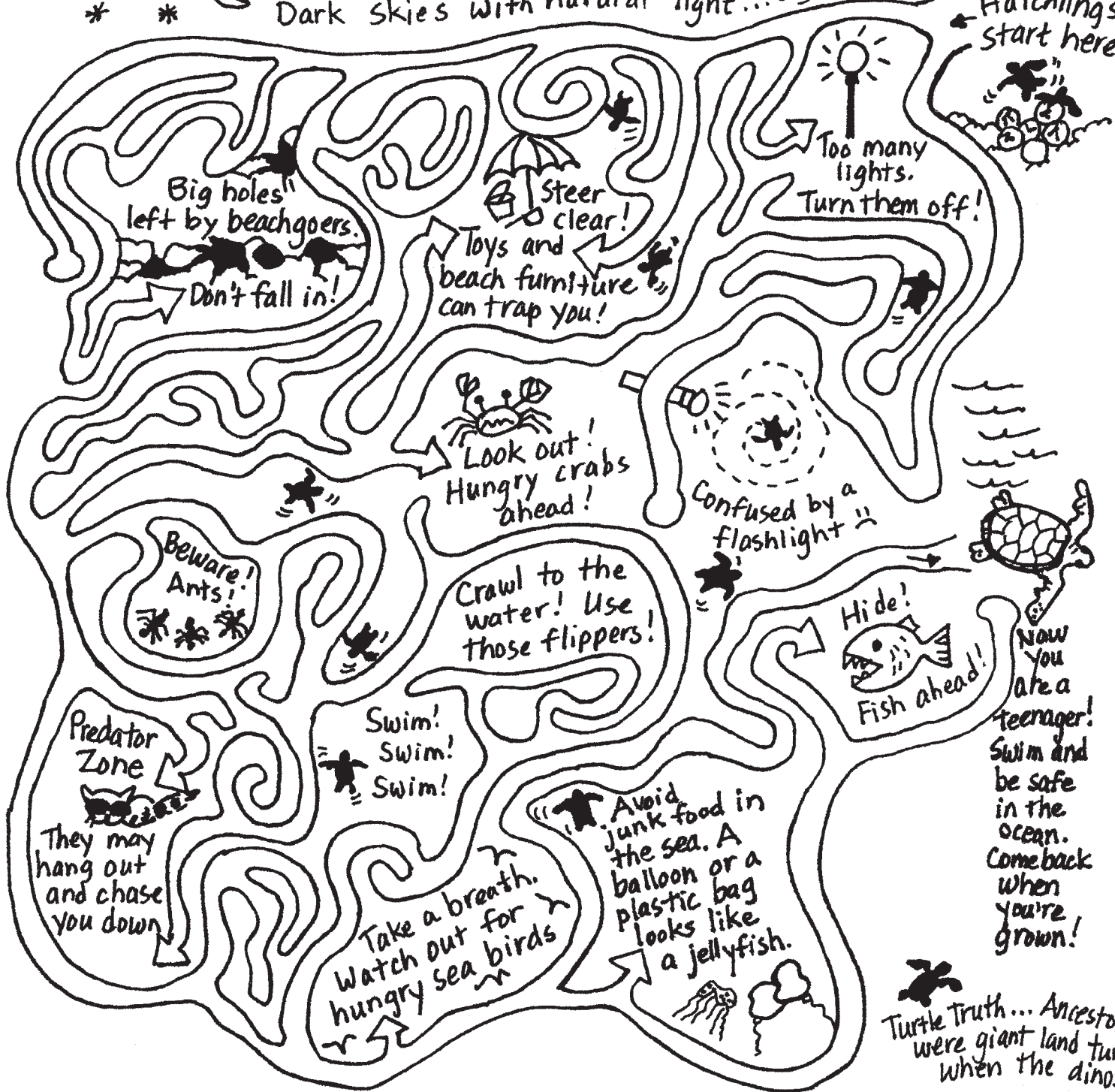


Draw and color some other hatchlings leaving their eggs.



\* \* \* \* \*  
Dark Skies with natural light... a good thing!

Hatchlings start here.



