

Sea Turtle Adventures II

The adventure continues...

An Activity Book for All Ages



Welcome to Sarasota County!

The beautiful beaches and surrounding waters of Sarasota County provide critical **habitat** for important populations of **threatened** and **endangered** sea turtles. We are honored that many sea turtles make Sarasota County their home year-round, while other sea turtles **migrate** to our beaches from hundreds of miles away to find mates and nest.

Each year between May 1 and Oct. 31, adult female sea turtles crawl out of the Gulf of Mexico to lay approximately 100 eggs in a sandy nest on our beaches. The **clutch** incubates for almost two months until the **hatchlings** **emerge** one night and make their way to the Gulf. During this special time of year, there are many things you can do to help and protect these magnificent animals.

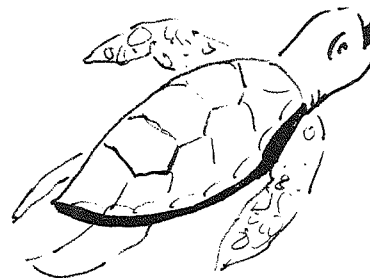
LIMIT LIGHTING: Lights on the beach confuse and **disorient** sea turtles. Both interior and exterior building lights can attract sea turtles away from the water. Fishing lamps, flashlights and camera flashes can also disrupt the natural sea-finding ability of sea turtles, especially the tiny hatchlings. Too often **disorientations** result in serious injury or death. You can help prevent disorientations by keeping beaches dark for sea turtles.

REMOVE OBSTACLES: Turtles can easily become trapped in beach furniture, recreational equipment, tents and toys, or fall into deep holes in the sand. You can provide a more natural and safe shoreline for the turtles to nest by removing all items from the beach each night. Also, remember to leave the beach as you found it by knocking down sandcastles, filling in holes, and picking up garbage, especially plastics, which can be mistaken for food by sea turtles.

We hope you enjoy learning more about sea turtles in this activity book. Thank you for sharing the shore and helping to make our beaches more turtle-friendly!

