

# ACTIVITY GUIDE



INSTITUTE of  
**Museum and Library**  
SERVICES



## Let's TALK ABOUT PATHWAYS THROUGH NATURE

WHAT CAN  
YOU SMELL?

WHAT CAN  
YOU HEAR?





# NATURE IS A GREAT TEACHER

Try these fun and easy-to-do outdoor activities to connect your family to nature. The Nature Activity Guide is suitable for children 3-5 years of age. Some activities work better for younger children, whereas others are more suited for older children. The way you present them will change depending on a child's knowledge and ability.

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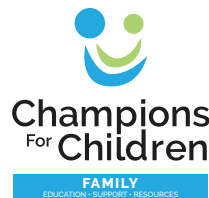
# DEAR HILLSBOROUGH COUNTY FAMILIES,

Welcome to "Let's Talk about Pathways Through Nature Activity Guide!" This Guide is part of a joint effort of Champions for Children (Champions); Talk Read Sing Tampa Bay, an Initiative of Champions; Tampa-Hillsborough Public Library (Library); and ZooTampa at Lowry Park (ZooTampa) to provide caregivers and young children with an opportunity to connect to each other and nature through fun guided hands-on learning activities.

Along with this guide, there are other free learning activities, some of which are offered online by the Library and ZooTampa. Virtual "Story Times" presented by the Library include readings and activities related to a selected children's book with presentations about animals by ZooTampa animal care staff. Learn more about the Library and the Story Time program at Tampa-Hillsborough Public Library main website.

ZooTampa will place special signage throughout the Zoo with questions inspired by Talk Read Sing learning strategies to help caregivers talk with their children about the animals. Learn more about visiting at [ZooTampa.org](http://ZooTampa.org)

Our goal is to promote parent/caregiver interactions with children, support early learning language development, and inspire greater curiosity about and empathy for animals. We hope you enjoy this Guide and the nature activities it contains. We hope you join your children in watching the Story Times and visiting the Library. And we hope you will come see the animals that live at ZooTampa.



# EVERYDAY FUN WITH STEM

Children are naturally curious about science, or the study of the natural world. They are drawn to questions that help them make sense of their world like how birds fly, why leaves change color, and which objects sink. At the same time, young children are also fascinated with the process of doing science—exploring cause-and-effect, discovering patterns, and more. In the early years, children use scientific practices like:

- Making observations and noticing similarities and differences
- Asking questions
- Describing animals and plants, and natural processes like rainstorms
- Predicting what will happen next in a process
- Providing explanations for processes they observe—such as why there is thunder
- Using tools to further exploration, such as binoculars, a shovel, or measuring cups

By following children's leads, describing their actions and discoveries, and guiding their learning, you can help them begin to understand big ideas about science.





# ANIMAL HOMES

Children will learn general information about the types of habitats the earth provides.

## INTRODUCTION

Animals need food, water, space, shelter. Habitats are like a neighborhood with everything necessary for survival. A habitat is where an animal or plant can typically be found and live and grows best. There are seven animal habitats: arctic, freshwater, rainforest, desert, forest, ocean, and grasslands. The forests of Florida are home to many kinds of habitats for animals, such as trees, caves, and water.

Florida is home to many unique types of animals, called species. Wildlife experts call one of those species, the gopher tortoise, a "keystone species" because it is the backbone of the plant and wildlife community in which it lives. Other animals that depend upon tortoise burrows for shelter include the indigo snake, pine snake, gopher frog, opossum, burrowing owl, Florida mouse, gopher cricket, and scarab beetle. Without the tortoise, the populations of more than 350 wildlife species that live in their burrows would be greatly reduced, if not disappear.



# MORE ABOUT ANIMAL HOMES

## "WORDS" FROM A SCIENTIST

**Species** – A group of animals that can reproduce together

**Habitat** – A home for an animal or plant

**Burrow** – A hole or tunnel, often dug by an animal

## QUICK FACTS

- A group of rabbit burrows is called a warren. Each burrow has its own entrance as well as a well-concealed back door which is used in time of danger, much as we would use a fire escape.
- Ants are amazingly well organized and are a model of a well-run community. Different ants have particular jobs for which they are responsible. They can live in the same colony for years.
- Weaver-birds are diligent workers who construct masterpieces that if not up to their standards will pull the nest apart and start over. They make nests that look like woven baskets by threading grass and straw through big leaves.
- Black bears make dens in trees, caves, or in holes they dig. They are generally considered woodland animals.



## HABITATS VS HOMES

Here are some examples of habitats and what animals might live in that space.

**Desert** – Naked mole-rats, hyenas, burrowing owl, and camels

**Woodlands** – Raccoons, opossums, black bears, coyote, white-tailed deer, turkeys, rattlesnake, and squirrel

**Rainforests** – Orangutans, tamarin, toucan, tapir, macaw, and red-eyed tree frog

**Grasslands** – Bison, cows, horses, sheep, zebra, elephants, giraffes, emu, and rhinoceros

**Water** – Fish, crabs, lobsters, whales, dolphins, sharks, rays, and manatees

**Arctic** – Reindeer, polar bear, walrus, harp seal, and some penguins

**Swamps** – Snapping turtle, caiman, and archerfish

**Caves** – Lesser horseshoe bats, cave spiders, and barn owl

## ANIMAL HOMES

Wild animals need homes for protection from predators and weather.

Examples of animal homes are nest, burrow, den, hive, and mounds.

**Burrows** – Prairie dog, rabbits, badgers, gopher tortoise, kingfisher (birds), fiddler crabs, trapdoor spiders, ants, chipmunks, jawfish

**Mounds** – Termites, muskrat

**Nests** – Birds, orangutans, gorillas, red squirrel

**Dens** – Black bears, red foxes

**Hives** – Bees, wasps



# BEAR CAVE ACTIVITY

TALK  
READ  
SING

TALK READ SING TALK READ SING

## WHAT MATERIALS ARE NEEDED

paper bag • stuffed animal • leaves • sticks  
scissors

## ACTIVITY

Create a cave for your stuffed animal to hibernate in during the winter.

## DIRECTIONS

Get a paper bag and go out and collect natural materials for your bear den. Cut an upside-down "U" on the paper bag, roll up the top of the paper bag, and place the stuffed animal inside.

LET'S FEEL WHAT IT IS LIKE  
TO BE IN A CAVE.  
IF YOU HAVE A BLANKET,  
PLACE IT OVER YOU, AND TALK  
ABOUT HOW YOU FEEL.  
IS IT COLD, HOT, DARK, LIGHT?