Big holes left by beachgoers.  
Don't fall in!

Steer clear!  
Toys and beach furniture can trap you!

Too many lights.  
Turn them off!

Look out!  
Hungry crabs ahead!

Confused by a flashlight

Beware!  
Ants!

Crawl to the water!  
Use those flippers!

Hide!  
Fish ahead!

Now you are a teenager!  
Swim and be safe in the ocean.  
Come back when you're grown!

Predator Zone  
They may hang out and chase you down

Swim!  
Swim!  
Swim!

Take a breath.  
Watch out for hungry sea birds

Avoid junk food in the sea. A balloon or a plastic bag looks like a jellyfish.

See if you can help the hatchlings find their way to the sea. They must make it to a healthy habitat in the ocean, where they will find plenty of food. Beware of all the threats on the beach and in the sea that might harm them.

Turtle Truth... Ancestors of today's sea turtles were giant land turtles that entered the sea when the dinosaurs lived.



Turtle truth... in some cultures, egg collectors gather sea turtle eggs from their nests to eat and sell in markets. Most places it is illegal to take the sea turtle eggs.

## The Sea Turtle's Body

The sea turtle has been around since prehistoric times and really has not changed much. The turtle's most distinctive feature is its shell. The turtle's shell is attached to the turtle by the backbone vertebrae, at the top of the shell. The shell grows with the turtle and never cramps the turtle. The top of the shell is called the carapace and the bottom is known as the plastron. On the carapace of most sea turtles, you see the scutes which fit against each other like floor tiles. In Hawksbills, though, they overlap each other. Unlike the fresh water turtles, sea turtles cannot pull their head or limbs into their shells because of tendons attaching them. The sea turtle has limbs that are flippers and the front flippers are much stronger than the back. Sea turtles have evolved to cope with being in the salt water all the time. They are able to cry out the salt that they consume, and this helps prevent dehydration.

Unscramble... to make words related to the sea turtle's body...

leshl \_\_\_\_\_

apecacar \_\_\_\_\_

slapnotr \_\_\_\_\_

tessuc \_\_\_\_\_

blism \_\_\_\_\_

last \_\_\_\_\_

slipepfr \_\_\_\_\_

cobbeakn \_\_\_\_\_

dahe \_\_\_\_\_

treaveerb \_\_\_\_\_

stonedn \_\_\_\_\_

tradhoideyn \_\_\_\_\_

# Can You Label the Turtle's Anatomy?

Turtle truth... Sea turtle eggs are about the size and shape of ping pong balls... except they are more "leathery" so they don't break when laid.

The back of a turtle is covered with bony plates called scutes, which form the CARAPACE.

The front flipper is called the FORE LIMB.

The back flipper is called the HIND LIMB.