Sincerely,

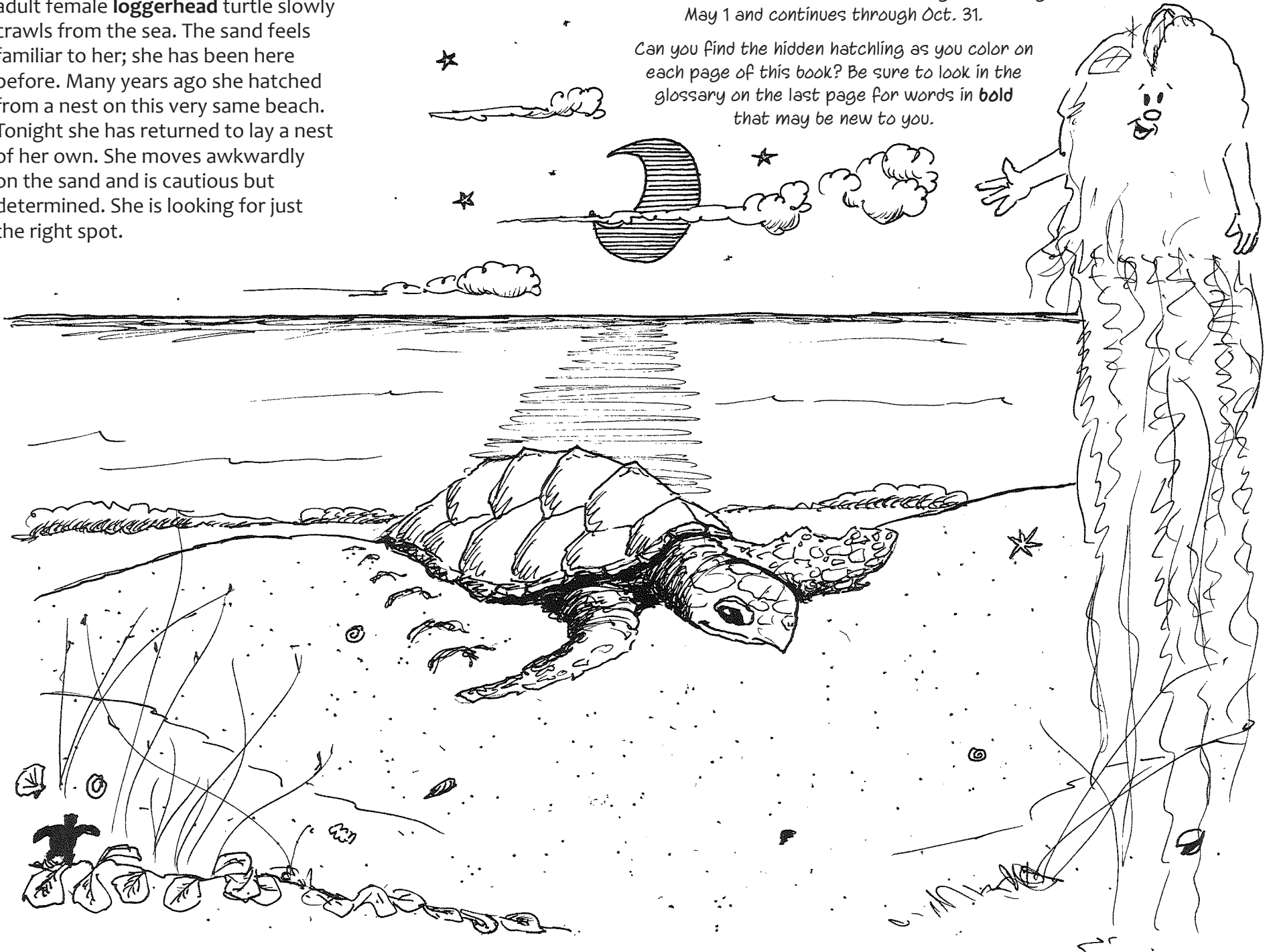
Your Friends at Sarasota County



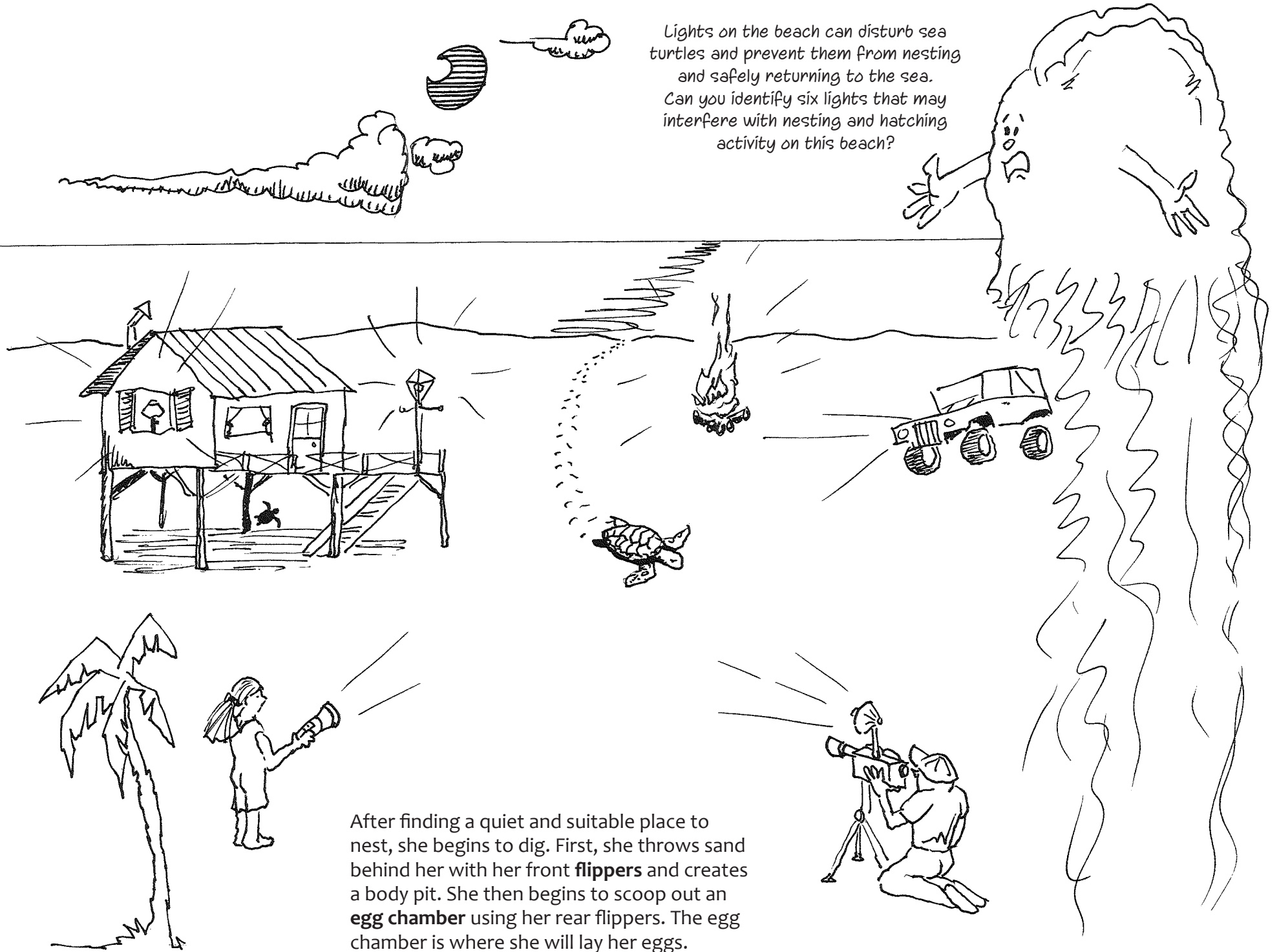
On a star-filled moonlit night, an adult female **loggerhead** turtle slowly crawls from the sea. The sand feels familiar to her; she has been here before. Many years ago she hatched from a nest on this very same beach. Tonight she has returned to lay a nest of her own. She moves awkwardly on the sand and is cautious but determined. She is looking for just the right spot.

Hi, I'm Jolly the jellyfish! I'll be your guide as you learn more about sea turtles. Sea turtle nesting season begins May 1 and continues through Oct. 31.

Can you find the hidden hatchling as you color on each page of this book? Be sure to look in the glossary on the last page for words in **bold** that may be new to you.



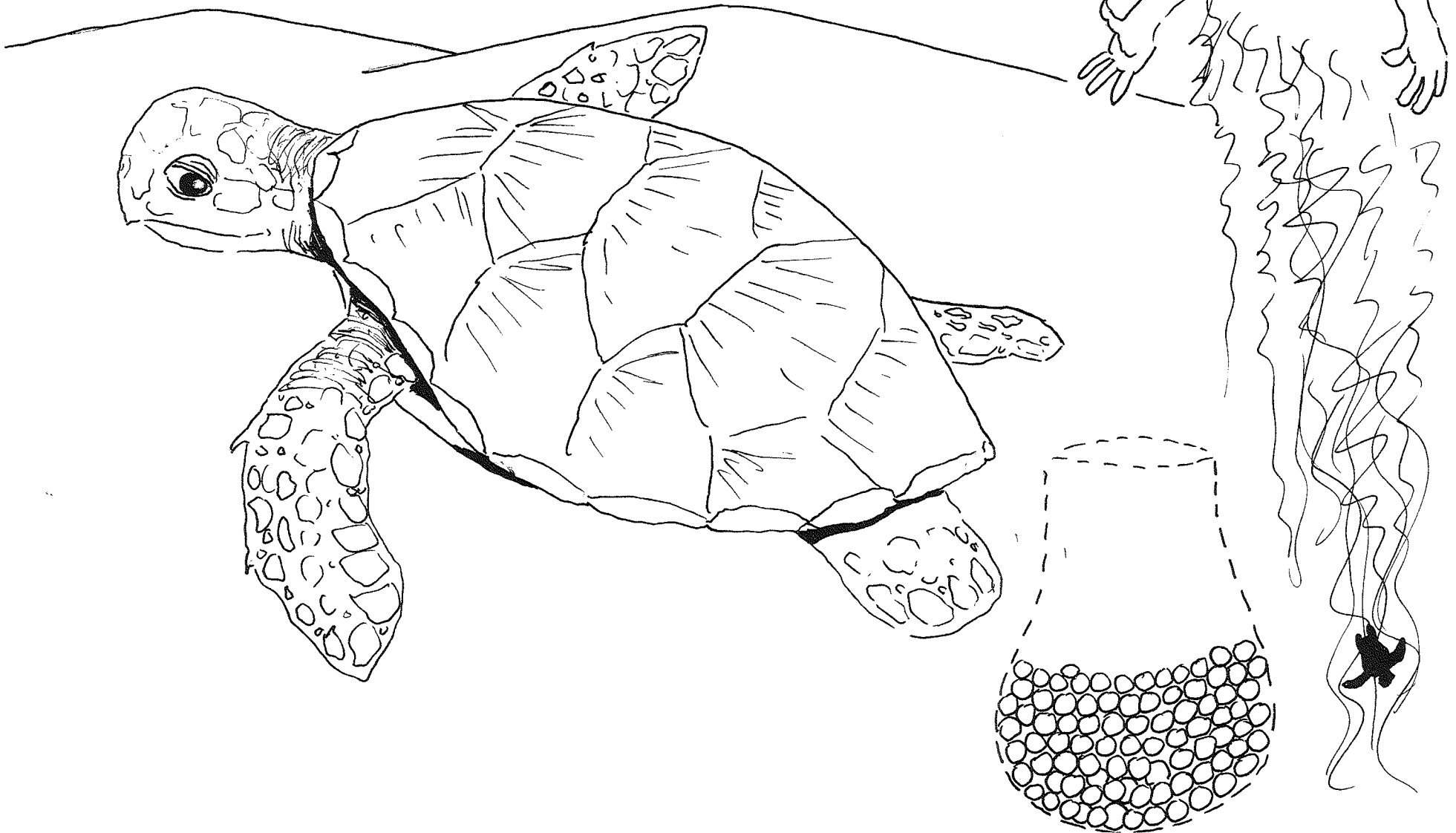
Lights on the beach can disturb sea turtles and prevent them from nesting and safely returning to the sea. Can you identify six lights that may interfere with nesting and hatching activity on this beach?