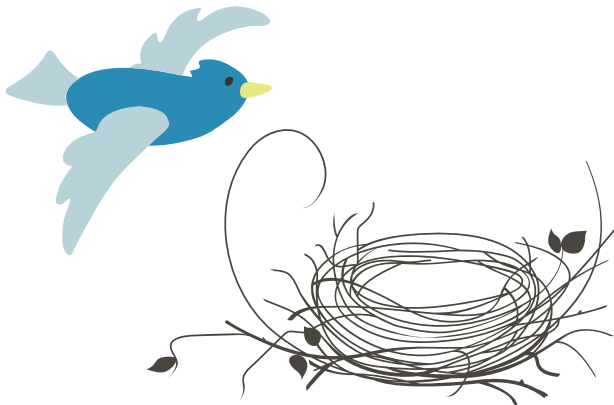




# CAREGIVER TIP

## ANIMAL HOMES

Just like humans, animal homes can vary in shape, size, and by location. An animal home is often referred to as a habitat. Some types of habitats include desert, tundra, marine, rainforest, wetlands, and air. Encourage your little one to learn about animal habitats through educational videos (free on YouTube©) or through coloring sheets of animal habitats (available online)! You may even be interested in ways that you can help preserve animal habitats and homes.



## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime (Scan the QR to take you to The Library's KidsPicks.)

### HERE ARE A FEW OF OUR FAVORITES

[Busy Busy Birds](#) by Geraldo Valerio

[Elliott the Otter](#) by John Skewes

[Pup 681](#) by Jean Reidy







## OTTER HABITAT DESIGN CHALLENGE

### OTTER HABITAT DESIGN CHALLENGE

You can see river otters at ZooTampa and maybe you can help design a new habitat for them. ZooTampa would like to have your ideas about how to make a new river otter habitat more like where they live in the wild and give humans a better chance to see them when they visit. What would you like to see in the new habitat to better understand river otters and how they live? The Library has books about otters that can help you learn about how they live.

### WHAT MATERIALS ARE NEEDED

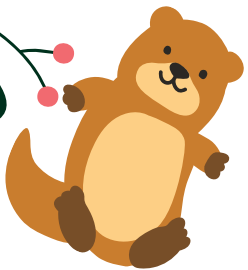
drawing materials • nature activity guide

### ACTIVITY

Sketch your design. Check carefully to ensure the habitat has a place to shelter, for water, guest viewing, and access for the Animal Care Professional to provide food and conduct daily health checks. Extend your learning by using various materials to make a 3-D river otter habitat.

# ACTIVITY

SKETCH YOUR DESIGN BELOW



# ANIMAL HOME ACTIVITIES

## TEXTURES OF HABITATS

### WHAT MATERIALS ARE NEEDED

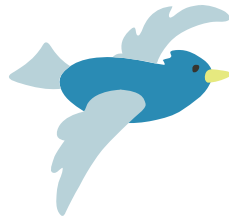
bucket • wooden spoon • whisk • tongs • measuring cups • sand • leaves  
pinecones or other natural objects • water • paper

### ACTIVITY

Animals live in varied habitats such as woodlands, grasslands, swamps, and caves with dirt. This activity is to get your hands dirty and connect to the soil of the earth. Good clean soil keeps plants healthy for animals to eat.

### DIRECTIONS

Using water, dirt, and a few essentials (large bucket, wooden spoon, whisk, tongs, measuring cups), make an outdoor lab! In your lab make mud dens, mud nests. You can also use natural objects to paint landscapes that animals live in.



## ANIMAL HOMES

### WHAT MATERIALS ARE NEEDED

shoebox • glue stick • recycled materials  
crayons or paint • replica animals

### ACTIVITY

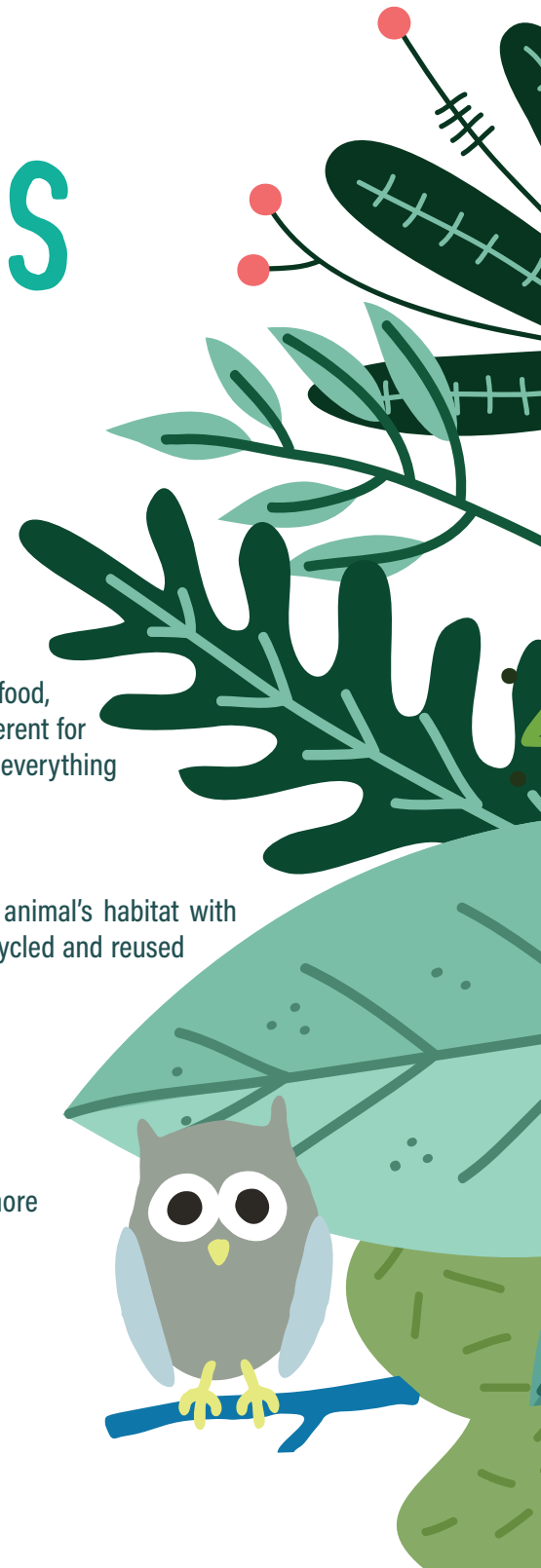
All animals have five basic needs (water, food, air, shelter, space), but these needs look different for every animal. Can you build a habitat that has everything your animal needs?

### DIRECTIONS

Turn your shoebox on its side. Design your animal's habitat with paint, markers, and your other materials (recycled and reused materials are most earth friendly!)

### Here's a few tips:

- Use junk mail torn into tiny pieces and glue inside
- Twist old packing paper for vines
- Plastic jars can be trees, burrows, and more



# ACTIVITY

## ANIMALS IN THE NEIGHBORHOOD

### WHAT MATERIALS ARE NEEDED

nature activity guide • crayon

### ACTIVITY

Take a walk in your neighborhood or a park and explore trees, plants, and animals. Count the number of each item that you find and draw pictures of them. Explore observations of nature in your area using the iNaturalist platform from the California Academy of Sciences and the National Geographic Society. If you have a cell phone, you can download the iNaturalist app to help identify the species of plants and animals you see during your walk.

