OCEANFIRST
EDUCATION

Ocean Activity Book

An interactive way for elementary students to learn about the ocean!

Explore the ocean without leaving your seat.
www.oceanfirsteducation.com

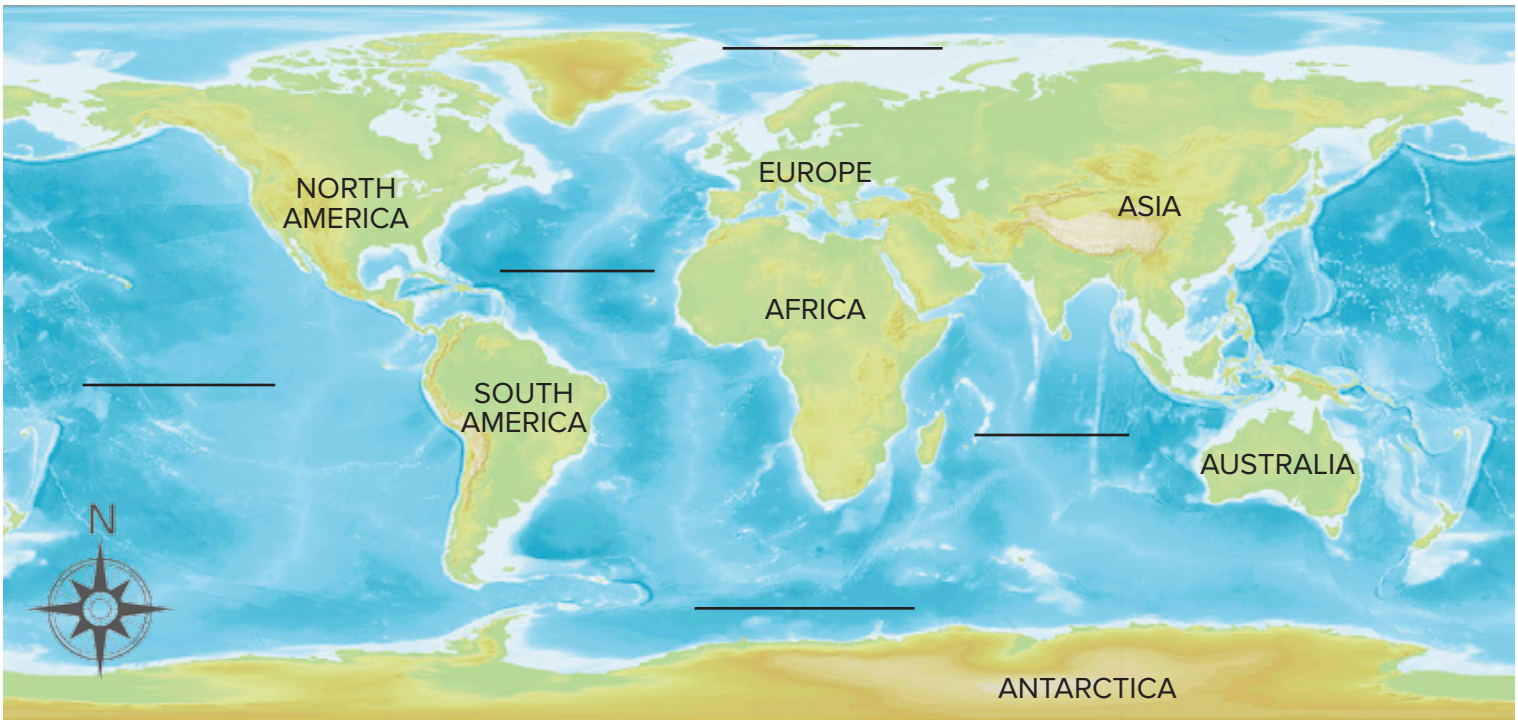
What is the Ocean?

The ocean is a large body of saltwater that covers 71% of the Earth; that's more than half of our planet! Many different plants and animals live in the ocean. Although there are five named oceans, nothing separates them from each other and the seawater flows freely all around the globe.

Create your own ocean view by drawing your favorite ocean creatures in the space below.

Name the Oceans

Write the names of the five oceans on the map below:



Here are a few hints to help you along.