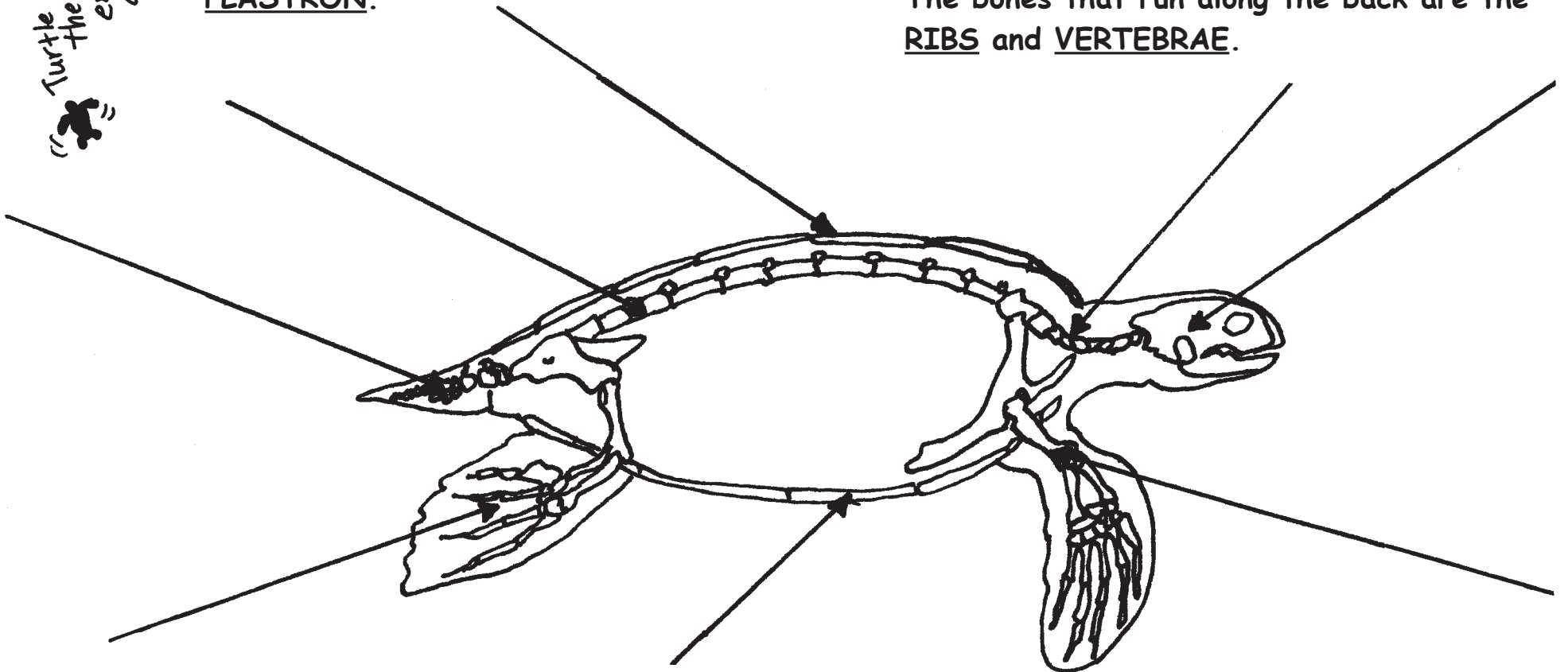
The underside of a turtle is called the PLASTRON.

The bones in the tail are called the TAIL VERTEBRAE.

The bones in the neck are called the NECK VERTEBRAE.

The soft parts of the head are protected by the SKULL.

The bones that run along the back are the RIBS and VERTEBRAE.





11 Turtle truth... sea turtles are the second largest reptiles in the world... by weight!

# Dangers in the Water

One of the biggest dangers affecting sea turtles is trash in the water. Many small turtles can get their heads caught in the plastic rings that held six packs of soda. Among other dangers, the largest turtle, the leatherback, diets on jellyfish. When the leatherback sees a plastic bag in the water, it might go after it thinking it's found a jellyfish. The bag will be trapped in its throat or digestive system. Fishing line and fishing hooks also are very dangerous because the sea turtles can ingest them.

Another danger in the water is long-line fishing and big trawling nets. Discarded lines from crab pots can become wrapped around a flipper, causing great damage and death. Now fishing nets have TEDs - "turtle excluder devices" - that allow the turtle to escape from a trawl net, and still allow fishermen to keep their catch. Many countries around the world are not using TEDs yet, but when used correctly, they are saving sea turtles all over the world.

How long does it take for each bit of trash to disappear? Match the item to the time.



- Aluminum can
- Plastic six-pack ring
- Disposable Diaper
- Foam cup
- Microfilament fishing line
- Apple Core
- Glass bottles
- Newspaper

- 600 years
- 400 years
- 50 years
- No one knows!
- 6 weeks
- 2 months
- 200 years
- 450 years

