

Name: _____

DelCorte Word Find

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

Find the following words in the puzzle.

Words are hidden     and .

AMERICAN MINK
BALTIMORE ORIOLE
BEAVER
BLUE CIRCLE
BLUEGILL SUNFISH
CONSERVATION
DEER
EASTERN WHITE PINE

ECOSYSTEM
FRESHWATER POND
GREAT BLUE HERON
GREEN FROG
GREEN TRIANGLE
LARGEMOUTH BASS
MIXED FOREST
OSPREY

PAINTED TURTLE
RED MAPLE
RED SQUARE
SASSAFRAS
SNAPPING TURTLE
TRAILS
WATER SNAKE
WETLAND

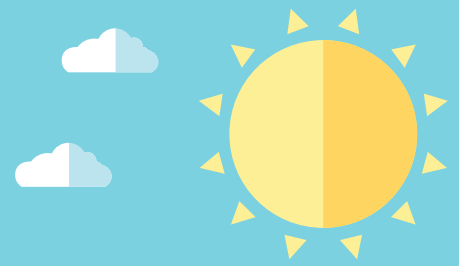
WHITE OAK
WHITE WATER LILY
WOOD FROG

Wetland Inhabitant Word Search

Search for the types of animals found in wetlands. See if you can find:

beaver flounder wood duck clam crab
crayfish mosquito raccoon heron bear
frog egret dragonfly sunfish mink
turtle shrimp salamander

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



WATER, WATER, EVERYWHERE!

Here's something that may blow your mind: When you go swimming in a pond, lake, or ocean, you might be moving around in some of the very same water molecules that a dinosaur slogged through millions of years ago! This is all possible thanks to something scientists call the water cycle.

Water on Earth moves and changes into different forms, from being solid like ice or snow; a gas like the clouds above or your breath on a cold day; or a liquid like the water we drink. It's also constantly being recycled.

BE A NATURE HERO & CONSERVE WATER!



- Turn off the water while you brush your teeth
- Take a 5-minute shower
- Collect water in buckets or a rain barrel and use it to water your grass or garden

Underground, In the Air, In a Leaf, It's Always There! It's the Water Cycle!

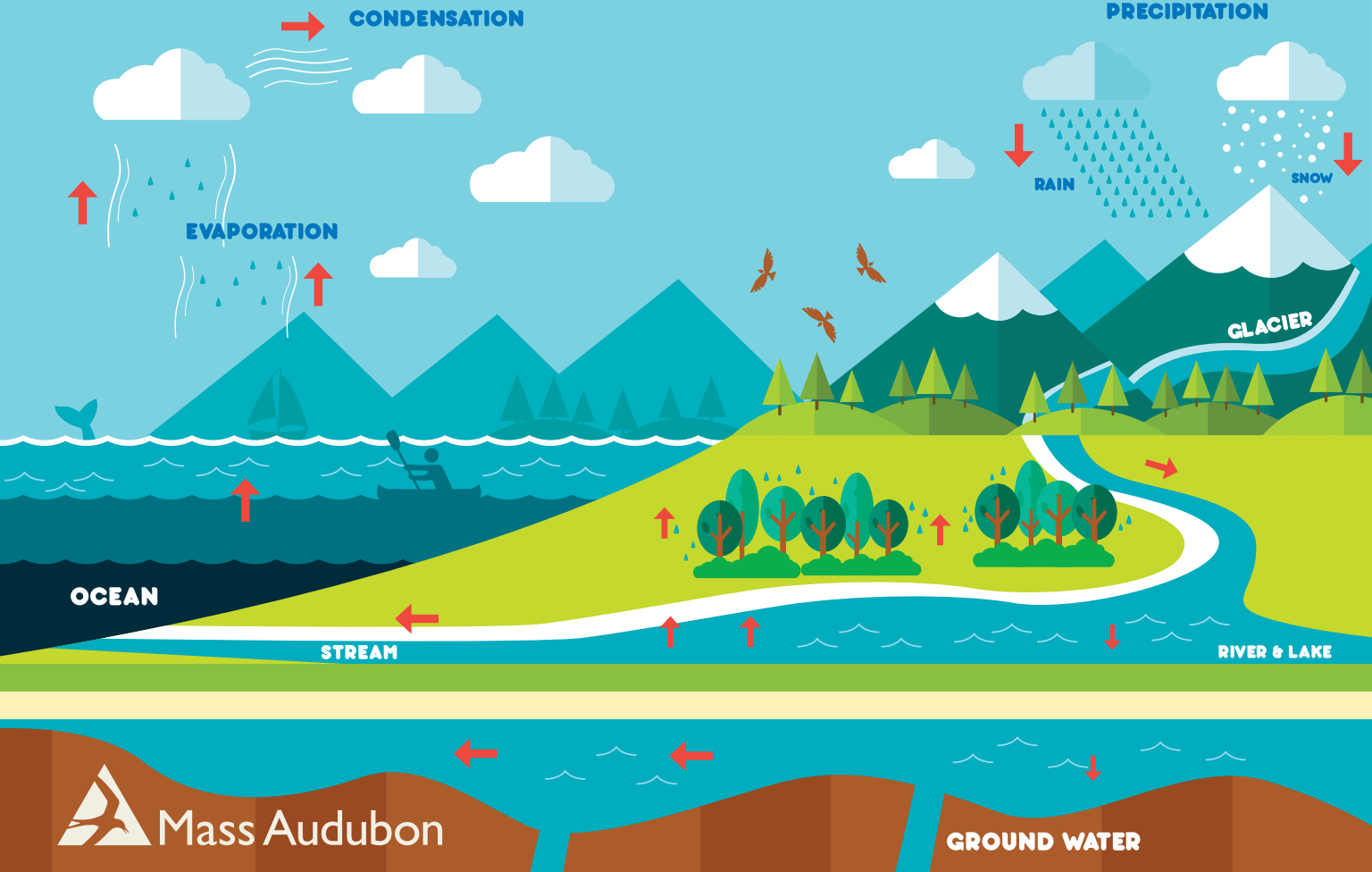
Evaporation: The sun heats up water on land and the ocean's surface, turning it into a gas known as water vapor in the air.