After finding a quiet and suitable place to nest, she begins to dig. First, she throws sand behind her with her front **flippers** and creates a body pit. She then begins to scoop out an **egg chamber** using her rear flippers. The egg chamber is where she will lay her eggs.

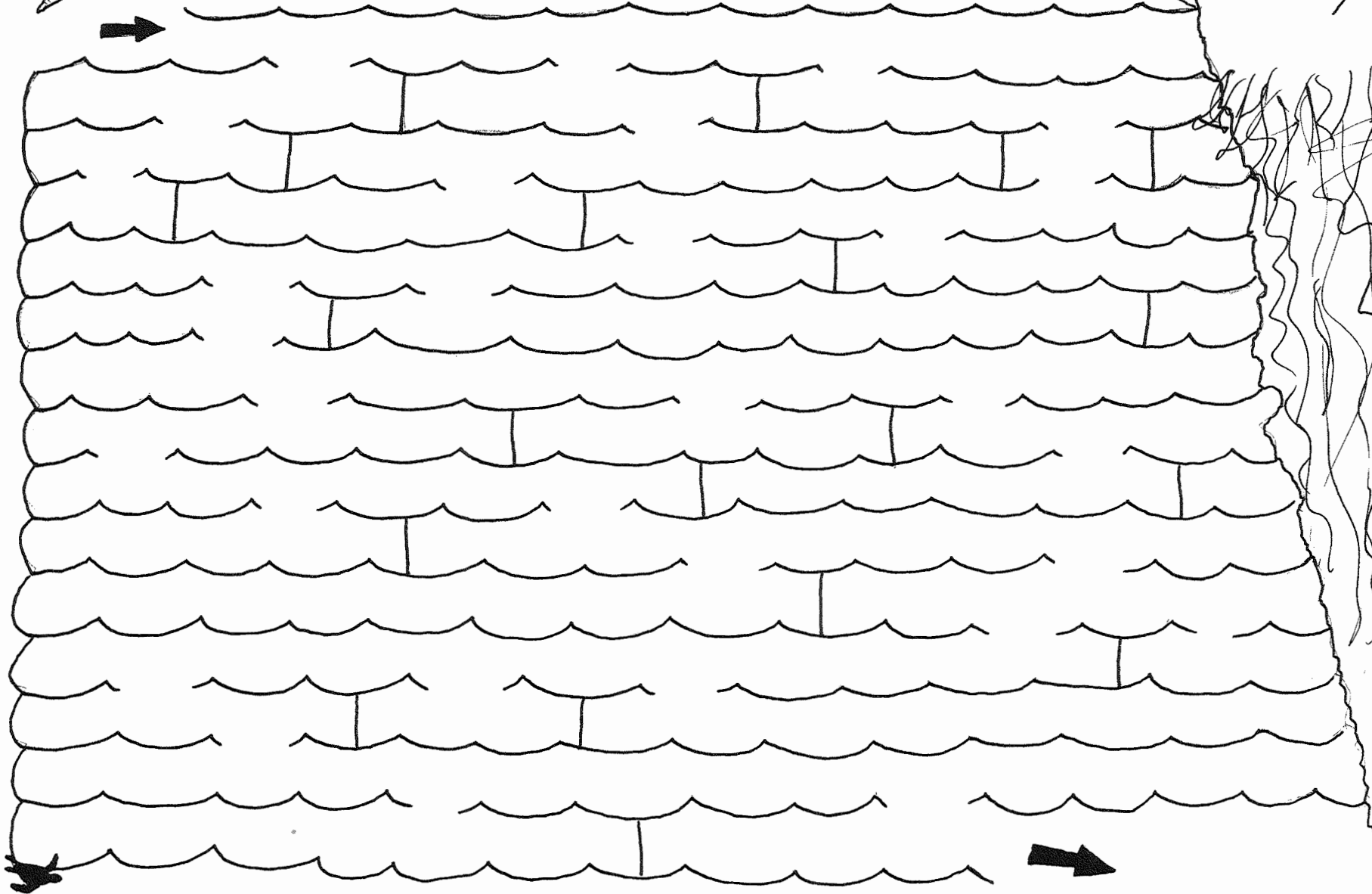
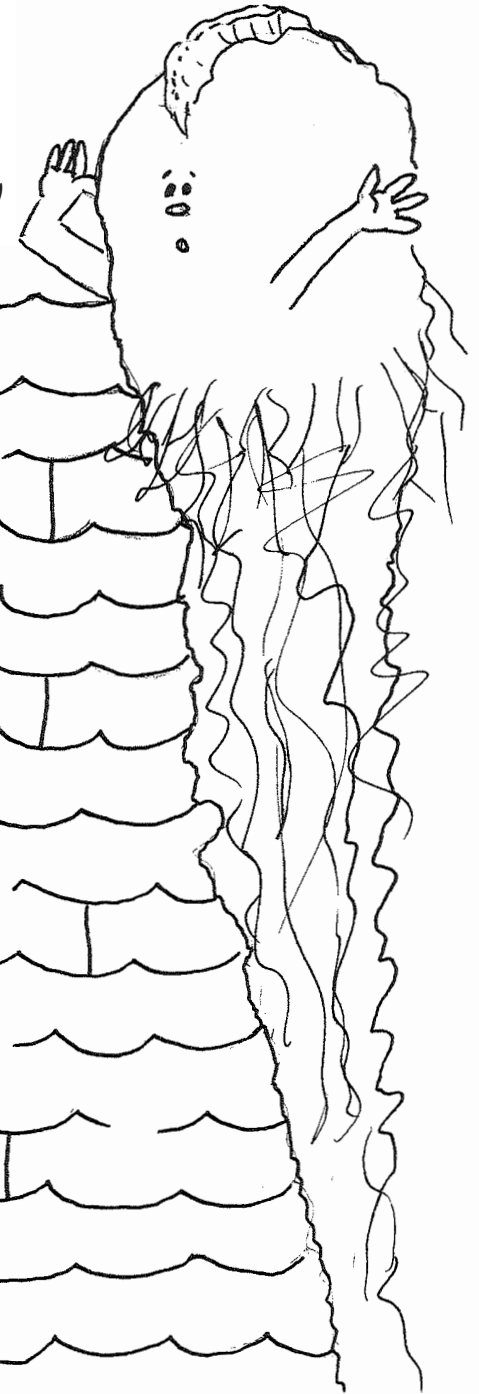
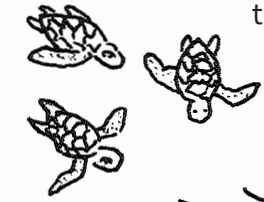
Once she has carefully dug an egg chamber, the sea turtle will begin to lay her eggs. She will fill her egg chamber with an average of 100 soft, leathery, ping-pong ball-sized eggs, and then carefully cover it with sand. A nest of eggs is called a **clutch**. She has come up onto the beach to make her nest and lay her eggs, and now she is tired, but happy to return to her home in the sea.