Atlantic Ocean - This ocean is located between the Americas and Africa
Arctic Ocean - This ocean is found at the very top of the world
Indian Ocean - This ocean is located south of Asia, east of Africa, and west of Australia
Pacific Ocean - This ocean is found to the left of the Americas and to the right of Asia and Australia
Southern Ocean - This ocean surrounds the southern-most continent

Did you notice how all of the water flows together? There are no barriers to separate the oceans. Just imagine being able to swim all around the world!

Which ocean is closest to your house? _____

Underwater Plants

You've probably walked on grass at school, at the park, or on your own front yard, but did you know there are plants, just like the grass on the ground, that live in the ocean? Green plants, like what you see growing out of the ground, get their energy to live and grow from the sun. The plants that live in the ocean do too! Mangrove trees, sea lettuce, and sea grass grow under and near the water, but they also need the sun to grow! There are also algae that grow in the sea. Algae, like kelp and seaweed, are very similar to plants, but they are not plants. Algae rely on the sun for their energy to grow, but they have different parts than plants do!

P - Plants are green, but can be shades of purple, red, and yellow too!

L - Long leaves or short leaves, they all need the sun.

A - Air, water, nutrients, and sunlight are needed.

N - Nibbling animals find plants delicious, yum!

T - Tall or short, plants grow up from the ground.

S - Sunshine helps all plants grow!

A - Along the water's edge is where you'll find it.

L - Like a plant, but not exactly the same.

G - Green, red, and brown are the colors it comes in.

A - Attached to rocks and the sea floor, it sways in the waves.

E - Eaten by snails, sea turtles, and crabs!

Can you come up with your own poem about plants, seaweed, or algae? Give it a try in the space below.

What Belongs in the Sea?

Plants on land are a little different from plants in the ocean. Look at each pair of plants below, then circle the one that belongs in the sea!


Grass


Manatee Grass


Red Flower


Red Algae


Halameda


Fern


Sea Lettuce


Bibb Lettuce


Kelp


Corn Stalk


Sprouts


Sargassum

Who Has a Backbone?

There are many animals that live in the ocean and most of them don't have a backbone! What's a backbone? Take your right hand and reach around to your back all the way to the middle. Can you feel that line that goes up and down the middle of your back? That's your backbone. You have one, each of your parents have one, every dog, cat, and fish has one, but there are many animals that don't. Animals that don't have a backbone are called invertebrates. Things like earthworms, butterflies, and bees are invertebrates that live on land.

Maybe you have eaten a few invertebrates that live in the ocean! Animals like clams, crabs, shrimp, lobster, and oysters are all invertebrate animals - you won't find a backbone among them! Invertebrates look pretty different from animals with a backbone.

All of these animals are found in the sea.
Circle the invertebrate animals. (The ones without a backbone.)


shark


nudibranch


angelfish


sponge


sea turtle


whale


scallops


sealion


parrotfish


stingray


dolphin


lobster


soft coral


seastar


manatee

In the space below, draw your favorite vertebrate animal.
(One that has a backbone, like you!)

In the space below, draw your favorite invertebrate animal.
(One that does not have a backbone.)

Vertebrates Like You!

If you are not a plant or an invertebrate, then you must be a vertebrate! Vertebrates are animals with a backbone just like you! Whales, manatees, dolphins, sea lions, sea otters, walruses, sharks, sea turtles, and every fish in the sea is a vertebrate animal. They all have a backbone. Having a backbone makes it possible for the animals to grow very, very - and in some cases like the blue whale - VERY large.

Can you figure out the different vertebrate animals from the clues to complete the crossword puzzle? There is a word bank to help you, just in case.

Across

4. This animal is black and white and is the largest member of the dolphin family.

5. Although it looks like a dog, it has four flippers instead of four legs.

6. The largest vertebrate animal on earth.

7. Although it is related to sharks, its body is squashed flat and looks like a kite flying across the bottom of the ocean.