Condensation: Water cools and transforms into lots of tiny drops of water that gather to form clouds.

Precipitation: Once the drops of water get too heavy, the liquid falls back to the ground as rain or snow.

Just because water has been going through this cycle for millions and millions of years doesn't mean we should take it for granted. If we don't take care of the Earth, the fresh water we (and all other living things) depend on for drinking, eating, and living may not always be there.

Go Online! Find cool water cycle experiments at massaudubon.org/youngexplorers.



BAT RESPECT

With all the vampire stories out there, it's not surprising that bats seem a little scary. But there's no need to be afraid of these creatures of night. Bats are really cool animals and they play an important role in nature. Here are just a few reasons to love bats.

Ultimate Bug Fighters

Are you a mosquito magnet? Bats to the rescue! All nine species of bats found in Massachusetts are insectivores, meaning they eat insects. In fact, one bat can eat up to 500 mosquitoes (and similarly sized insects) in one hour. And since bats can live in colonies of hundreds, thousands, or even millions of bats, that's a lot of insects.

Do the math

Colony of 100 bats = insects in one hour

Colony of 300 bats = insects in one hour

Colony of 10,000 bats = insects in one hour

Wings Up

Bats are the only mammals that can fly (flying squirrels, despite their name, can only glide). Their wings are between 8.5 and 13 inches wide and have four long fingers and a short "thumb" with super thin skin (think: piece-of-paper thin) stretched between them.

Fuzzy, Wuzzy Was a Bat

Bats have fur and are homoeothermic (pronounced home-ee-o-THERM-ick), meaning they are warm-blooded and make their own body heat to keep themselves warmer than their surroundings. They can also save energy by allowing their bodies to cool while they roost (or rest) during the day.

Big Ears, Big Sounds

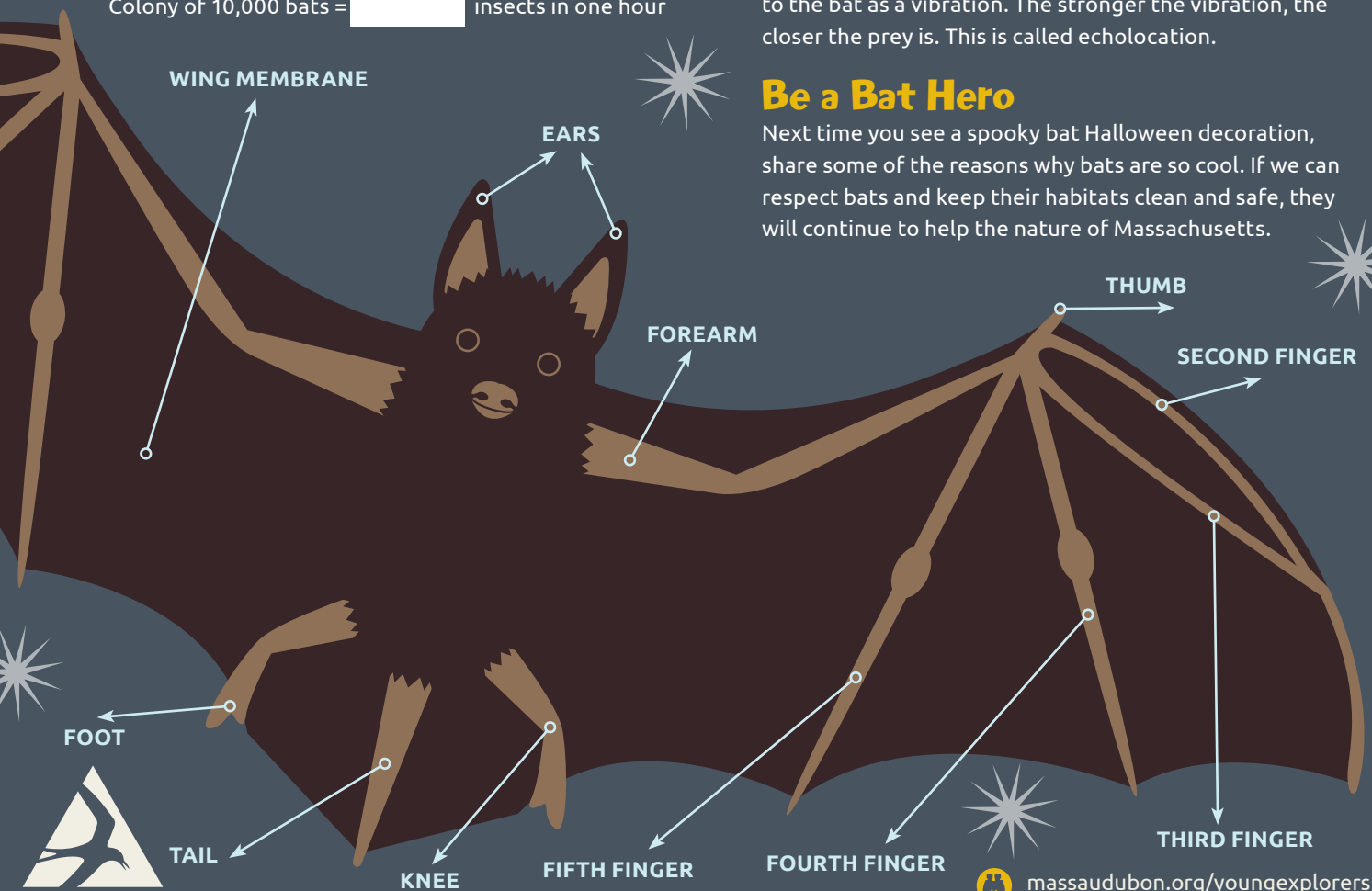
Some bats have ears twice as big as their heads. Imagine how well you could hear if your ears were bigger. Give it a try: First listen to music, the TV, or a person talking. Then, cup your hands around the back of your ears and listen to the same sound. What do you notice?