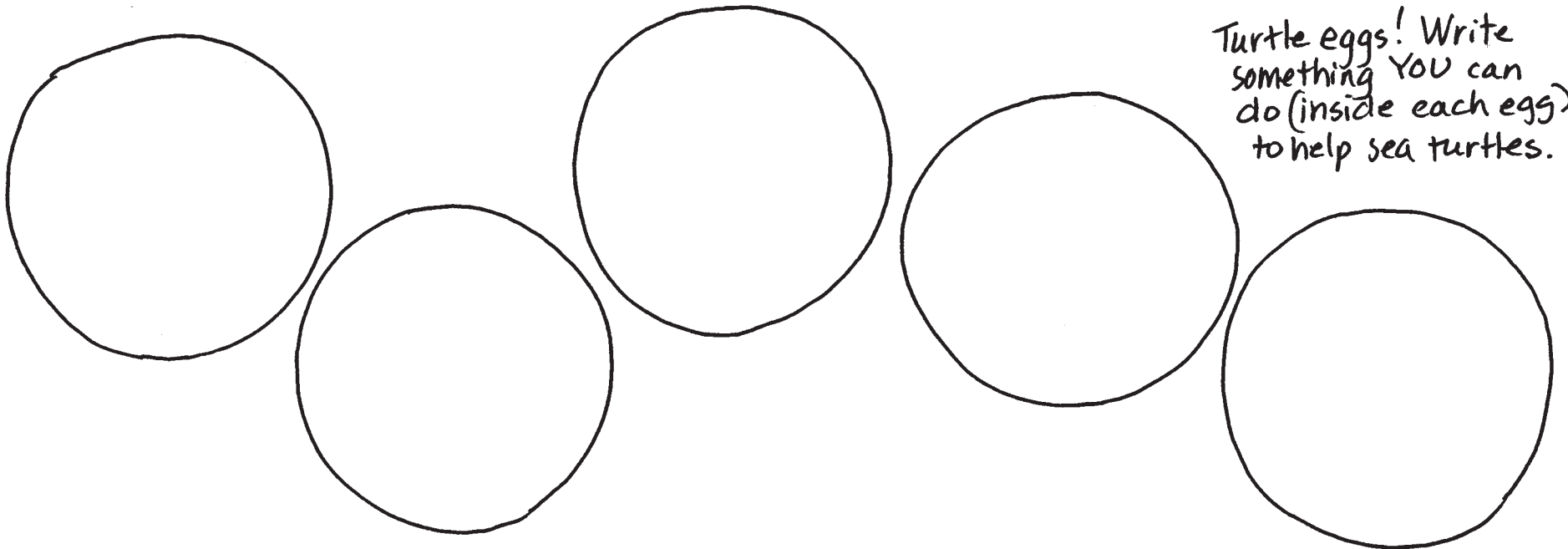
Answers: fishing line 600yrs, diaper 450yrs, 6 pack ring 400 yr., aluminum can 200yrs, foam cup 50yrs, newspaper 6 wks., apple core 2 mo., glass... no one knows!

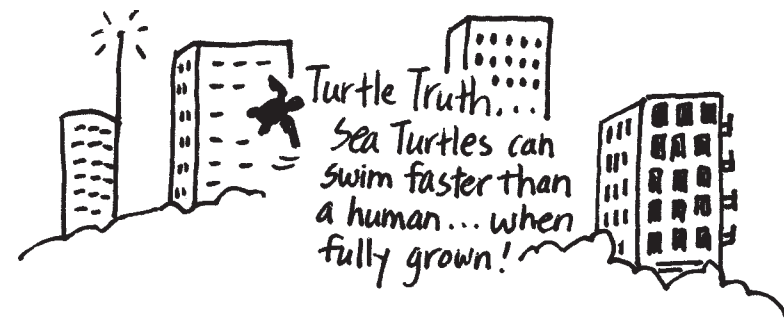
*Turtle Truth... adult male and female sea turtles are about the same size, except males have longer, thicker tails and longer claws.*



## What Kids Can Do to Help

The most important thing kids can do to help sea turtles is to be aware and knowledgeable and to share that knowledge with other people. A big thing young people can do is to organize beach cleanups. If you cannot do that just make sure you are not adding to the problem. When you're out in the boat or on the beach, make sure you have a place to put your trash and used fishing line. If you are all really active, you want other people to be as involved as you are to make a difference. Start programs where you can go to different schools and libraries and try to get people as interested as you. The turtle population is diminishing, and it is mostly a result of not understanding the consequences of our actions. People will listen if you give them the information. Most people aren't trying to hurt the sea turtles. They just don't know any better. If you see a turtle on the beach, you should not touch it or get near it. If the turtle is nesting, then just stay back and leave her alone. If the turtle seems to be in distress, then locate a local environmental group or a beach permit holder who has government permission to work with turtles.