8. This fish has a long delicate mouth that it uses to pick tiny shrimp and algae off the coral.

Down

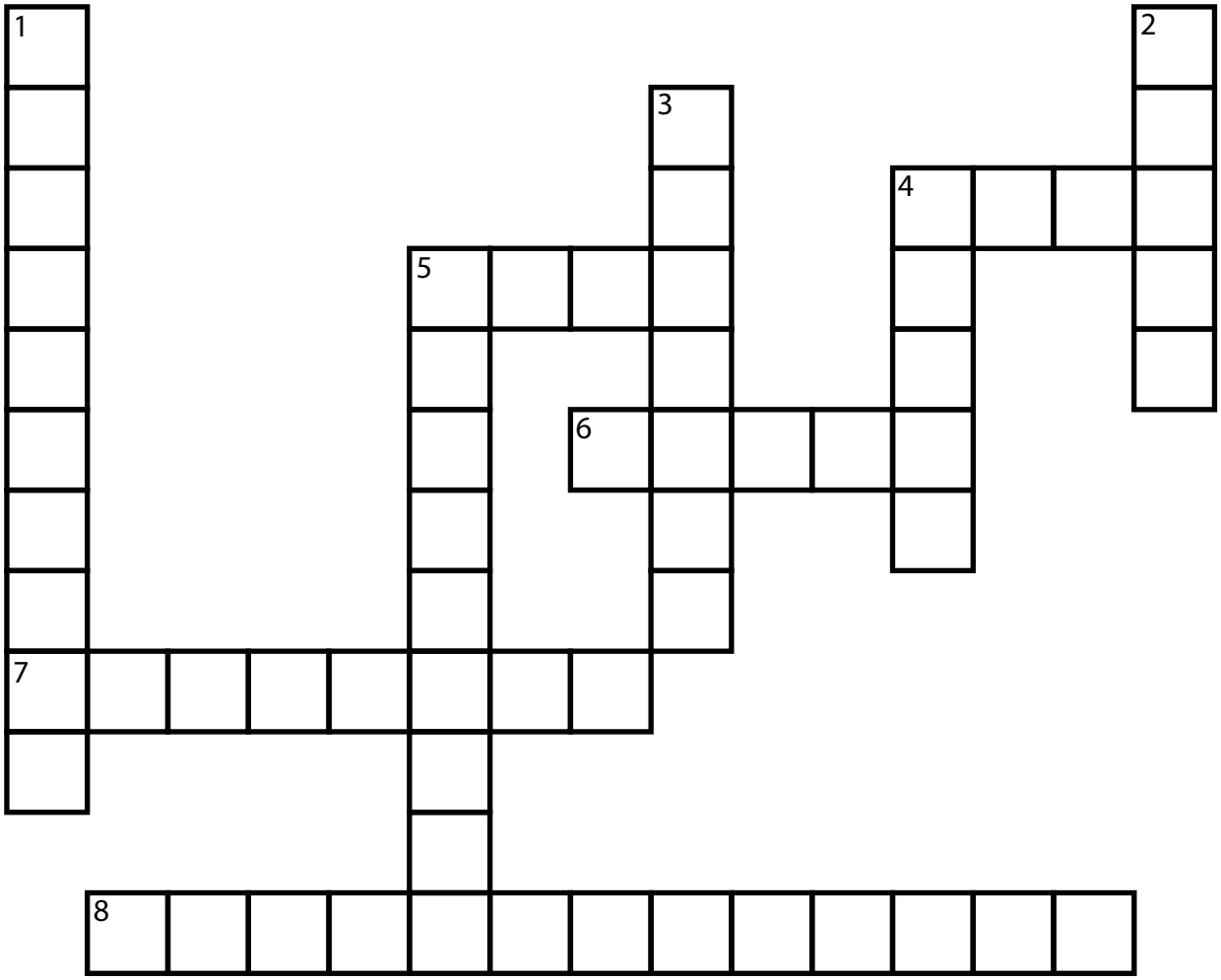
1. The mouth of this fish looks big and sharp like a type of bird, but it doesn't eat fruit like the bird, it eats coral.