Echo...echo...echo...

Bats don't use their eyes to hunt or get around. Instead, they use their ears. They send out high-pitched sounds that bounce off their prey or another object and return to the bat as a vibration. The stronger the vibration, the closer the prey is. This is called echolocation.

Be a Bat Hero

Next time you see a spooky bat Halloween decoration, share some of the reasons why bats are so cool. If we can respect bats and keep their habitats clean and safe, they will continue to help the nature of Massachusetts.



YOUNG EXPLORERS



Mass Audubon

FALL LEAVES Scavenger Hunt

Fall is Unbe-leaf-able!

The sky is falling! Oh wait...it's just leaves falling from the trees. With many trees dropping their leaves this time of year in preparation for winter, fall is the perfect time to go out and explore the many colors, shapes, and textures that leaves have to offer.

Shapes

Did you know that you can identify a tree by the shape of its leaves? Pine trees grow thin needles, maples have points like a star, and oaks are "lobed" with rounded or pointed edges that stick out. Some leaves are shaped like hearts or teardrops or even fans. One type of tree, called sassafras, has three different shapes of leaf on the same plant.

Colors

In the fall when the length of daylight gets shorter and the temperatures drop, plants stop making food from sunlight. The "food factories" inside leaves—known as chlorophyll—break down and their green color fades, allowing other colors within the leaf to show. This is why we see yellows, reds, and oranges each autumn. Different factors can affect what colors come out each fall, including the amount of sun on each leaf or how much sugar remains inside the leaf.

Textures

Have you ever felt a furry leaf? A stiff leaf? A sharp one? Leaves come in many different textures. An evergreen leaf or needle has a waxy coating to help ice and snow slip off of it. Lamb's ear is as soft as...you guessed it, a lamb's ear! The thick fuzz helps prevent moisture from being lost on hot days. And holly has very sharp points on its edges to protect the leaves from being eaten.

Get Curious!

The next time you go out for a walk with a grown-up, explore some of the different textures that leaves offer and think of some possible reasons why the leaves have that texture or shape. Just be on the lookout for poison ivy and remember: Leaves of three, don't touch me!



Fan-shaped leaf



Leaf with sharp points



Three different shapes of leaf on the same plant



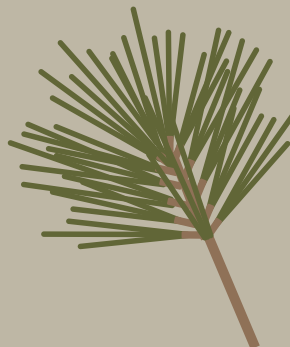
Bright red leaf



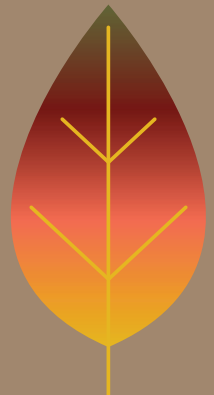
Leaf with 3 holes



Leaf with waxy coating



Multi-colored leaf



Find more information and activities online at massaudubon.org/youngexplorers.