### TREES



Hint: look for different types of leaves or bark on your trees



### TREES

Total Species =

Total Items =

### PLANTS



Hint: look for flowers, bushes, grass, and weeds

### PLANTS

Total Species =

Total Items =

### ANIMALS



What animals visit your yard or live there

### ANIMALS

Total Species =

Total Items =

# ACTIVITY

## NATURE IN THE NEIGHBORHOOD

### WHAT MATERIALS ARE NEEDED

four sticks • string • natural materials  
(grass • leaves • moss • flowers)

### ACTIVITY

Make your own nature loom with this fun activity, the perfect way to weave your creativity into a piece of natural art.

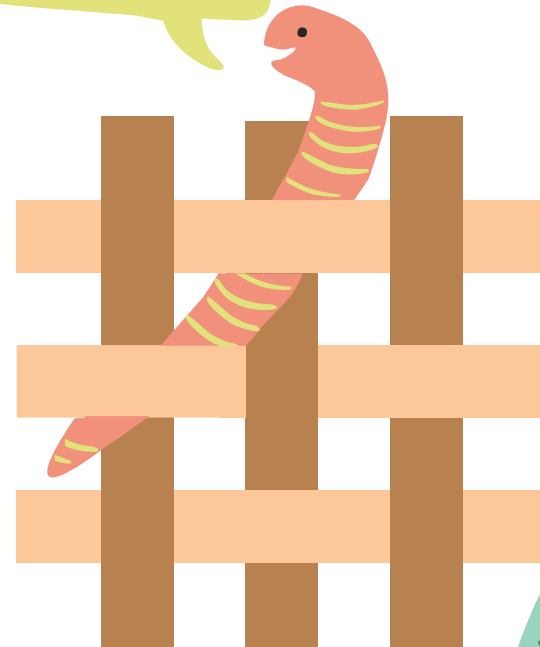
- Lay out four sticks to create a square frame
- Securely tie the four corners of your frame together using string
  - Tie a piece of string to the bottom left of your frame
- Run the string up to the top stick, and loop around the top stick twice
- Next, run your string back down to the bottom stick and loop around the bottom stick twice
- Repeat steps 4 and 5, moving each run 1cm to the right

### YOU NOW HAVE YOUR FRAME TO WEAVE

- Take each strand of grass and weave under and over each string from one side to the other
- Try to alternate for the next piece of grass – over and under all the way along
- Once you've filled the loom with grass, secure some colorful objects into the design such as flowers. Remember to use fallen materials

WHAT TYPE OF FALLEN MATERIALS  
CAN BE FOUND IN  
YOUR NEIGHBORHOOD?

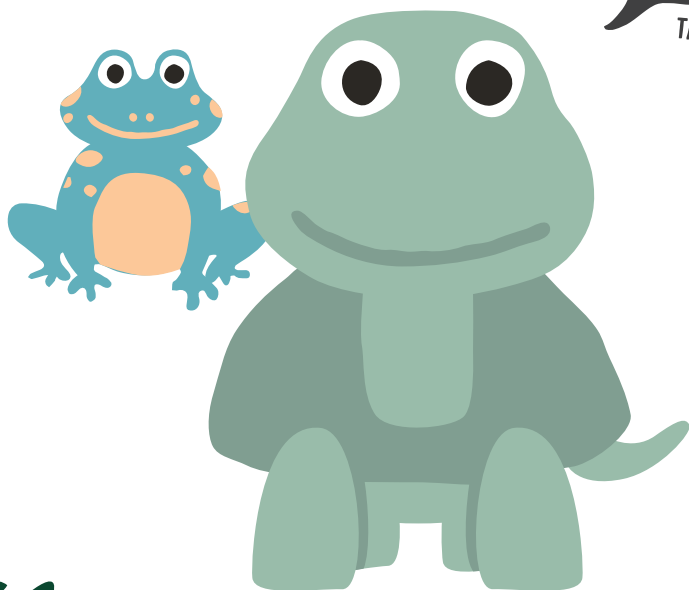
USE BOTH SOFT AND HARD  
ITEMS FOR YOUR NATURE WEAVE.



# CAREGIVER TIP

## ANIMALS IN MY NEIGHBORHOOD

Florida is home to animals of many varieties! Birds, reptiles, amphibians, and more. Every day is an opportunity to discover new animals in our environment. When you look around, you may be surprised at how many animals you see. Take a walk with your little one and play a game! How many animals can you spot in your neighborhood? Do you know their names? Have fun with it and look in all directions - you may see some unexpected animals in your neighborhood!



## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime. (Scan the QR to take you to The Library's KidPicks.)

### HERE ARE A FEW OF OUR FAVORITES

[Hello, Garden Bugs](#) by Julissa Mora

[Please Please the Bees](#) by Gerald Kelley

[Lola Plants a Garden](#) by Anna McQuinn



# ACTIVITY

## ANIMAL MOVE AND GROOVE

### WHAT MATERIALS ARE NEEDED

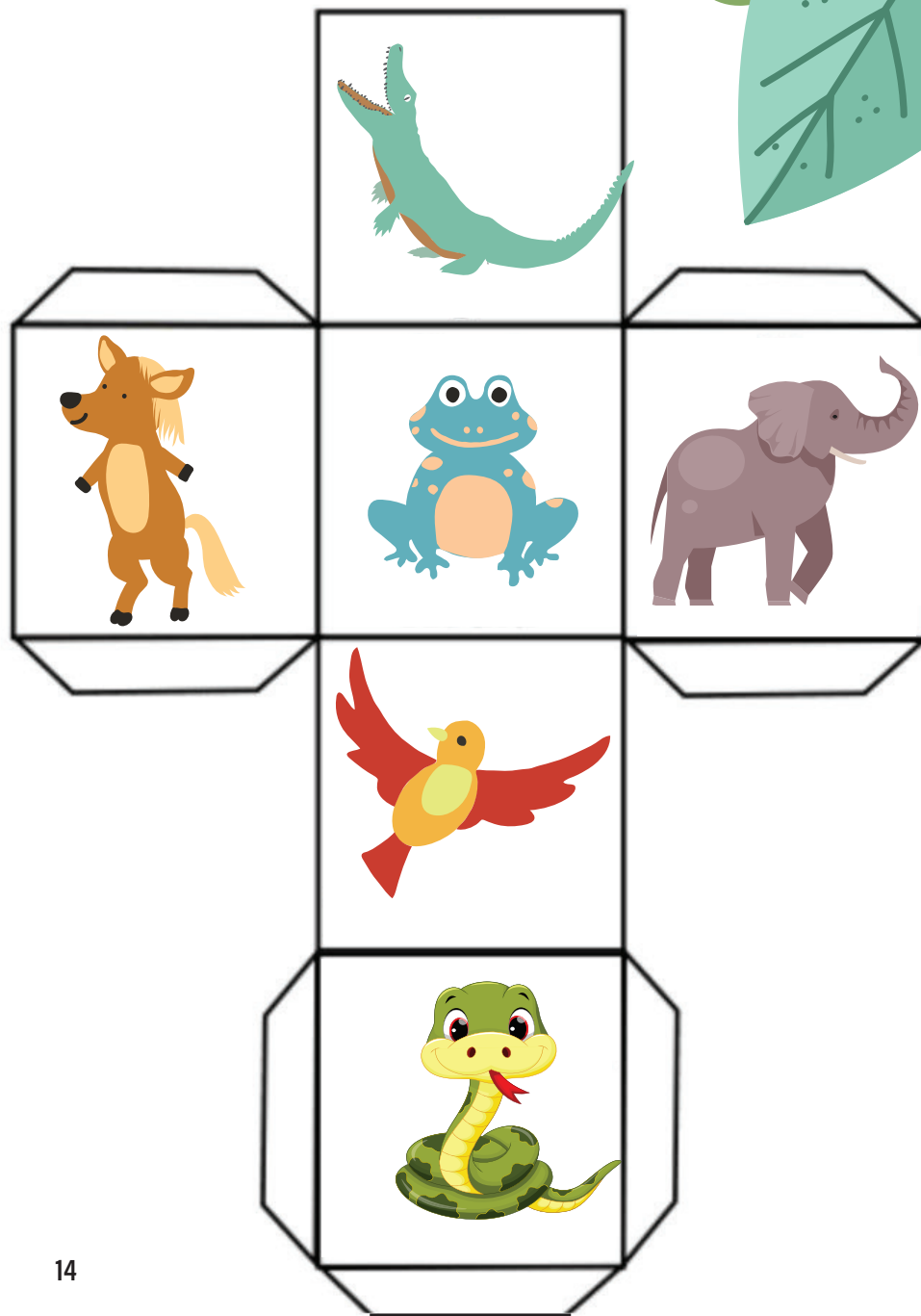
nature activity guide • glue stick • scissors