2. This animal has an endless conveyor belt of teeth to replace the ones it loses while eating.

3. This animal looks like it is smiling all the time, maybe because it sometimes does somersaults out of the water.

4. They are small, use kelp to keep them from floating away, and have the most fur of any animal in the ocean.

5. As an adult, this animal lays its eggs on the same beach it hatched on.



Vertebrate Word Bank


stingray


seal


parrotfish


orca


dolphin


otter


sea turtle


shark

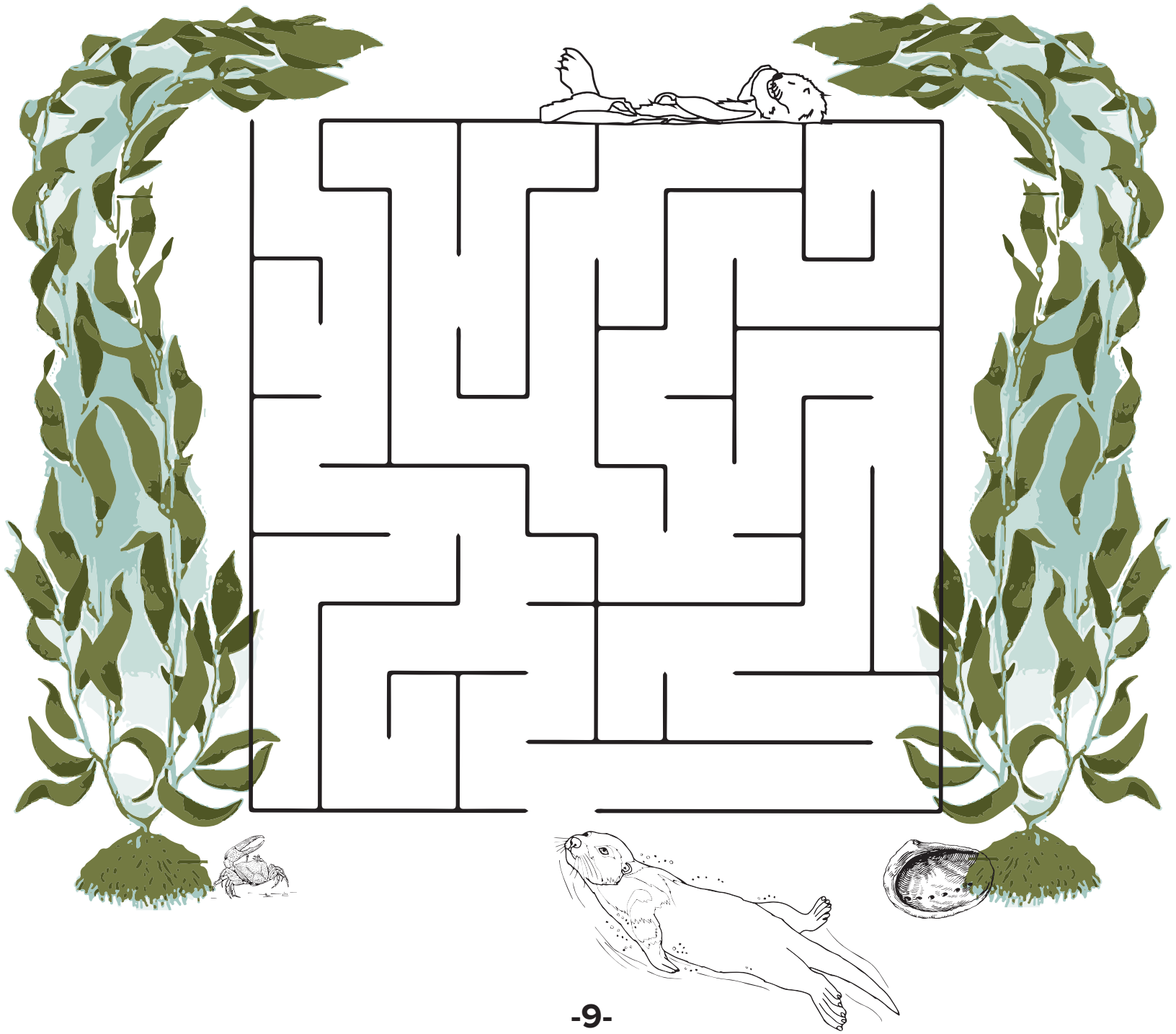

whale


butterflyfish

Kelp Forests

The kelp forest is just like a jungle, but under water! Kelp are not plants though; they are algae and need the sun to make their own food. Large kelp holdfast to the seafloor so they don't get washed away by the waves. Sea otters live in the kelp forest. They wrap themselves up in the kelp to keep them from drifting out to sea!