YOUNG EXPLORERS

SEEDS



Seeds are tiny packages plants make that can grow into new plants, given the right conditions. Seeds come in lots of different shapes and sizes (think peas, pumpkin seeds, and even rice!), but they all have a protective outer shell called a “seed coat,” a miniature “baby” plant called an embryo, and a little bit of food to give the plant energy to grow and sprout.

Seed Search

Seeds can be found in lots of places, especially this time of year—along a walk in your neighborhood, in a plant box near your home, or during a visit to a local field or forest. They can even be found in your refrigerator or a fruit basket on your kitchen counter! See how quickly you can find five seeds, inside or outside of your home.



INSIDE



OUTSIDE

TRY THIS!

Find some milkweed or dandelions that have gone to seed. Each bit of fluff you see has a tiny seed delicately attached at one end. Take a dandelion head or a handful of milkweed fluff and blow the seeds away. See how far they travel. Try it again in different weather conditions. What changes do you notice? Have a “race” between two or more flying seeds to see which travels the farthest, or the highest, before landing.

Q. How many seeds do you think are in each milkweed pod?



Find more information and activities online at massaudubon.org/youngexplorers.

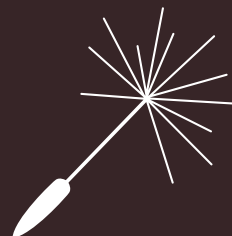
A. An average of 226!

On The Go

Seeds come in lots of different shapes, which help them travel to new locations to grow into plants. Wait...did we just say seeds travel? Why, yes, they do!

SEEDS TRAVEL BY:

Blowing in the wind (think dandelion or milkweed)



Attaching to animals or hikers with tiny, Velcro-like hooks (such as beggar's ticks and burdock)



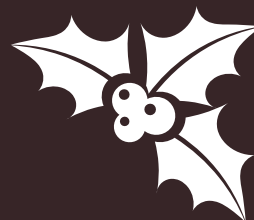
Catapulting into the air when touched or shaken by an animal—this is known as “ballistic dispersal” (jewelweed)



Being planted by wildlife (acorns)



Traveling through an animal—yes we mean that way (berries)



Mass Audubon

YOUNG EXPLORERS

Don't Bug Out!

How Insects Weather the Winter

Bugs are everywhere! Or at least they were all through the spring, summer, and fall. But now that it's winter they are almost impossible to find. Here's what some bugs do when the weather turns cold.

Monarch Butterflies

Monarch Butterflies are migrators. Although most Monarchs only live a few weeks, those that migrate south for the winter live for many months, long enough for them to make the 3,000-mile trip to Mexico where they roost (settle down) in trees and mostly rest until spring. In March, they wake up, mate, and lay eggs, which hatch into caterpillars that grow and change into adult butterflies. Then, they continue the journey northward. It can take up to **four** generations of Monarchs to make the full trip back north in the spring but only **one** to make the trip south for the winter.

Honeybees

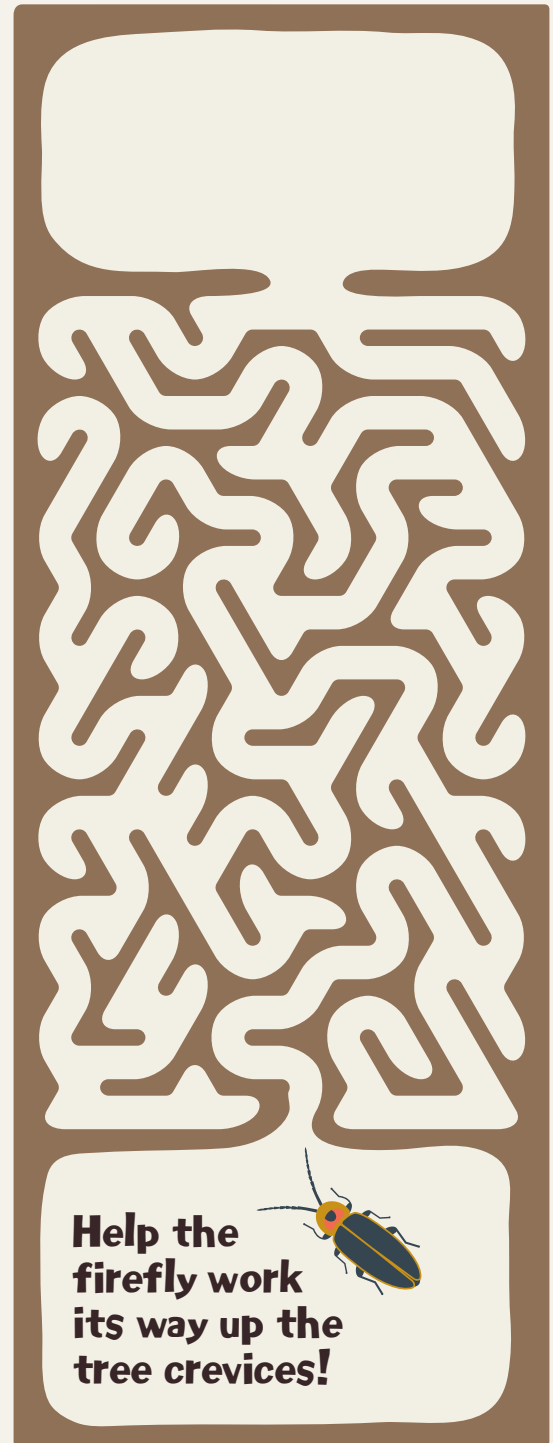
Like Monarchs, honeybees in winter live longer than they do in the summer. While the male (or drone) bees die off, the female worker bees cluster together inside their hive and shake or shiver to generate heat (as high as 90-100 degrees Fahrenheit, the temperature of a hot summer day!). They keep up their energy by eating the honey they stored during the summer and fall.