Some sea turtles will nest several times in a season. Can you count how many eggs are in this clutch?



Guided by the natural glow of the ocean, especially on a moonlit night, the female sea turtle makes her way back to the sea. In around 60 days, the eggs will begin to hatch, and the hatchlings will emerge from the nest. The little hatchlings use their egg tooth to help break out of their shells. They will then climb out of the nest together and scurry down to the water.

Nests usually **incubate** between 45 and 75 days depending on the temperature of the sand. Can you help the hatchlings find their way through the water?



Usually, the hatchlings will **emerge** from the nest at night and make a quick dash. With their flippers flipping as hard as they can, the little turtles head in the direction that seems brightest to them, which should be the natural glow of the sea. The journey from the nest to the sea is full of danger. Sea birds, crabs, raccoons, armadillos and people are just a few of the **predators** they must avoid.

Can you name five predators that may harm the hatchlings during their dash for the sea? Unscramble the letters, and then draw a line to identify each predator.



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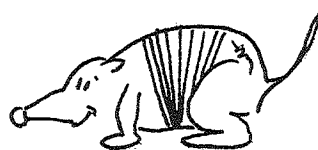
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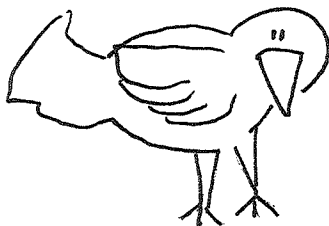
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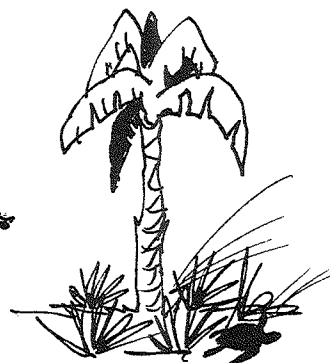
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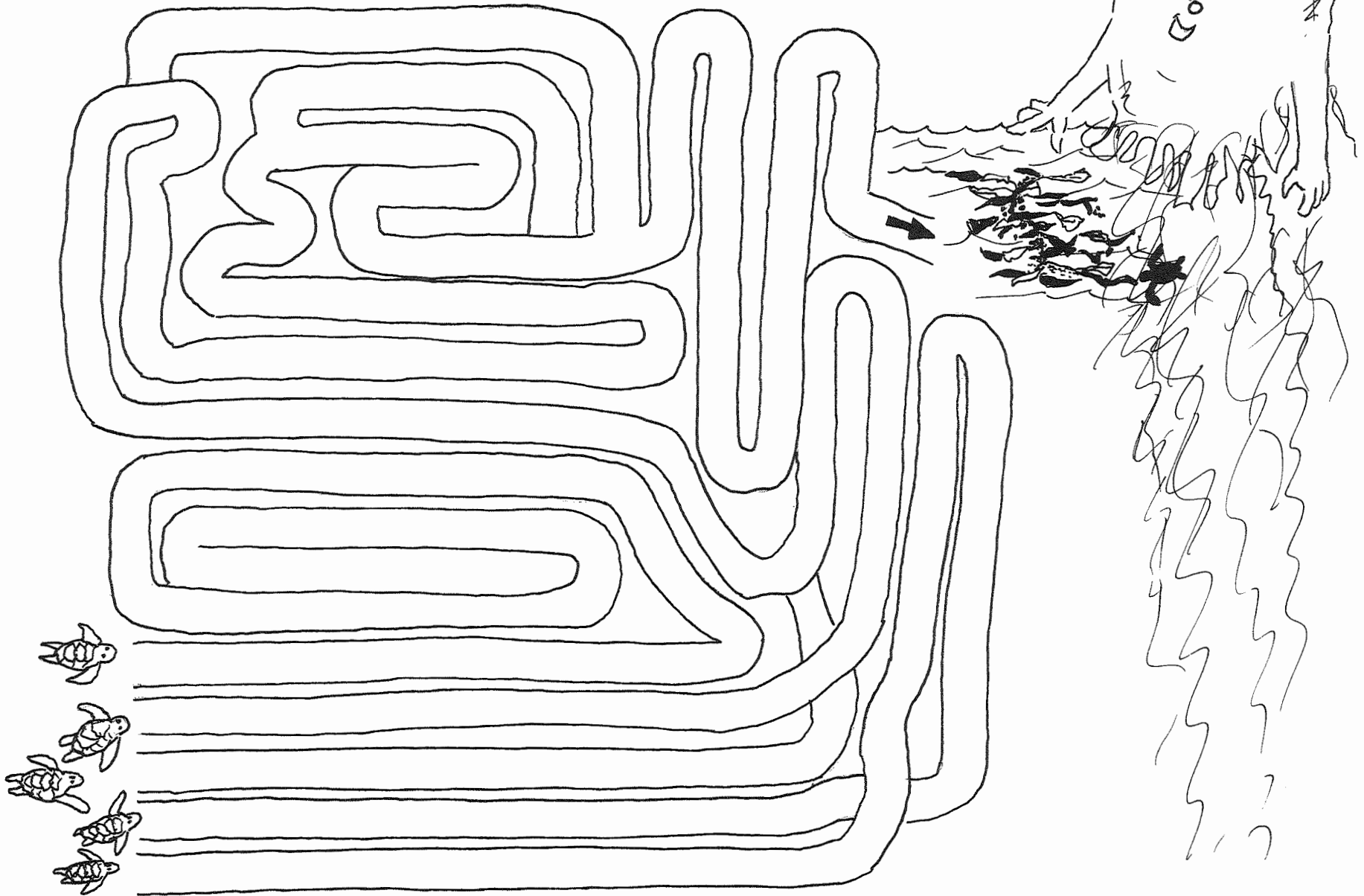
R A M A L D I L O