### ACTIVITY

For this game, you can act out different animals with your child to support their large motor skills and learn to identify different animals.

### DIRECTIONS

- Cut out the dice template
- Bend all the tabs on the lines
- Glue the side tabs together to make the square shape of the dice
- Roll the dice and act out the animal that is rolled



# ACTIVITY

## ANIMAL MOVE AND GROOVE CUT OUT

(SIDE TWO)





# ANIMALS THAT FLY



With this activity, you can help your child learn to identify types of bird beaks, feet, wings and other adaptations.

## INTRODUCTION

Even though we think of wild animals as living far away from humans, there are many that live right in our backyards! Birds are one of the most frequent backyard visitors, and you can help them by making your yard a good habitat.

## What are some threats facing wild birds?

When houses and communities are built, this can sometimes harm or reduce space for bird habitats. Some problems that can happen are:

- **Light pollution** – Migrating birds use the night sky to navigate, but bright city lights can cause them to become lost and disoriented. Birds may become confused, tired, or vulnerable to other threats.
- **Invasive species** – Some non-native animals hunt birds and disrupt natural ecosystems. Dogs and cats are two of the biggest threats to wild birds.
- **Glass collisions** – Birds don't see glass windows and doors and sometimes fly into them, causing injury.

## How can I help wild birds?

- Plant native plants. Visit the Library to find books about bird-friendly plants that are native to your area and plant a few. This provides food, shelter, nesting materials, and nesting sites for birds.
- Provide nesting materials. Twigs, leaves, straw, and grass clippings can all be used by birds to make nests. Do not use materials like yarn, human hair, and dryer lint.
- Turn off lights during spring and fall migrations.
- Close the blinds or curtains on your windows so the lights don't confuse birds at night.
- Turn off unnecessary outdoor lighting.
- Cats and dogs can be threats to birds, so keep them inside. If they do go outside, make sure that they are supervised.



# MORE ABOUT ANIMALS THAT FLY

## "WORDS" FROM A SCIENTIST

**Warm-blooded** – Body temperature stays the same when its cold or hot outside

**Aviaries** – Locations where the birds are located in the zoo

## QUICK FACTS

Birds are warm-blooded animals that have wings, feathers, a beak, no teeth, and a skeleton. The bones of birds' skeletons are hollow. Birds move in and out of their environments in different ways; most can fly, some can run very well, some swim, and some do combinations of these. Some birds cannot fly, like the African Penguin.



## IDENTIFYING BIRD BEAKS

You can visit ZooTampa and explore the three aviaries, large netted areas where birds fly freely. Notice the various types of bird beaks. Each beak is used in various ways to eat.

What are some ways that birds use their feet? Walking, perching, swimming, running, climbing, and grabbing.

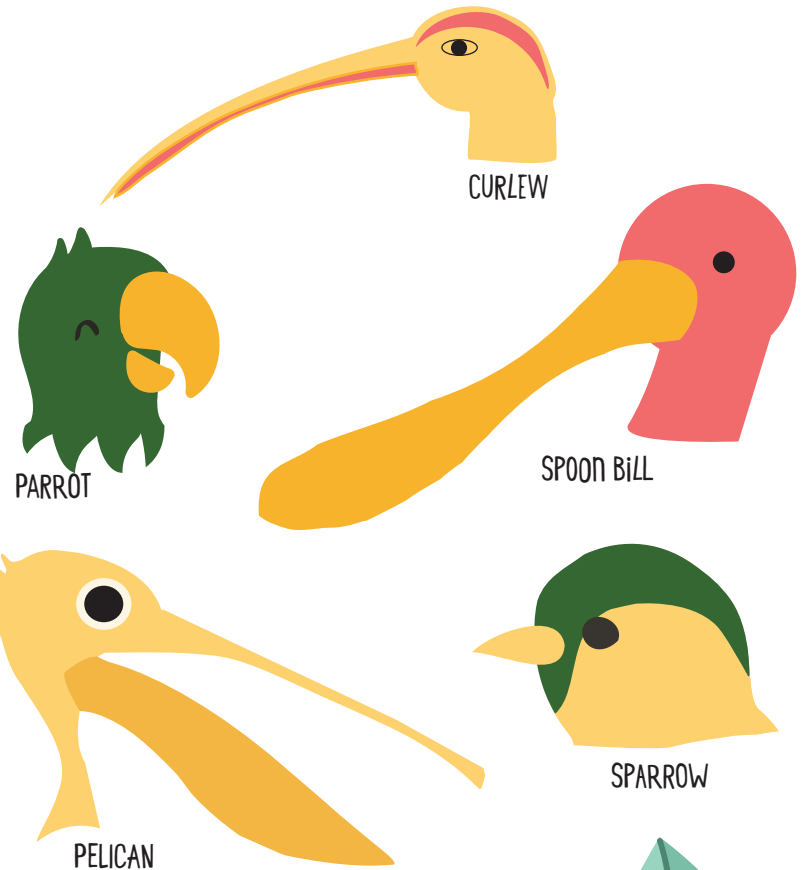
- **Climbers** such as woodpeckers have two toes in front and two toes in back for climbing tree trunks. Graspers such as owls, hawks and other birds of prey have large curved claws called talons, which dig into their prey and hold onto them in flight.
- **Perchers** such as robins and doves have three toes that face forward and one long hind toe that helps them grip their perches tightly.
- **Runners** such as ostriches and killdeer have two and three toes and all their toes point forward for fast running.
- **Scratchers** such as pheasants and chickens have rake-like toes for scratching in the soil.
- **Swimmers** such ducks use their webbed feet like paddles.