Winter Firefly

This species of firefly is common in New England, but unlike other species of firefly, this one does not light up. It is well-adapted to cold, surviving subfreezing temperatures by wintering in the crevices of tree bark. When you go for a walk in late winter or early spring, try taking a closer look at the trees to see if you can find any fireflies hiding in the bark.

Field Crickets

These insects are sensitive to temperature. Warm temperatures increase their level of activity and make them chirp faster. But when the temperature drops, most are unable to survive. Instead, they carefully lay their eggs in soil to protect them from the cold, so the eggs can survive the winter and hatch in the spring.



Help the
firefly work
its way up the
tree crevices!

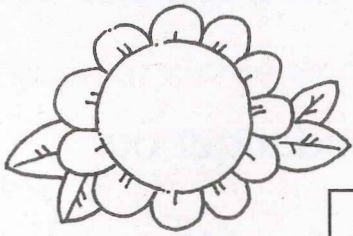
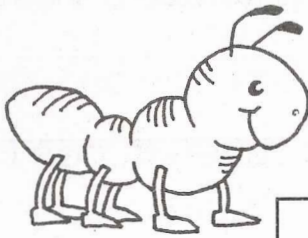
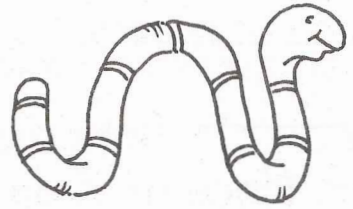
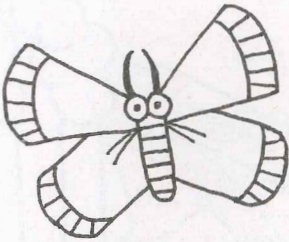
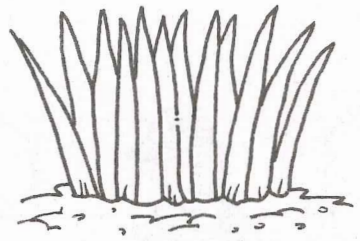
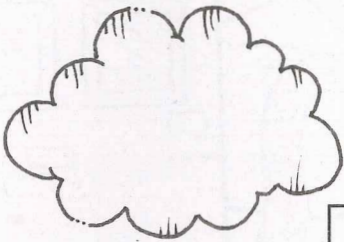
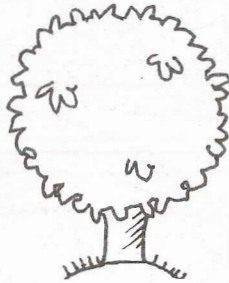
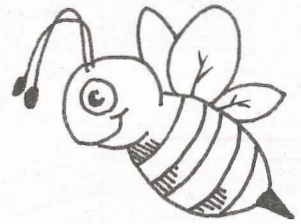
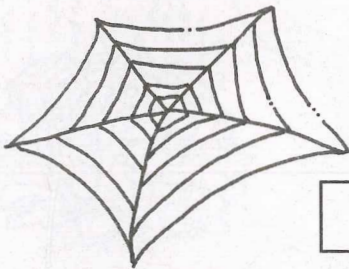
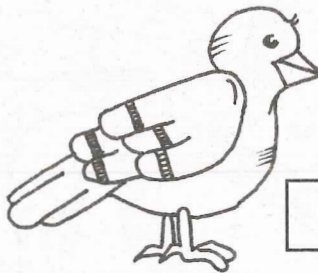
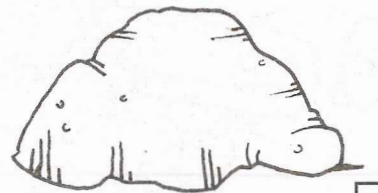
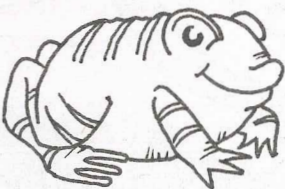
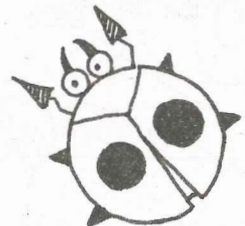


ANSWER:



LET'S GO ON A NATURE WALK

Check off and **color** the items you see on your walk.