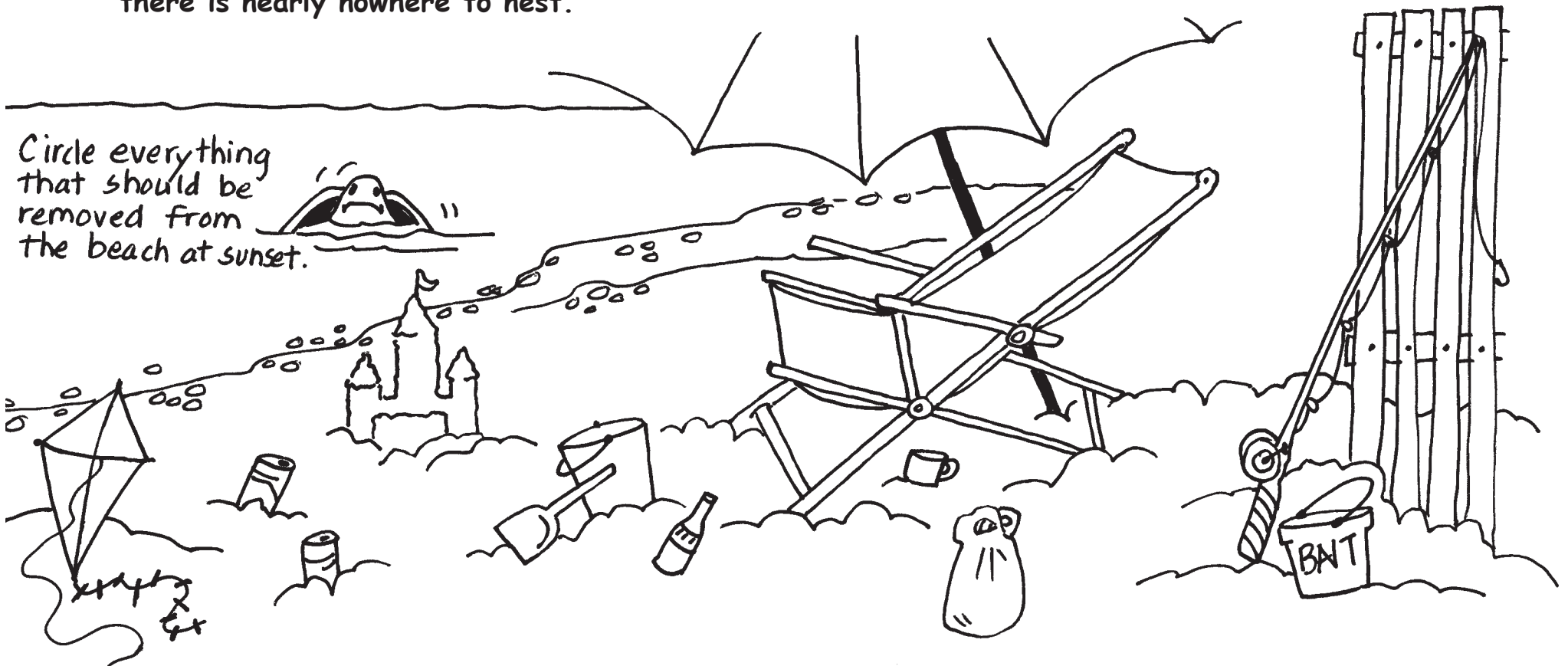




Turtle Truth...  
Sea Turtles can  
swim faster than  
a human... when  
fully grown!

## No Place to Nest


When you are down on the beach, now what do you see? Large apartment buildings, houses, and hotels are taking up most of our beaches and leaving only a small piece of the beach left. Then this small strip is covered with beach furniture. Where the sea turtles lay their eggs, there will be thousands of people walking over the same spots. Also illuminating the beach from these houses and apartments are very bright lights attracting hatchlings away from the water. Once there were miles and miles of beach for sea turtles to lay their eggs without any man made troubles - now there is nearly nowhere to nest.