## COMMON FLORIDA BIRDING GUIDE

Visit the Library to check out a guide to Florida birds. Draw and count how many different kinds of birds you can find in your yard or neighborhood. Look for:

White Ibis	American Kestrel	Curlew
Roseate Spoonbill	Red Shoulder Hawk	Parrot
Wood Stork	Egret	Pelican
Bald Eagle	Barred Owl	

# ACTIVITY





# ACTIVITY

## NATURE BAT

### QUICK FACTS

- Bats are mammals: warm-blooded, have fur, give birth to live young and nurse their babies (also called pups).
- Hanging upside down enables bats to take flight by simply letting go, dropping into the air and taking flight. This is also an easy means of predator avoidance.
- About 70% of bat species feed on insects, 20% on fruit. The other 10% have varied diets including nectar, fish, and animals like mice.

### ACTIVITY

This is a fun craft activity for your family. Head outside and respectfully collect sticks and leaves. Cut out the bat template and glue on the sticks and leaves onto the bat. Use string to hang the bat upside down.

### WHAT MATERIALS ARE NEEDED

sticks • leaves • scissors • string • glue • bat template

# ACTIVITY

## NATURE BAT CUT OUT (Side TWO)





# CAREGIVER TIP

## ANIMALS THAT FLY

Up, up, up in the sky! Animals that fly are much more than just birds and insects like butterflies and bees. Things that fly include airplanes, rockets, and kites. Creating paper airplanes is a fun way to demonstrate the power of flight with your child. The Library is a great resource to find books to show you how to create paper airplanes and learn more about the science of airplanes.

**TALK  
READ  
SING**

TALK READ SING TAMPA BAY, FL

## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime. (Scan the QR to take you to The Library's KidsPicks. )

### HERE ARE A FEW OF OUR FAVORITES

Flip, Float, Fly: Seeds on the Move by Joann Early Macken

Flight School by Lisa Judge

Fly by Mark Teague



# CAREGIVER TIP



Children benefit from “thick” conversation. You can have a thick conversation with your child by giving them many chances to speak and communicate, ask them open-ended questions, and encourage them to imagine and think and have back-and-forth exchanges. When you visit ZooTampa you will see special signs to help you have thick conversations with your child.

Scan the QR code to find more tips like these—as well as videos, information, and more.



## HERE'S ONE WAY TO TURN A THIN CONVERSATION...

Adult: Do you want to play with the boat?

Child: Yes.

Adult: What color is it?

Child: Blue.

Adult: Who will ride in the boat?

Child: The man.



## ➔ INTO A THICK CONVERSATION.

Adult: Which toy do you like to play with the most?

Child: The boat.

Adult: Oh, the boat is your favorite. What will you do with the boat?

Child: The man is going to ride on it.

Adult: Where is the man traveling?

Child: Into the bubbles.

Adult: The bubbles are dense. Watch out!

Child: Help! The man is falling out!

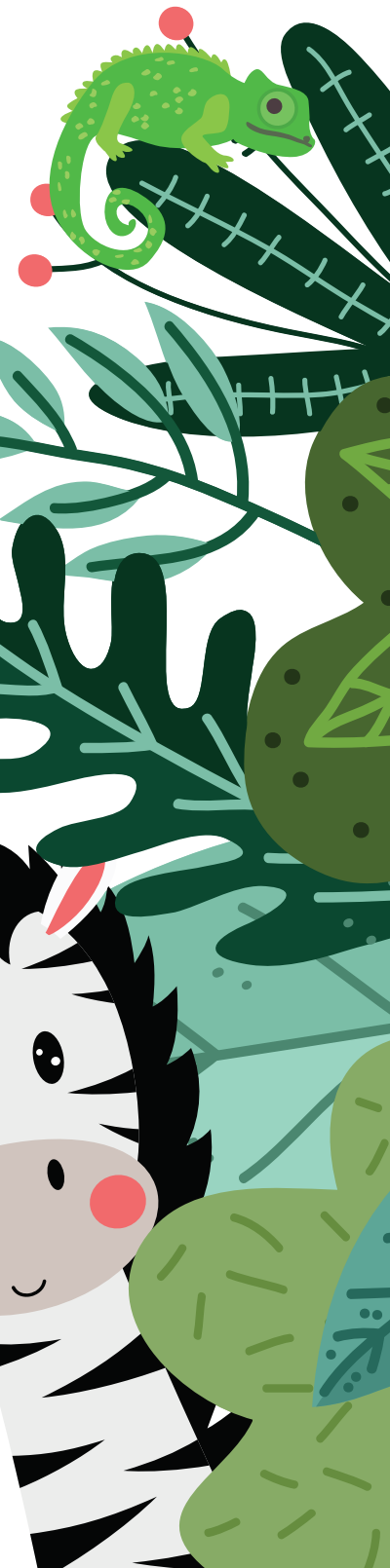
Adult: Oh no! Who will rescue the man?

Child: I'll get the whale!

Adult: The whale is the hero!



# SHAPES, PATTERNS, & CAMOUFLAGE



## INTRODUCTION

Camouflage can be thought of as a color or shape in an animal's body covering that helps it blend into its environment. Most animal species have developed camouflage that helps them find food and avoid predators. In contrast, predators may use their camouflage to hide when stalking prey. Camouflage varies between species, but an animal's environment often directs the color and shape of it. Camouflage patterns may match or blend into the habitat surroundings.

## QUICK FACTS

Animals come in all shapes and sizes. Wild animals must find food and avoid being eaten by other animals to survive. Many adaptations help wild animals accomplish these critical tasks.

Examples of different types of animal adaptations are:

- Fur or feathered animals typically have natural earth tone coverings to blend into the environment.
- A chameleon changes the color of its skin to match the color of the object it is sitting on.
- The stripes of zebras and tigers are examples of covering that makes it hard for other animals to detect.



# ACTIVITY

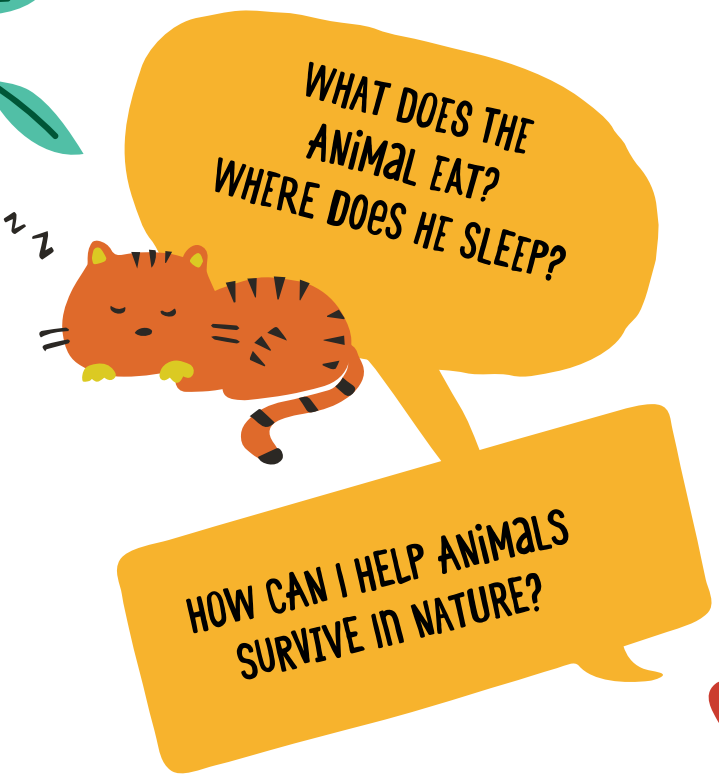
## ANIMAL LEAF ART

### WHAT MATERIALS ARE NEEDED?

leaves (varieties of color, size, and shape) • glue • replica animals

### ACTIVITY

- Go outside and collect leaves
- Create your favorite animal completely out of leaves
- Glue the Animal Leaf Art in your Nature Activity Guide