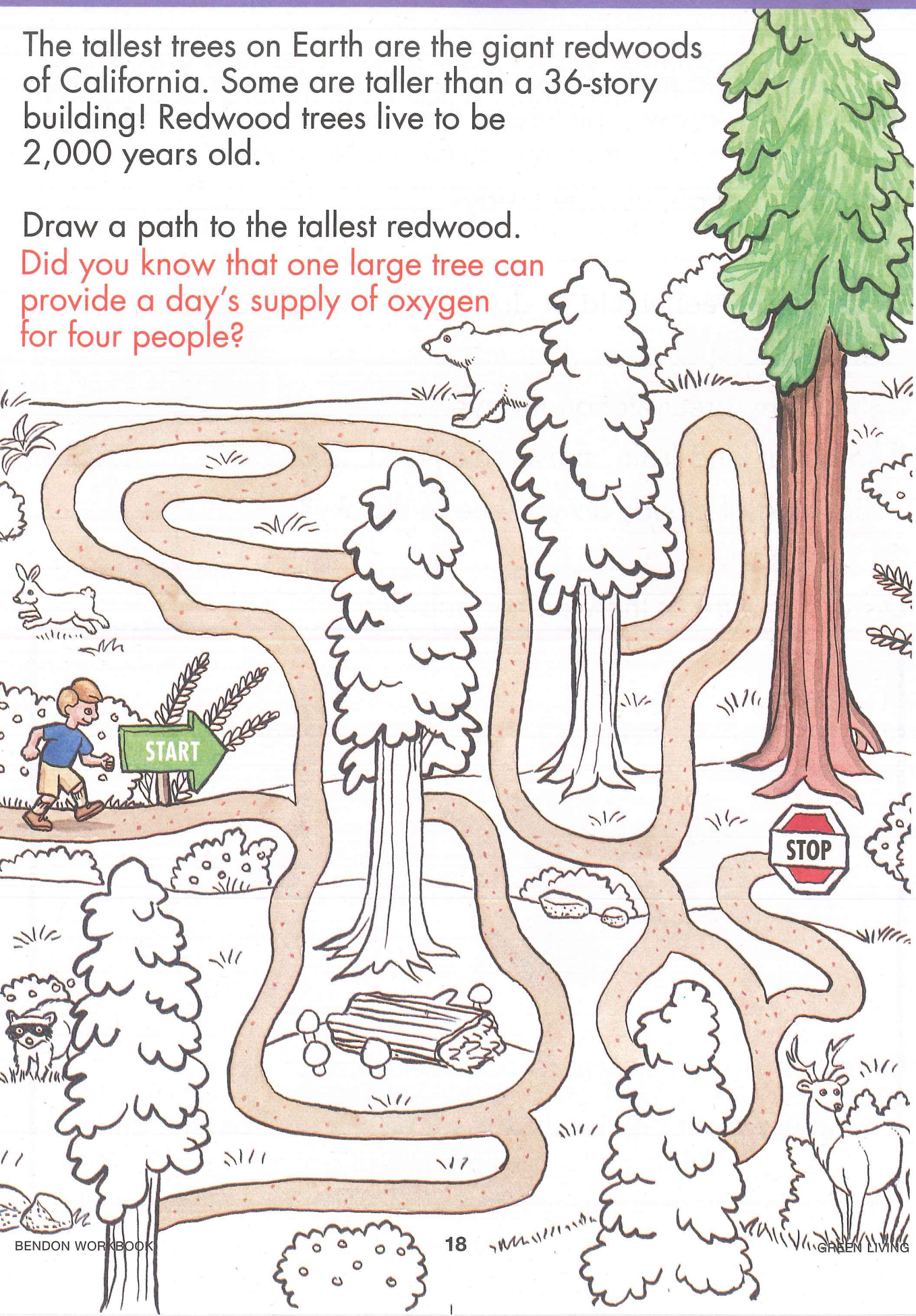
☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

THE TALLEST TREES

The tallest trees on Earth are the giant redwoods of California. Some are taller than a 36-story building! Redwood trees live to be 2,000 years old.

Draw a path to the tallest redwood.

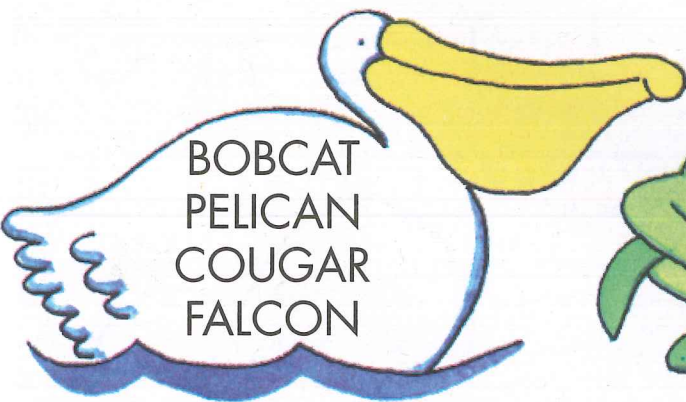
Did you know that one large tree can provide a day's supply of oxygen for four people?