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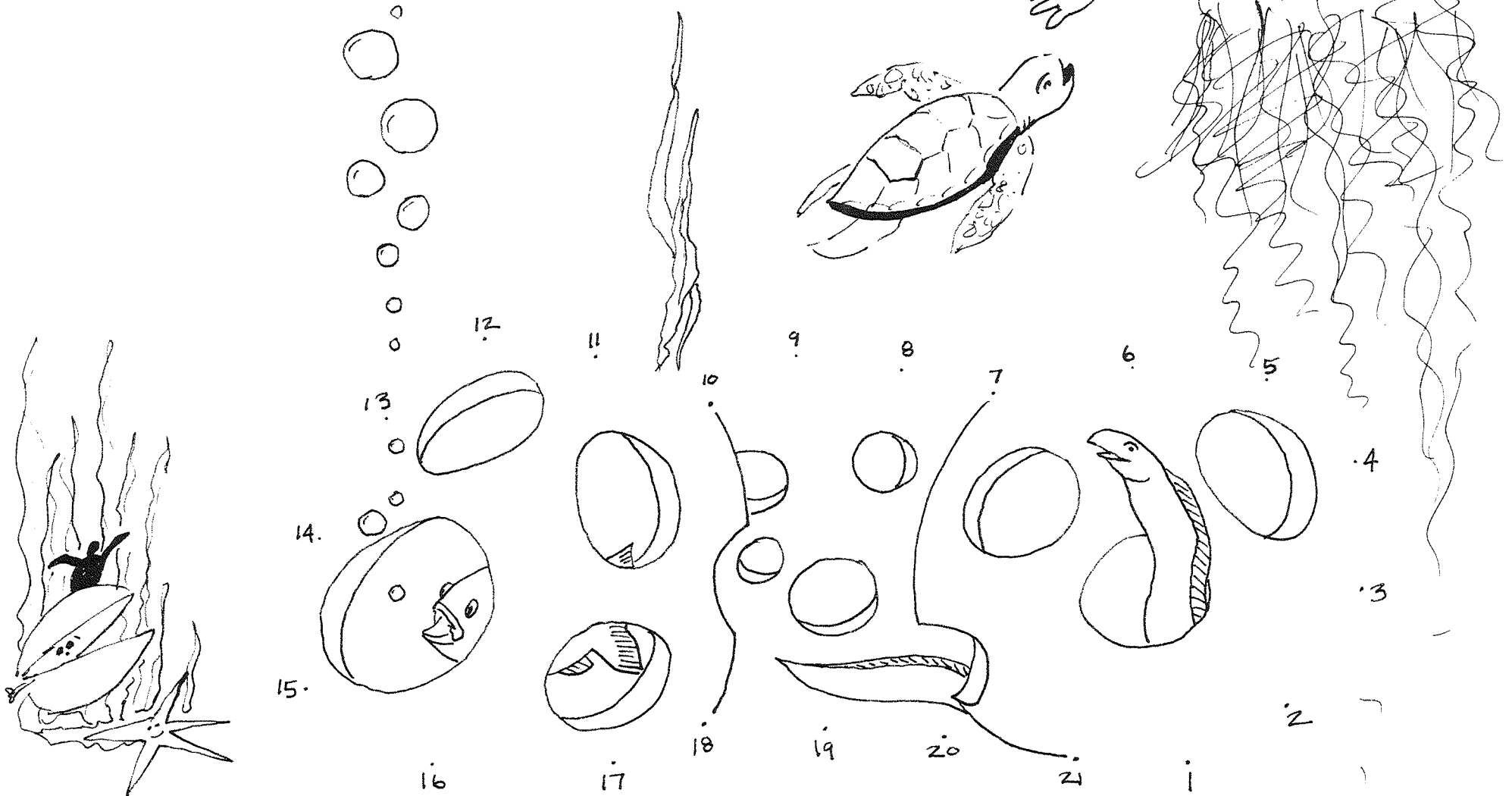
Many of the hatchlings will make it safely to the sea. In the open water there are other dangers awaiting them. Snook, tarpon, sharks and other fish may eat them. The hatchlings swim hard at the surface. Their white underbellies blend in with the sunlit sea surface to help **camouflage** them from predators below. Their dark backs blend in with the deep blue of the open ocean and help disguise them from predators above. Floating beds of seaweed provide food and shelter for the weary turtles.

Can you help the hatchlings and lead them to the safety of a floating bed of seaweed?