WHAT DOES THE  
ANIMAL EAT?  
WHERE DOES HE SLEEP?

HOW CAN I HELP ANIMALS  
SURVIVE IN NATURE?



# ACTIVITY

## EXPLORING SHAPES & COLORS IN NATURE

A rainbow is created when the sunlight shines through water droplets in the air after it rains. The raindrops act as a prism, which means when the light shines through the water drops, the light is refracted, or bent to display all seven of the colors. Close your eyes and imagine a rainbow. Can you name the colors in a rainbow? A fun way to remember the colors is to remember the acronym ROYGBIV. This stands for: red, orange, yellow, green, blue, indigo, and violet.

### WHAT MATERIALS ARE NEEDED

colorful objects or surroundings

### ACTIVITY

On the following page is a Nature Color Wheel. Use the color wheel to help identify the colors that make the rainbow. Take a look at your surroundings and try to find objects that represent the color of the rainbow. You may find a red apple, an orange pencil, a yellow flower, and more. Gather all of the colorful objects you can find and place them on a flat surface. Next, arrange the items so that they are in the order of the rainbow. Again, remember ROYGBIV. Once you place your objects in order, you should have your own homemade rainbow. Try to recreate a rainbow with other objects found around you.

CAN YOU IDENTIFY SOMETHING GREEN?

ARE THERE ANY BLUE OBJECTS IN  
YOUR HOME?

DO YOU SEE INDIGO AND VIOLET  
ANYWHERE?



# NATURE COLOR WHEEL



# ACTIVITY

## CAMOUFLAGE DETECTIVES

### WHAT MATERIALS ARE NEEDED?

drawing materials • nature activity guide • magnifying glass

### ACTIVITY

1. Search for camouflaged animals in your neighborhood.
2. When you find one, draw a picture of it in the back of your Nature Activity Guide.



WHAT KIND OF  
ANIMALS  
DID YOU FIND?

WHY IS CAMOUFLAGE  
IMPORTANT TO THIS  
ANIMAL?



# CAREGIVER TIP

## SHAPES AND PATTERNS IN NATURE

The natural world around us is filled with many different patterns and shapes - all we have to do is observe and pay close attention! Spirals, swirls, stripes, waves, webbing are just some of the ways animals, insects, trees, and leaves show their individuality. With your child, think of all the different types of shapes and patterns that you can, write them down together and then go explore! Try to find all the different shapes and patterns in nature and take pictures or even bring home samples of leaves and flowers as long as they are safe. This is a fun way to learn new shapes and patterns that you may not have considered before and even find them in some unexpected places.

Scan the link below for more TALK READ SING tips.



## LITERACY CONNECTIONS

The Public Library has provided a list of books that will complement the activity guide and storytime.

(Scan the QR to take you to The Library's reading recommendations.)

### HERE ARE A FEW OF OUR FAVORITES

Actual Size by Steve Jenkins

Patterns at the Zoo by Bela Davis

My Tail is Long and Striped by Joyce L. Markovics



# SENSES IN NATURE

## INTRODUCTION

Our senses tell us what we need to know about our environment. They help to keep us out of danger and enable us to find food and shelter. As humans, we use the five senses; other animals need different information about the world to survive.

### “Words” from a Scientist

**Sight** – the ability to see using the eyes

**Hear** – to perceive or be able to perceive sound through the ears

**Smell** – to detect or recognize something through the nose

**Touch** – to put a part of the body, especially the fingertips, in contact with something to feel it

**Taste** – the flavor of something – to taste means to eat or drink a small amount

## QUICK FACTS

Some owls have ears that are different in size and shape. This enhances the stereo effect—the subtle difference between the sound reaching one ear relative to the sound reaching the other ear. This enables the precise location of prey. A barn owl can hone in on and catch a mouse in a room with no light within seconds, because its ears are adapted to an extremely accurate sound location. Ears of owls have openings on the side of their head surrounded by deep soft feathers which the owl can spread to make a funnel to each ear opening.





# ACTIVITY

## SENSES IN NATURE

### ACTIVITY


Visit ZooTampa or take a walk in your neighborhood. Using drawing materials and your nature activity guide, have your child sketch their observations.

### MATERIALS NEEDED

drawing materials • nature activity guide

### Ask them to:

- Draw something they enjoyed seeing
- Draw something they heard
- Draw something they touched
- Draw something they smelled
- Draw something that they tasted



Do you see it living or non-living?  
Where did the noise come from?  
Did you feel something hard or fluffy?

# ACTIVITY

## MAGNIFYING NATURAL OBJECTS

### INTRODUCTION

This activity will have your family outside, observing and identifying materials with interesting textures. How might a person or animal use these items in nature?

### WHAT MATERIALS ARE NEEDED

drawing materials • magnifying glass • egg carton

### ACTIVITY

Go outside and collect natural items and some textured items in your home. Store the small items in an egg carton to securely carry.

Discuss the sense of sight with your child. Tell them that they will be using a magnifying glass to explore different items. They will see how the magnifying glass can change the way an object looks. Have your child look at their hands with the magnifying glass; encourage them to move the magnifying glass around, and closer to and farther away from their hands.

WHAT HAPPENS TO  
YOUR HANDS WHEN  
YOU LOOK THROUGH  
THE MAGNIFYING  
GLASS?

Look at the items you collected with the magnifying glass. Encourage your child to compare the items, first without and then with their magnifying glass. Talk with them about what they see and how the magnifying glass changes the way you see the object.

# CAREGIVER TIP

## SENSES IN NATURE

There are so many ways to experience nature through our five senses – sight, smell, touch, hearing, and taste. Though we may want to be very wary of tasting items in nature without investigating them further, there are so many ways to experience nature around us with our other senses! Creating a sensory box with your child is a fun way to experience the way things in nature smell, feel, see, and sound. You can take a sensory walk in your own neighborhood or venture to a local nature reserve or park to collect items!

You can find more tips like these by scanning the QR code below.



TALK  
READ  
SING

TALK READ SING TAMPA BAY ORG

WHAT DO YOU SMELL?  
WHAT DO THE LEAVES FEEL LIKE?  
I SPY SOMETHING GREEN?



## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime. (Scan the QR to take you to The Library's KidsPicks.)

### HERE ARE A FEW OF OUR FAVORITES

Me and My Senses by Joan Sweeney

My Five Senses by Alik

I Hear You, Forest (Sounds of Nature) by Kallie George



# LIVING OR NON-LIVING

## INTRODUCTION

Children may have trouble distinguishing between living and non-living. They may consider everything that moves to be alive, including cars and clouds. Often children pretend that objects are alive so that they can talk to them. Children also have difficulty comparing once-living objects with objects that have never lived. Living and non-living are scientific terms. Children are more used to hearing only the terms living or dead. By exploring various objects and animals, they can begin to understand the difference between things that are living, things that were once living, and things that are non-living.

## "WORDS" FROM A SCIENTIST

**Living** – having life; having the characteristics of living things; all living things need food, air, water, and shelter to survive

**Non-living** – lacks or has stopped displaying the characteristics of life

**Reproduce** – to make more, either by having babies or creating copies.

CAN IT MOVE?  
CAN IT GROW?

IF YOU SAY YES TO ALL THE QUESTIONS,  
THEN THE IT IS LIVING.

DOES IT  
BREATHE?

DOES IT  
REPRODUCE?  
DOES IT  
REACT?

## I SPY AND SORTING GAME

### PLAY A GAME OF I SPY

During a trip to ZooTampa or in your neighborhood, identify four to six living and non-living things as you are enjoying nature with your child. Start by saying, "I spy something that needs food." If you have a very young child, use more simplistic words such as, "I spy something round." Let your child ask yes and no questions to discover the answer. Every time you talk and have a high-quality back-and-forth interaction, new connections are made in your child's brain. These language-rich conversations will help solve the I Spy mystery. Below are a few suggestions for I Spy living and non-living things.

### LIVING



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# ACTIVITY

### LIVING OR NON-LIVING SORTING GAME

Use a marker and draw a line down the middle of a piece of paper. Label one side of the line living and the other side non-living. Gather ten items from inside and outside your home that are living and non-living. Sort the items in the proper category. Use Quick Fact questions on the previous page to guide their choices.

### WHAT MATERIALS ARE NEEDED

drawing materials • living items • non-living items • nature activity guide

### NON-LIVING



# CAREGIVER TIP

## LIVING VS NON-LIVING

Living things have three primary characteristics. They grow; they need food and water, meaning that they take in the nutrition of some kind to survive; and can reproduce, meaning they can make more things like themselves. Non-living things don't do these three things. For example, some living things maybe a puppy, an oak tree, a butterfly, a coral, and many more! Some non-living things may be a lamp, a microwave, a table, or a pair of shoes. For fun, you and your little one can use two scrap pieces of paper and label one with living and one with non-living: think of your favorite things that fall within each category and draw them together or even cut pictures out of a magazine or catalog and paste them. Some things may be tricky to identify so it is always okay to ask for help – maybe ask Google or even go to your local library!!

TALK  
READ  
SING

TALK READ SING TAMPA BAY

WHAT IS YOUR  
FAVORITE LIVING THING?

CAN YOU NAME A  
NON-LIVING THING?



## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime. (Scan the QR to take you to The Library's KidsPicks.)

### HERE ARE A FEW OF OUR FAVORITES

- [Saving Fiona, The Story of the World's Most Famous Baby Hippo](#), by Thane Maynard
- [The Baby Beebeebird](#), by Diane Redfield Massie
- [The Tiger's Egg](#), by Nele Brönnert





# WATERSHED ADVENTURES

## INTRODUCTION

Clean water matters to all of us! We depend on water for drinking, recreation, and agriculture. Fish and wildlife depend on clean water.

Water is all over the Earth. When the sun heats the water in the rivers, lakes, and oceans, the water turns into clouds. Clouds are made of millions of water droplets. When the water droplets become big and heavy, they fall from the clouds to the Earth. When the rain or snow falls on the Earth, it waters the trees and plants and fills the rivers, lakes, and oceans.

## WHY IS A WATERSHED IMPORTANT

We live in a watershed. A watershed is an area of land where all of the water that is under it, or drains off of it collects into the same place, such as a stream, lake, estuary, wetland, or, ultimately, the ocean.

Watersheds are important because they directly impact water quality. Watersheds include natural and unnatural features. Natural watersheds have mostly natural features, such as mountains, trees, shrubs, grasses, dirt, streams, and rivers. Unnatural watersheds have features created by people such as parking lots, city streets, schools, and buildings. As the water flows under or over the surface of the land, natural and unnatural objects get picked up and flow to the ocean. The protection of the natural resources in our watershed is essential to maintain the health and well-being of all living things, both now and in the future.

## HOW CAN YOU HELP THE HEALTH OF THE WATERSHED

- Conserve water every day. Take shorter showers, fix leaks and turn off the water when not in use
- Don't pour toxic household chemicals down the drain; take them to a Hillsborough County Hazardous Waste location
- Pick up after your dog, and dispose of the waste in the toilet or the trash
- Drive less—walk or bike; many pollutants in our waters come from car exhaust and car leaks
- Put your trash in a secured garbage can





# WONDERFUL WATER

## WHY IS WATER IMPORTANT

We care about the water cycle, because water is necessary for all living things.

## HOW CAN YOU HELP

We can help by cleaning up our Earth, because everything on the ground will wash into a storm drain that ultimately goes into our oceans. We can keep the ocean healthy for people and animals by:

- Picking up litter
- Reducing the use of single-use plastic. It helps the environment and saves money
- Pick up after your pets and toss waste into the garbage

## “WORDS” FROM A SCIENTIST

**Water cycle** – The water cycle is the path that all water follows as it moves around Earth in different states

**Evaporation** – turning from a liquid into vapor (gas)

**Condensation** – turning from vapor gas to liquid

**Precipitation** – the product of condensation that falls from the sky under gravity; such as drizzle, rain, sleet, snow, hail





## WATER CYCLE ACTIVITY

### WHAT MATERIALS ARE NEEDED

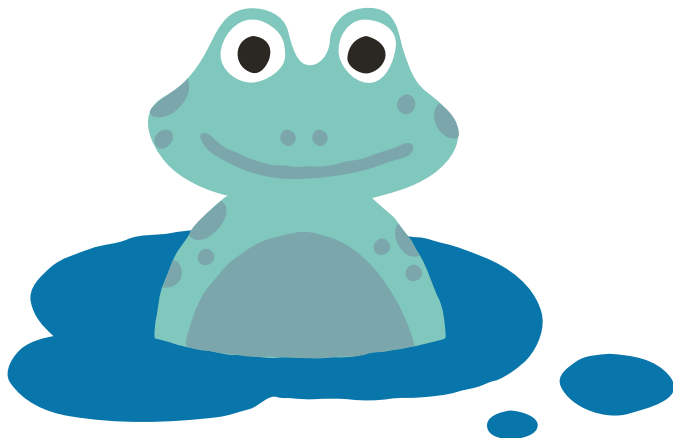
glass jar or bottle • water • blue food coloring (optional)  
permanent marker

### ACTIVITY

Create a water cycle in a bottle. This simple science discovery bottle is a quick and easy way to learn about the water cycle!