THE PROTECTED WORD SEARCH

People protect the animals in the list below. Find and circle the animals in the puzzle. The words can be in any of these directions: → ← ↑ ↓ ↗ ↘

B	P	M	C	R	O	C	O	D	I	L	E
O	R	A	A	O	P	A	I	G	R	R	O
B	C	N	N	P	N	A	C	I	L	E	P
C	T	O	R	T	O	I	S	E	S	H	F
A	E	T	M	G	A	C	R	U	O	T	A
T	H	E	F	A	L	C	O	N	U	N	L
N	C	O	U	G	A	R	P	N	A	A	C
R	H	I	N	O	C	E	R	O	S	P	O

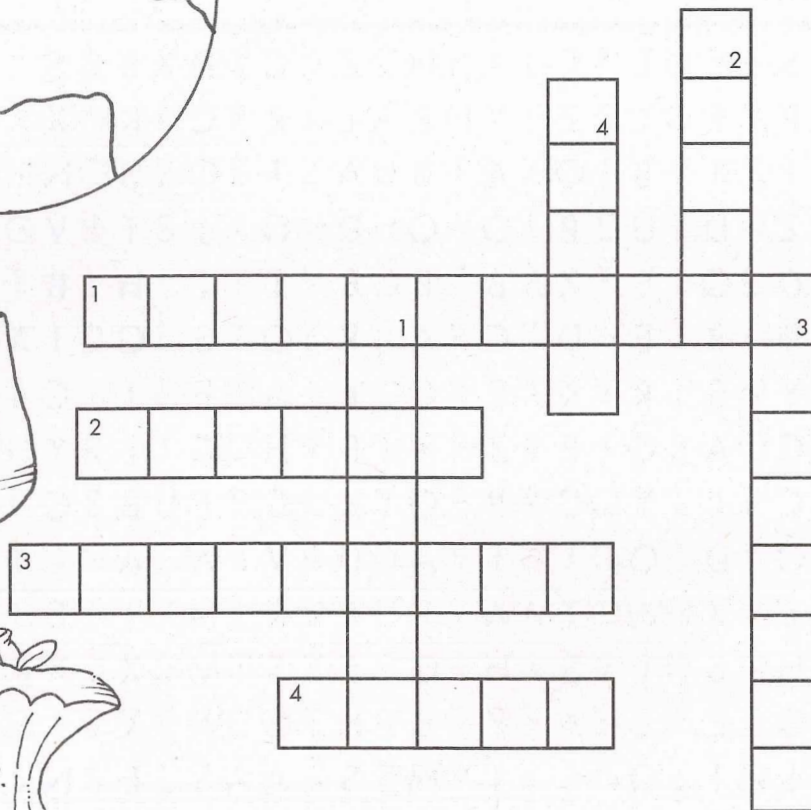
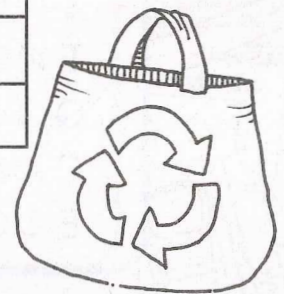
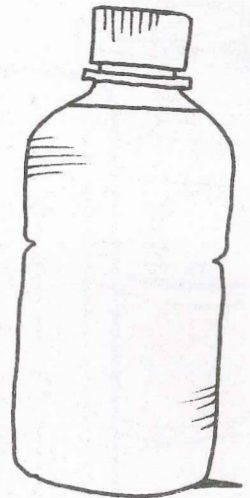
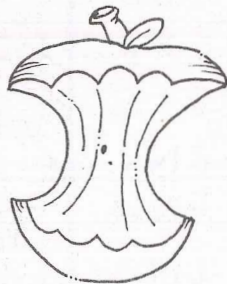
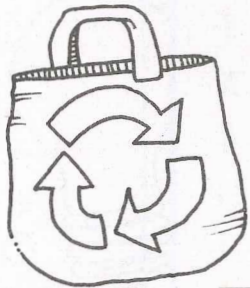


These animals would become extinct—die out—if people didn't protect them. Special places, such as wildlife preserves and national parks, keep some of the animals safe.

EARTH DAY FUN CROSSWORD



Use the picture clues to solve the crossword puzzle. Then, **color** the pictures.

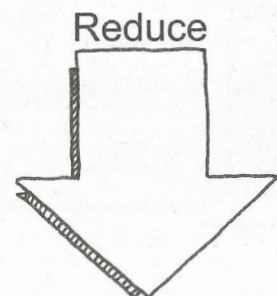
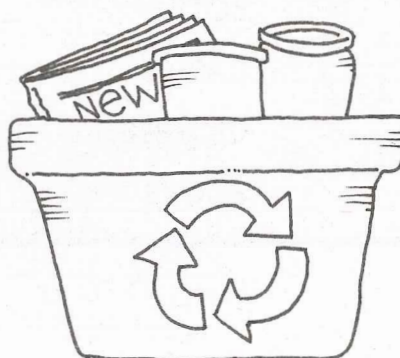
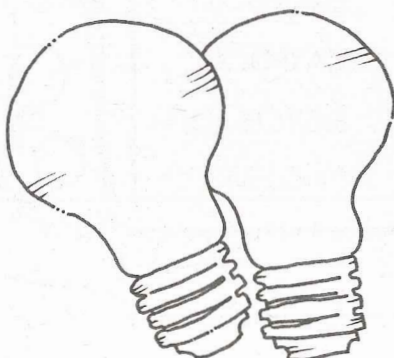


Across

1. Something that can be recycled
2. To use less of something
3. Something that can't be recycled
4. To use something over again

Down

1. To use something another way
2. The month of Earth Day
3. Who can help save the earth?
4. The planet we live on



DO-IT-YOURSELF RAINBOW

A rainbow is the product of sunlight and certain atmospheric conditions. A rainbow is formed when light passes through a water droplet, slowing down and bending as it goes from air to denser water. This creates the spectrum of colors which we call a rainbow.