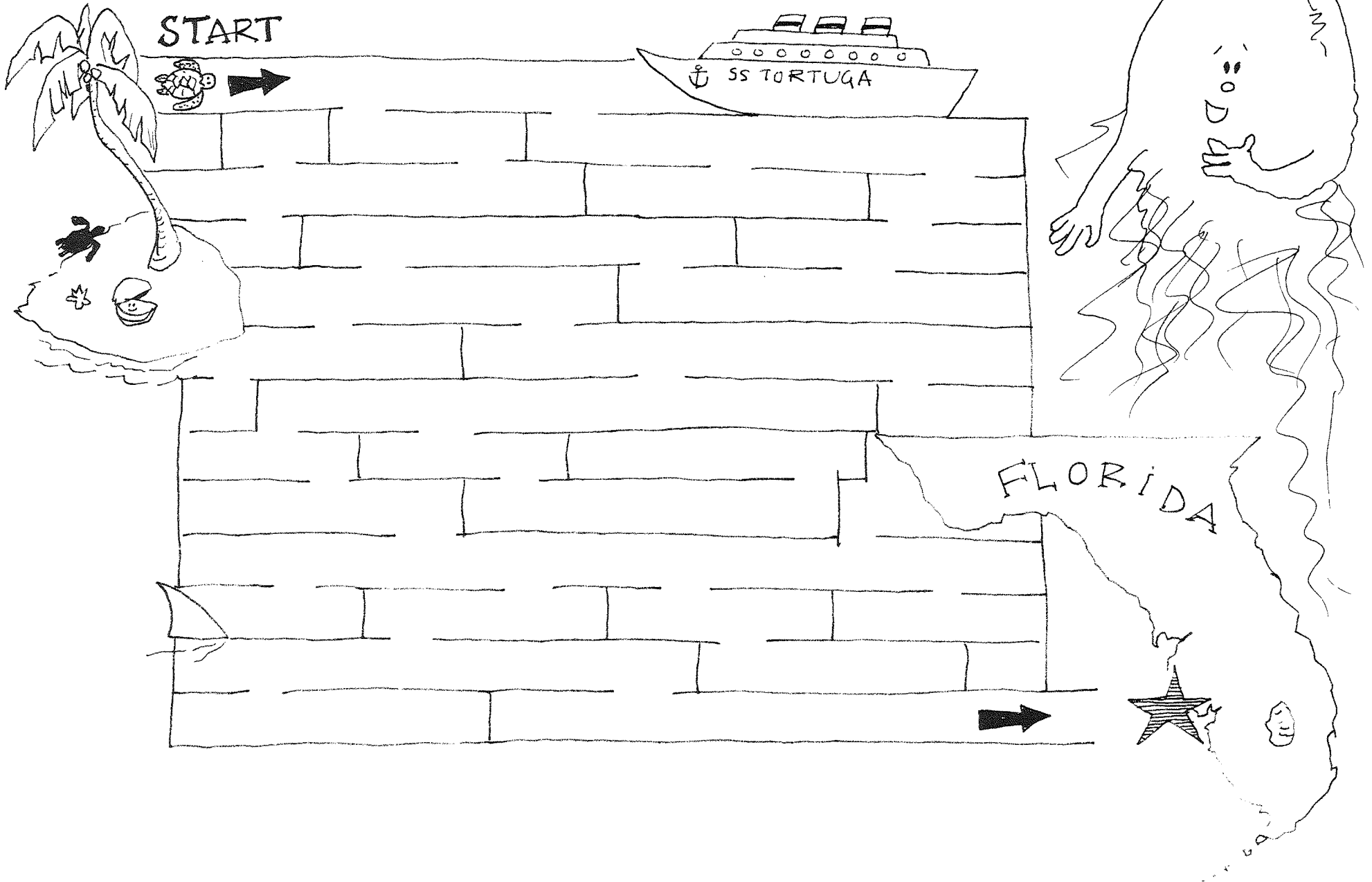
For the first few years the turtles will find a home in warm ocean waters. Sea grass beds, reefs and undersea ledges provide the necessary **habitat** for the young turtles to survive. There is food, shelter, and many places to hide. Here the young turtles can grow bigger and stronger.

Artificial reefs are often built with reef balls. These are made of concrete and have lots of holes that small turtles and fish use to hide. Connect the dots to build the reef.



After many years at sea, the turtles grow to be very large and become so strong that they can even swim faster than a human! The turtles will ride the warm ocean currents and **migrate** hundreds and sometimes thousands of miles. Sea turtles migrate to areas where food is plentiful, or to mate and nest.

Can you help this female sea turtle return to the very beach where she hatched?



There are five different **species** of sea turtles found off the Florida coast. The threatened loggerhead sea turtle is the most common in Florida. Occasionally, an endangered **green sea turtle** will nest on our shore. Even the very rare and endangered **Kemp's ridley**, **hawksbill**, and **leatherback** sea turtles nest on Florida beaches.

Can you identify each species? Use the species description to connect the name to the correct turtle.

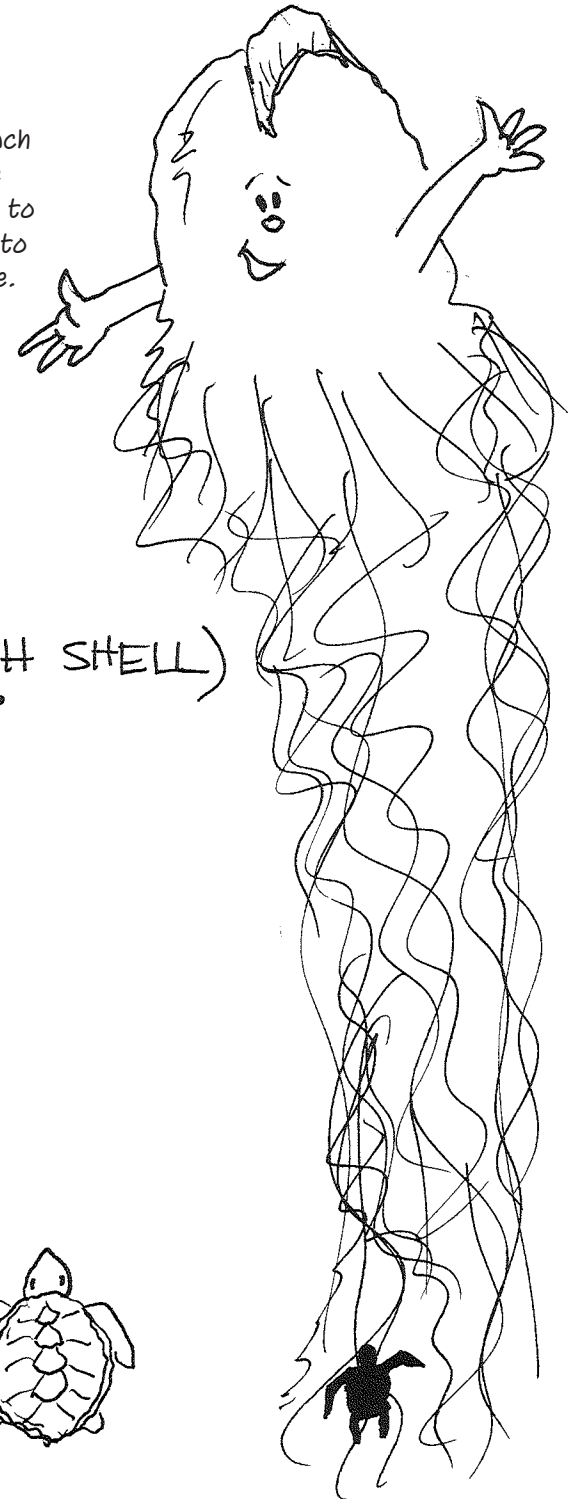
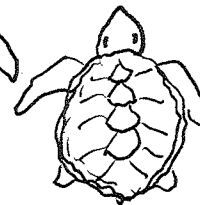
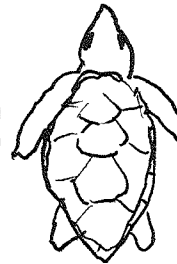
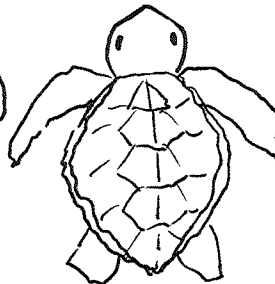
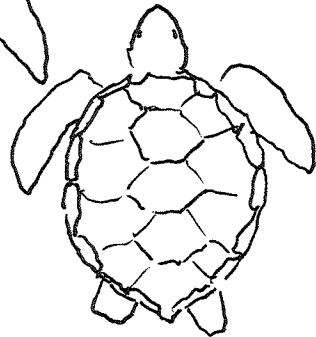
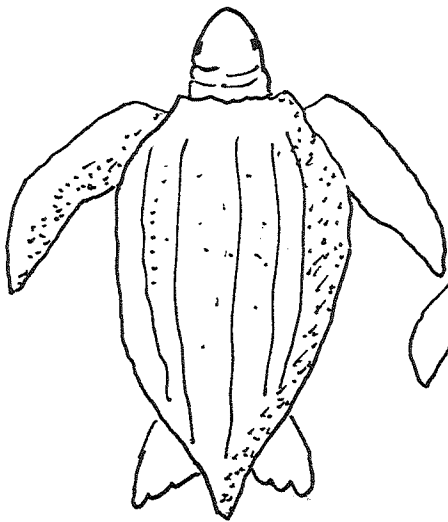
LOGGERHEAD
(LARGE HEAD)