The mother sea otter has gone in search of food at the bottom of the kelp forest. Her baby is floating safely on the surface wrapped in kelp so it won't float away! Can you find the right path for the mother sea otter to take from the bottom back to her pup at the surface?



Food Web

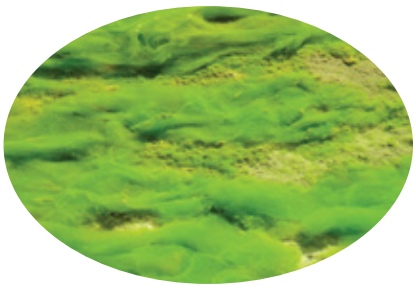
All living things, including you, need energy to live. The animals in the ocean are no different. Some animals like tuna, dolphins, and sea lions eat other animals for food, while other animals like coral, shrimp, and butterfly fish just eat plants and algae to get the energy they need. And then there are those animals like whales, parrotfish, and basking sharks that eat both plants and other animals - like small fish and invertebrates. But what about plants? Where do plants and algae get the energy they need to live? From the sun! Most of the green things in the ocean generate their own energy using light from the sun.

Use arrows to connect the plants and animals in a food web to illustrate who eats what in the ocean! Make sure the arrow points toward the animal that is receiving the energy (the one that is doing the eating!)