Can you name all 7 of the colors found in a rainbow?

(For a hint, the first letter of each color is provided.)

R _ _ O _ _ _ _ Y _ _ _ _

G _ _ _ _ B _ _ _ I _ _ _ _ V _ _ _ _



Follow the directions below and create your very own mini rainbow. Experience the cool science of rainbows up close!

What you need:

- Water
- Large clear drinking glass
- Small mirror
- Flashlight
- Room with white walls



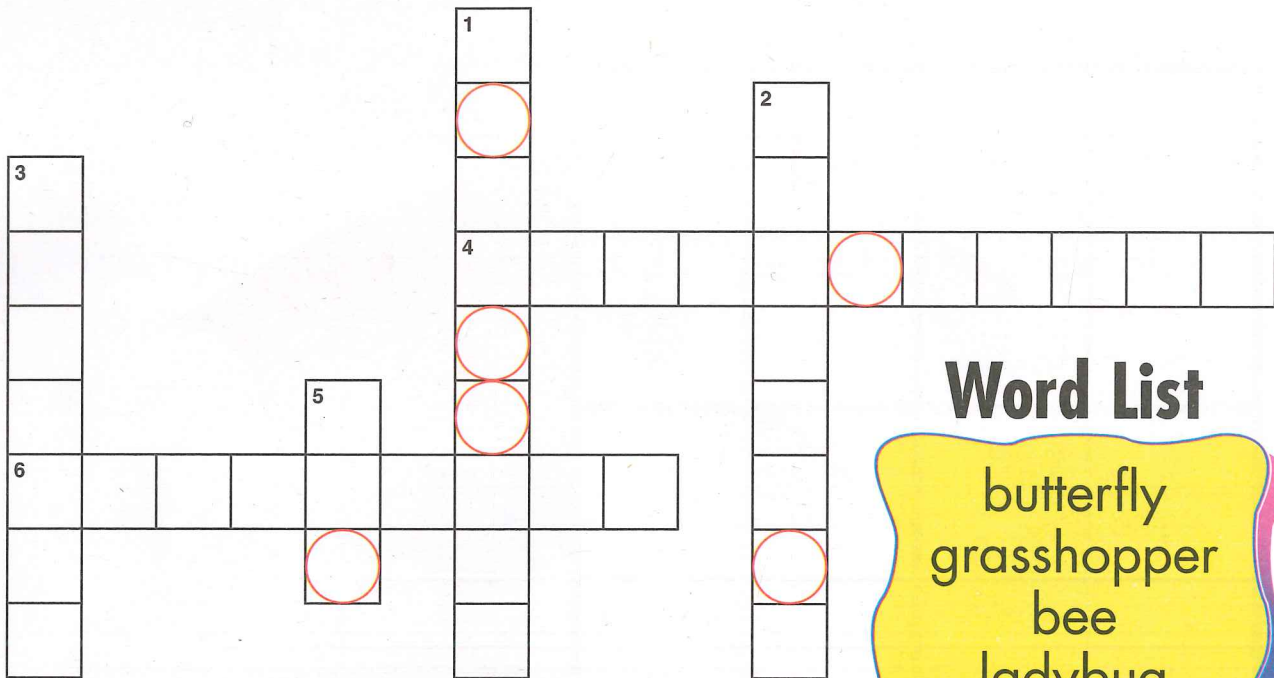
Result Timing:

- 5 minutes

Directions:

1. Fill the glass about $\frac{2}{3}$ full of water.
2. Submerge the mirror in the glass and tilt the mirror so it faces slightly upward.
3. Take the glass and mirror into a dark room with white or light-colored walls.
4. Shine the flashlight on the mirror.
5. Look around you—do you see a little rainbow on one of the walls? If not, try tilting the mirror and moving the flashlight until you can see a rainbow. It won't be as big and dramatic as the rainbows we see outdoors, but you should be able to notice the rainbow colors as narrow stripes.

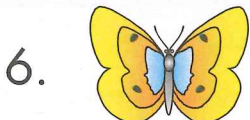
All insects have six legs. All insects' bodies have three sections covered with a hard shell, but different insects look very different from each other! Match each insect to its name. Then, fill in the puzzle.



Word List

butterfly
grasshopper
bee
ladybug
dragonfly
mosquito

Across



Down



Copy the letters in the circles. _____
Unscramble them to find the mystery word.
Hint: This insect stings: _____.