HAWKSBILL
(POINTED BEAK)

KEMP'S RIDLEY
(SMALLEST)

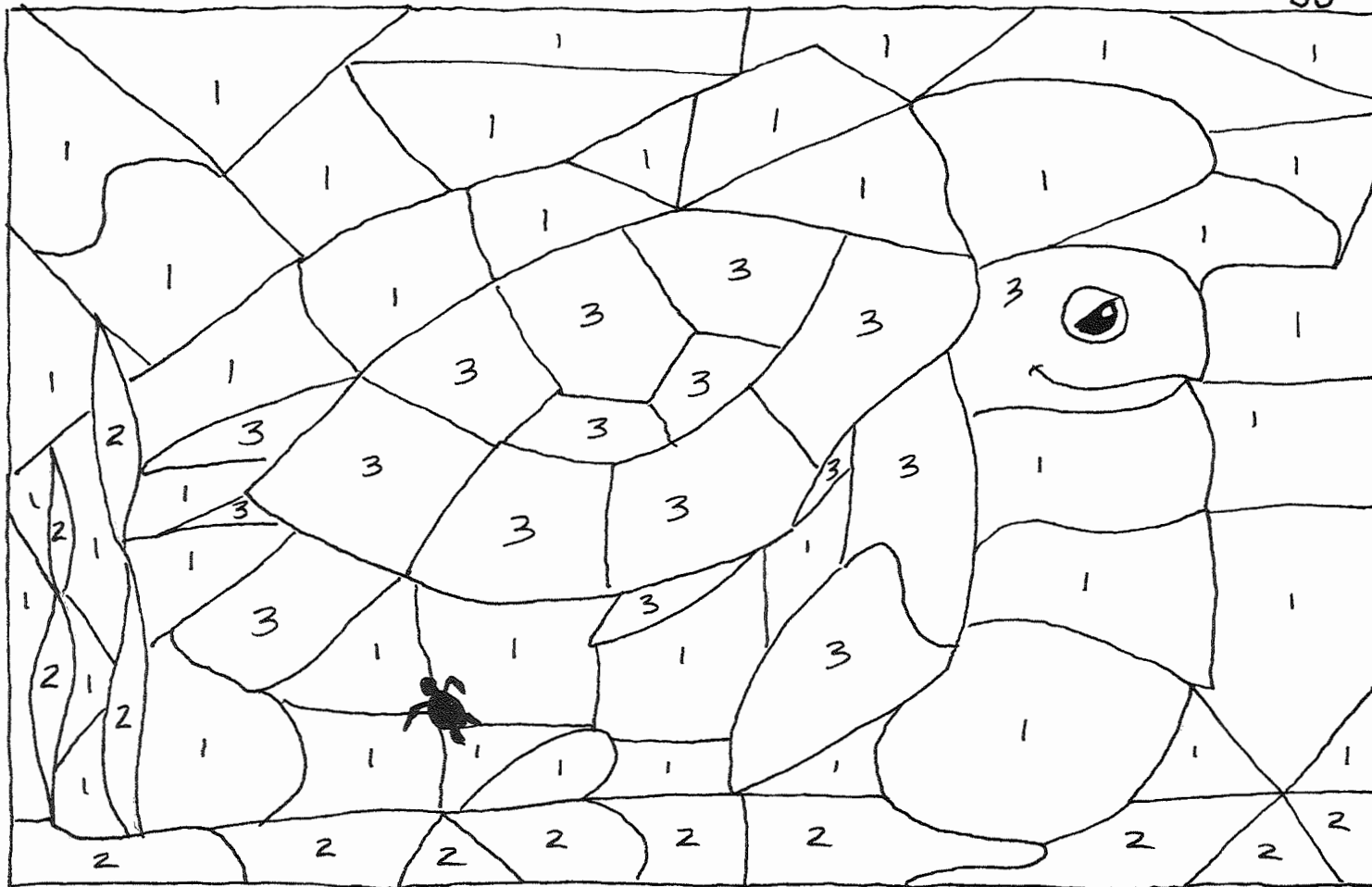
LEATHERBACK
(LARGEST)

GREEN
(ROUNDISH SHELL)



Sea turtles have a hard outer shell called a **carapace**; this is made up of large scales called **scutes**. The underside of the turtle is called the **plastron**. Sea turtles use their front flippers to swim, and their rear flippers to help steer. Turtles also have a keen sense of smell and can see very well underwater. Even though they don't have ears you can see, they can hear well also.