Circle everything  
that should be  
removed from  
the beach at sunset.



Use this page to draw turtles, keep a journal of your sea turtle encounters, or make a list of things you can do to help our coastal environment.

 Turtle truth... a sea turtle eggshell is full of tiny holes that you cannot see. Oxygen can pass through these holes to the young inside, even when they are buried in the sand!

G  
L  
O  
S  
S  
A  
R  
Y

**Arribada** - Spanish for Arrival, used to refer to a mass, synchronized nesting of sea turtles.

**Carapace** - The top portion of the turtle shell.

**Conservation Tourism** - Travel with the goal of supporting efforts to protect endangered species and habitats.

**Crustaceans** - Lobsters, shrimp, and crabs that have hard shells, jointed legs, and live underwater.

**Endangered** - When a species is in danger of becoming extinct.

**Estuary** - A place where fresh water and salt water meet, where a river flows into the sea.

**Extinct** - When the last living member of a species dies and is gone forever.

**False Crawl** - When a mother turtle comes up on the beach but doesn't make a nest.

**Green Turtle** - An endangered sea turtle named for the green body fat under its shell.

**Hatchlings** - Baby turtles that have just come out of their shells.

**Hawksbill Turtle** - An endangered sea turtle with a hook shaped beak, killed for its shell.

**Kemp's Ridley Turtle** - The smallest and most rare of the endangered sea turtles.

**Leatherback Turtle** - The largest of the endangered sea turtles. It gets its name from the leathery covering on its carapace.

**Loggerhead Turtle** - A threatened sea turtle, named for the size of its head.

**Migration** - Traveling from one area to another, sometimes for food or to mate.

**Olive Ridley Turtle** - A small sea turtle named for the olive green color of its heart shaped shell.

**Plastron** - The bottom of the turtle shell.

**Poachers** - Humans that hunt animals illegally. Laws in the U.S. and international laws help to protect endangered and threatened animals from begin hunted and killed.


**Predators** - Animals that hunt and eat other animals for food.

**Scutes** - The scales that cover a turtle shell.

**Sea Grass** - Grass that grows under water, usually in a large area called a bed. A good source of food and habitat for many types of sea life.

**Threatened** - At risk for becoming endangered, and possibly headed towards extinction.

**Turtle Excluder Device** - TED is a device that allows turtles to escape from a shrimp net, while keeping the shrimp in.

 Turtle truth...  
Sea turtles  
must breathe  
air, like all  
reptiles!

*Turtle Talks and Charlas de Tortugas, revised 2010*

# **TURTLE TALKS** and **CHARLAS DE TORTUGAS**

These books have been reprinted by Coastal Wildlife Club as part of our Public Outreach Program.

Estos libros han sido impresos por Coastal Wildlife Club como parte de nuestro Programa de Alcance al Público.

[www.coastalwildlifeclub.org](http://www.coastalwildlifeclub.org)  
*Continuing to increase awareness of our coastal resources.*

We received generous support from the Gulf Coast Community Foundation of Venice,

Recibimos el apoyo generoso de la Gulf Coast Community Foundation of Venice,

[www.gulfcoastcf.org](http://www.gulfcoastcf.org)  
*We build strong communities through leadership, partnership, and endowed philanthropy.*

From the Tampa Bay Estuary Program through the Anna Maria Island Turtle Watch,

Del Tampa Bay Estuary Program por medio del Grupo Anna Maria Island Turtle Watch,

[www.tbep.org](http://www.tbep.org)  
*A Partnership for a Healthy Bay.*

And from the Charlotte Harbor National Estuary Program supporting the project since its first printing in 2004 in English and in 2006 in Spanish.

Y del Charlotte Harbor National Estuary Program apoyando este proyecto desde la primera impresión del libro en 2004 en inglés y en 2006 en español.

[www.chnep.org](http://www.chnep.org)  
*The CHNEP is a partnership working together to protect the natural environment from Venice to Bonita Springs to Winter Haven.*

*Turtle Talks* may be downloaded from the CHNEP website.