shrimp

tuna

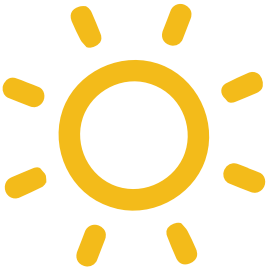
shark



algae

mackerel

cuttlefish



sun

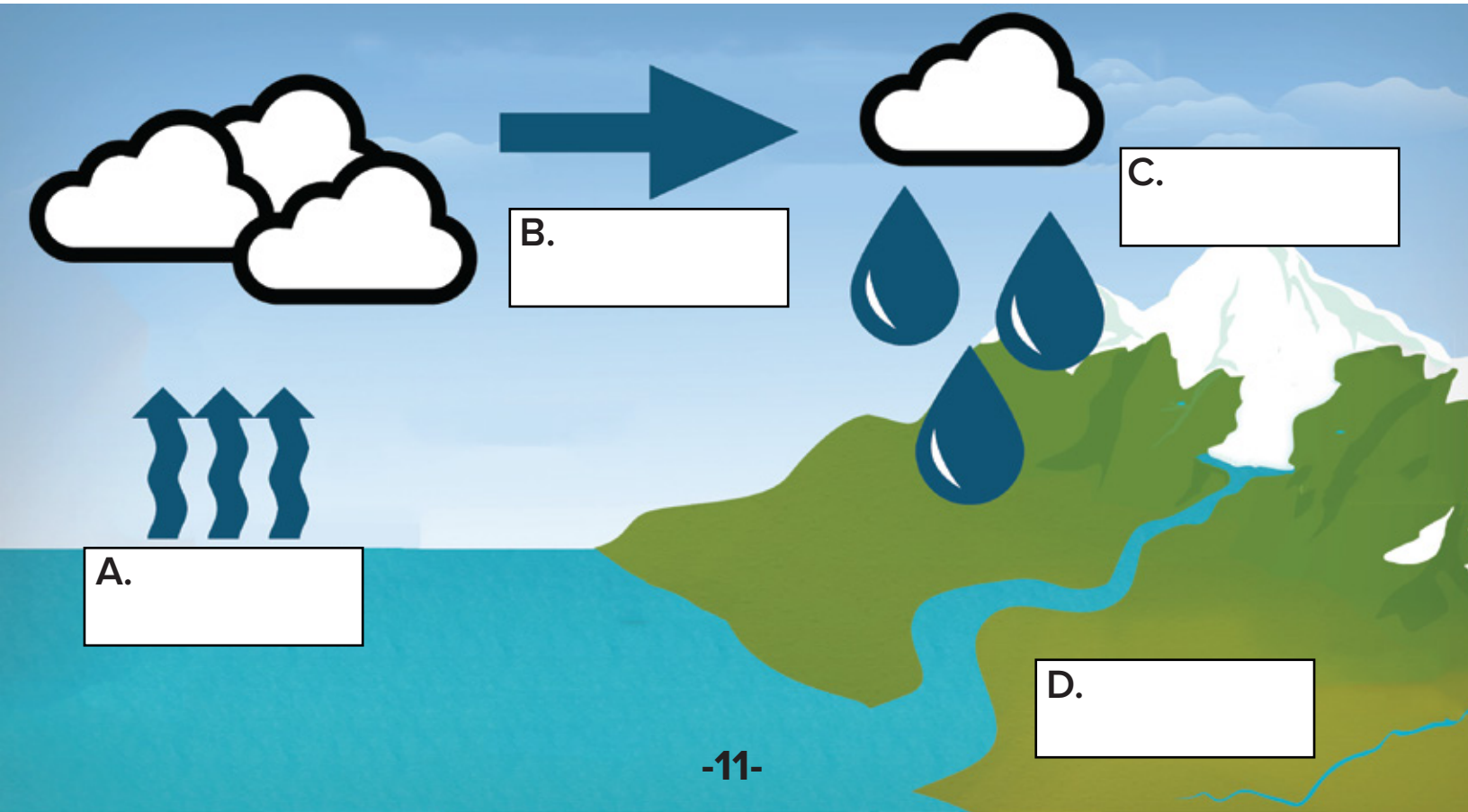
kelp

sea turtle

The Water Cycle Story

Today, you are drinking the same water dinosaurs drank a long, long time ago! How is that possible? All of the water on Earth moves around the planet in a cycle that never ends, it just keeps going and going. It is called the water cycle. Have you ever seen a puddle and then later when you looked for it again, it was gone? Well the water in the puddle evaporated - that means it turned from a liquid to a gas. When the water evaporated, it became much lighter than liquid water and moved up into the sky. Once in the sky, the evaporated water begins to collect and form clouds. This is called condensation. Condensation is the collection of very, very tiny water drops. Eventually, the water drops become bigger and too heavy to remain in the sky. The force of gravity pulls the water drops back to Earth. When water falls from the sky it is called precipitation. If it's really cold outside, the precipitation is snow; if it's warm out, it is rain. As the rain reaches the ground, it accumulates or collects. It can collect in puddles, lakes, rivers, and especially the ocean. More rain falls on the ocean than anywhere else because the ocean covers more of the planet than land! And then the water cycle starts all over again.

Label the parts of this water cycle using the following terms:
Condensation Accumulation Precipitation Evaporation



Keep the Ocean Clean!

Oh, no! Sometimes people can be careless and throw their garbage in the ocean. This does not make the ocean a very safe environment for marine animals. Help clean up the ocean by finding all of the words in the word bank. Some of the words are helpful reminders of what we all can do to keep the oceans clean!

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

pollution junk waste filth garbage trash
rubbish litter plastic debris poison toxic reduce
recycle reuse compost healthy clean
wastewater toxins ocean wildlife blue

You Can Help!

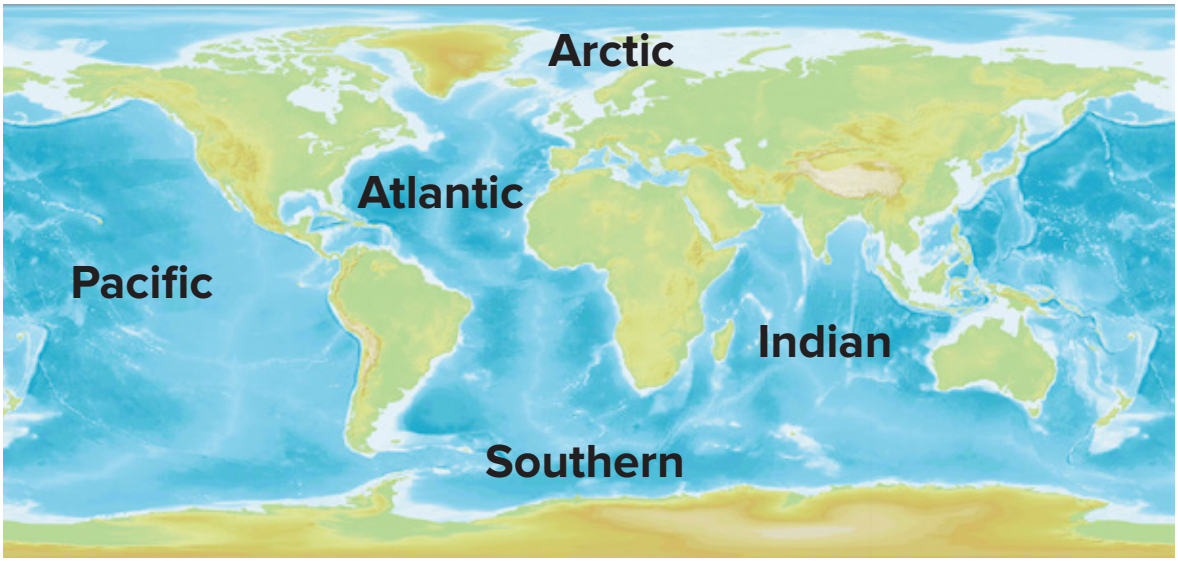
You can save the seas too! Here are just a few ideas:

- Just say no to plastic straws, use paper or stainless steel straws instead
- Throw garbage away, not on the ground or in the water
- Don't use plastic water bottles, use a stainless steel one instead
- Recycle trash that can be recycled
- Reuse things instead of throwing them away
- Turn the water off when brushing your teeth
- Turn off the lights when you don’t need them
- Plant a vegetable garden
- Walk or ride your bike or skateboard to places that are nearby

Learn more about the ocean and the creatures that inhabit it at www.oceanfirsteducation.com and take our free Ocean Literacy course.

Answer Key

Pg. 2



Pg. 4

Marine plants: Manatee grass, kelp, Halameda, red algae, sea lettuce, sargassum

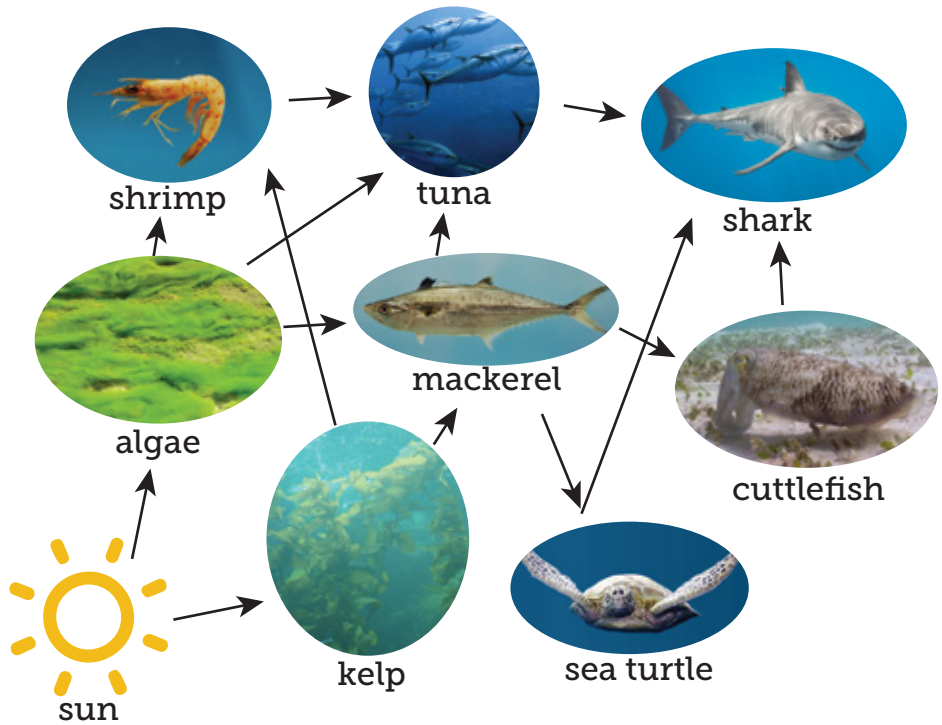
Pg. 5

Marine Invertebrates: nudibranch, seastar, scallop, lobster, soft coral, sponge

Pg. 8

ACROSS: 4. orca 5. seal 6. whale 7. stingray 8. butterflyfish DOWN: 1. parrotfish 2. shark 3. dolphin 4. otter 5. sea turtle

Pg. 10



Pg. 11

A. Evaporation B. Condensation C. Precipitation D. Accumulation