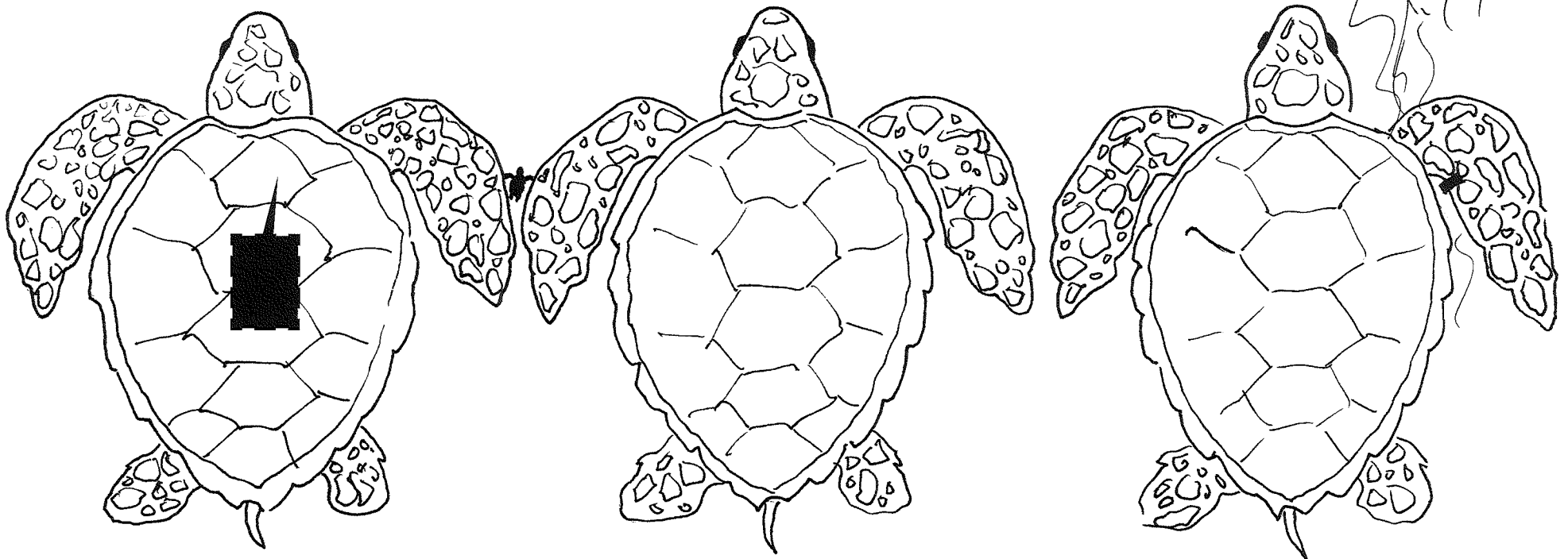
Can you find the hidden picture?
Color the 1s BLUE. Color the 2s GREEN.
Color the 3s BROWN.



There are many things humans don't know about sea turtles. Researchers and biologists try to learn more about sea turtles by **tagging** the females that come ashore to nest on our beaches. Some turtles may receive an **external** flipper tag, which is visible on the flipper. Some researchers use **internal** flipper tags that are not visible on the flipper and must be read with a special scanner. Other turtles may be fitted with a **satellite transmitter** that allows us to track the turtles' movement from satellite readings sent from space!

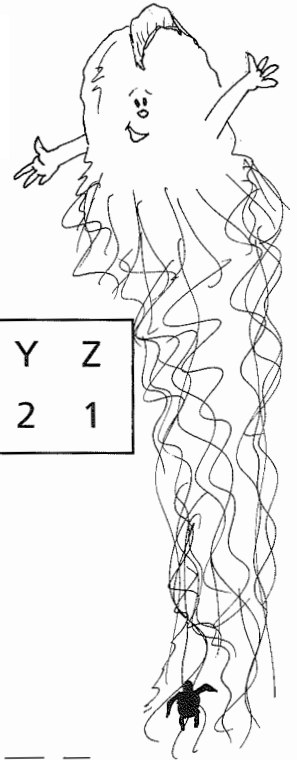
To track satellite tagged sea turtles, go to www.seaturtle.org or www.conserveturtles.org!

Can you tell which type of tag - external, internal or satellite transmitter - each turtle has been tagged with? Remember, you can't see internal tags without a scanner.



Sea turtles have been on earth for over 100 million years, much longer than humans. It is important that we do everything we can to help protect these magnificent creatures and their habitat.

Crack the code and learn how YOU can help sea turtles survive.



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Sea turtles come in many shapes and sizes. Here is your chance to DESIGN YOUR OWN SEA TURTLE!



Sea Turtle Adventures Glossary

Camouflage – When an animal protects itself by blending in with its environment. Camouflage is like a natural disguise.

Carapace – The top half of a turtle’s shell.

Clutch – Eggs laid together in a nest.

Disorient or Disorientation – When sea turtles (adults or hatchlings) are drawn away from the ocean by man-made lights shining on or near the beach.

Egg chamber – A hole dug in the sand where a female sea turtle lays her eggs.

Emerge – When hatchlings break away from their egg shells and dig out of their nest. Hatchlings usually emerge in the cool hours of the night.

Endangered – When a species is in danger of becoming extinct, which means the last of the species may die. Endangered animals are protected by the United States Government.

External – Found on the outside of the body.

Flipper – A broad, flat limb adapted for swimming.

Green sea turtle – An endangered sea turtle named for the layer of green body fat under its shell.

Habitat – The natural environment where a plant or animal is usually found or lives.

Hatchling – Young turtles that have just broken out of their egg shells.

Hawksbill sea turtle – An endangered sea turtle named for its hooked beak, and hunted for its beautiful rare shell.

Incubate – The time a sea turtle spends growing while in the egg.

Internal – Located inside the body.

Invertebrate – An animal that does not have a backbone.

Kemp’s ridley sea turtle – The smallest and most rare of all sea turtles. (Endangered)

Leatherback sea turtle – The largest species of sea turtle, named for the leathery skin covering its shell. (Endangered)

Loggerhead sea turtle – A threatened sea turtle, named for its large head and powerful jaws.

Mangrove island – A cluster of mangrove trees with water on all sides. Mangroves are special trees whose roots reach out of the sand, into the water and air. Mangrove islands are excellent habitat for small turtles, birds and many other animals.

Migrate – To travel from one area to another in search of habitat or a mate.

Predator – An animal that hunts and eats another animal for food.

Plastron – The bottom half of a turtle’s shell.

Reef – An underwater group of rocks and living creatures (coral) that grow together to provide habitat for sea turtles, fish and many other animals.

Satellite transmitter – A small box that researchers place on a sea turtle’s shell that sends signals to a satellite in space. This tells researchers where the turtle is, where it is going, and even how fast it is swimming.

Scutes – The bony plates that make up a turtle’s shell.

Sea grass bed – An area of grass growing underwater. The sea grass beds may not be as colorful as reefs, but they are a good source of food and habitat for sea turtles, birds and other sea life.

Species – A group of animals that look alike, mate with one another, and use the same type of habitat.

Tagging – When researchers put a tag or make a mark on a sea turtle so they can track the turtle and learn about where and how it lives.

Threatened – In danger of becoming endangered, and may be at risk of becoming extinct in the future. Threatened animals are protected by the United States Government.

Sea turtles have been in existence for millions of years. Seven species are found in waters throughout the world, and we are fortunate to provide habitat for sea turtles here in Sarasota County.

The species most common to Sarasota County is the loggerhead sea turtle. Beginning in May and continuing through October, hundreds of females will use the beach to nest. Thirty years from now, hatchlings that survive to adulthood will one day return to nest on the beach from which they were born.

Much of this book was written and illustrated by Brendan Coudal, a local artist and writer. Through the activity book, we hope you learn more about sea turtle biology, the threats they face, and ways you can help to conserve the species and habitat.

We especially would like to thank the many volunteers, residents and visitors who help make our beaches and surrounding waters more turtle-friendly by sharing the shore.

For more information about sea turtles, please call the Sarasota County Contact Center at 941-861-5000.