### DIRECTIONS

1. Remove the wrapper from the bottle
2. Draw clouds, a sun, water and land on the sides of the bottle
3. Mix up about a 1/4 cup of water and with a few drops of food coloring for each bottle and pour the water into the bottle
4. Re-seal the top to the bottle
5. Place by the window
6. In a day or two, observe the jar. The water in the bottle is suspended in different parts of the water cycle



# ACTIVITY

## WATERSHED ACTIVITY

### WHAT MATERIALS ARE NEEDED

baking pan • water-based marker • spray bottle with water  
tape or stickers • white paper

### ACTIVITY

Before getting started, watch the Costal Watershed Model video made by the Florida State Parks. The YouTube video link is <https://www.youtube.com/watch?v=m1QISGYWhNc>.  
Next, create your own watershed model.

### DIRECTIONS

1. Crumple the white paper into a "ball"
2. Lightly pull the edges of the paper so it is flattened, but it should still have patterns that will represent shapes for your peaks, ridges, and mountains
3. Tape the paper to the baking pan
4. Use a water-based marker and outline the "peaks" of the paper
5. Use a spray bottle with water and spray the paper
6. Watch how the water flows and where the marker travels



# ACTIVITY

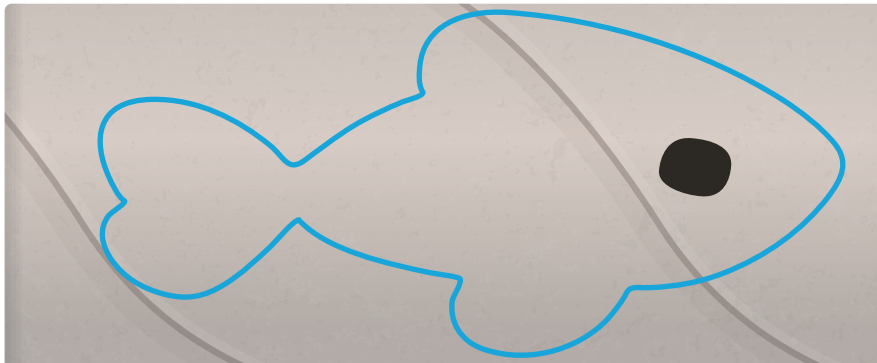
## DESIGN A FISH

### WHAT MATERIALS ARE NEEDED

one toilet paper roll • scissors • crayon • glue stick

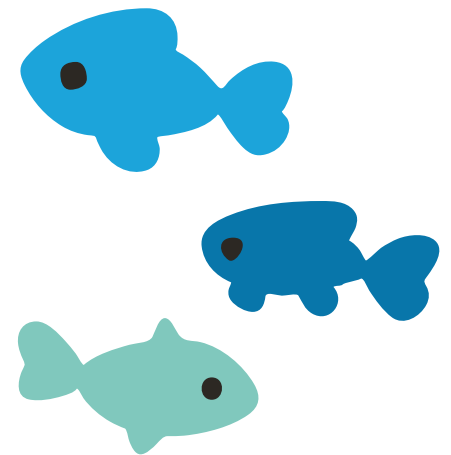
### DIRECTIONS

1. Lightly squish the toilet paper tube flat
2. Use the template and draw on the fish lines and cut out your fish with scissors
3. Add the fin and gill details with the marker
4. Use crayons to color your fish



NAME FOUR ANIMALS THAT LIVE IN THE OCEAN?

WHAT IS THE NAME OF YOUR FISH?  
WHERE DOES YOUR FISH SWIM  
DURING THE DAY?





# CAREGIVER TIP

## WONDERFUL WATER

Our Earth is over 70% water and there is so much to explore. Whether it be the water cycle, marine life, or items that sink and float – there are so many fun opportunities to learn about water and its properties right at home! You can create a water sensory bin for your child to play and explore in the water. Water sensory bins inspire creative play with various textures, and motor skill-enhancing opportunities. You can experiment with different items for their level of buoyancy and how well they float, talk about different marine life, what animals do and don't live in the water.



## LITERACY CONNECTIONS

The Library has provided a list of books that will complement the activity guide and storytime. (Scan the QR to take you to The Library's reading recommendations.)



### HERE ARE A FEW OF OUR FAVORITES

Heron and Turtle by Valeri Gorbachev

Hello World! Ocean Life by Jill McDonald

Slow down for Manatees by Jim Arnosky



# THE THREE R'S

## INTRODUCTION

Reduce, Recycle, and Reuse (3R's) - Great ways to help the Earth, oceans, and save families money.

## WHY IS RECYCLING IMPORTANT

We care about the 3R's because it provides a healthy environment for both people and animals to live.

- **Reduce** - using less and using things again, in order to protect the environment.
- **Recycle** - converting used items back into other materials, then making new products with them, conserving resources and reducing waste into our landfills.
- **Reuse** - using items many times instead of just once keeps them from becoming waste.

## HOW CAN YOU HELP

Families can help by reducing waste through simple actions that can help the Earth and save money.

- Purchase your family reusable water bottle and fill up at home
- Buy bulk snacks and prepack snacks in reusable containers
- Snack on fruits and veggies instead of pre-packaged snacks

## ACTIVITY

The store is a great setting to learn about products that create waste and how to avoid them. On your next trip to the store, plan a waste-reduction scavenger hunt. Challenge children to find five items that have a lot of packaging and five alternatives to those items that generate less waste. Differences in snack and drink packaging, for example, are good hints. Don't forget to put them back when you're done!



# HELP OUR EARTH PLEDGE



Hand Print Here

## MATERIALS NEEDED

nature activity guide • water • dirt • something to collect trash  
hand sanitizer • bowl

## ACTIVITY

Go out on a nature hunt in your neighborhood and find items that are plastic that should not be in the environment. This might be bottle tops, straws, and bags. Bring something with you so you can collect some dirt while you are out in nature. Wear gloves and use hand sanitizer after picking up trash, or a better option is to wash your hands with soap and water.

## DIRECTIONS

- Remove the Earth Day Pledge sheet from your Nature Activity Guide
- Mix dirt and water in a bowl
- Put the mud mixture on your hand
- Place your handprint in the middle of the page
- Decorate it with the plastic items that you removed from the earth

## HELP OUR EARTH PLEDGE

I pledge to take care of the planet by picking up five pieces of trash each day and placing them in the garbage. Every action helps people and animals live well in the natural world.



WE WANT TO SEE YOUR EXPLORATION! TAKE A PICTURE OF YOUR  
ACTIVITY OR DRAWINGS AND SHARE IT WITH US!

**#ZOOTAMPA OR #ZTSAVES**





# THANK YOU

This project was made possible in part by  
the Institute of Museum and Library Services ARPML-250845-OMLS-22.



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SERVICES

We thank our many like-minded education partners for their support  
in making this an inspirational, hands-on learning experience.



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