



Kids in Parks

TRACK Trail Self-Guided Activities



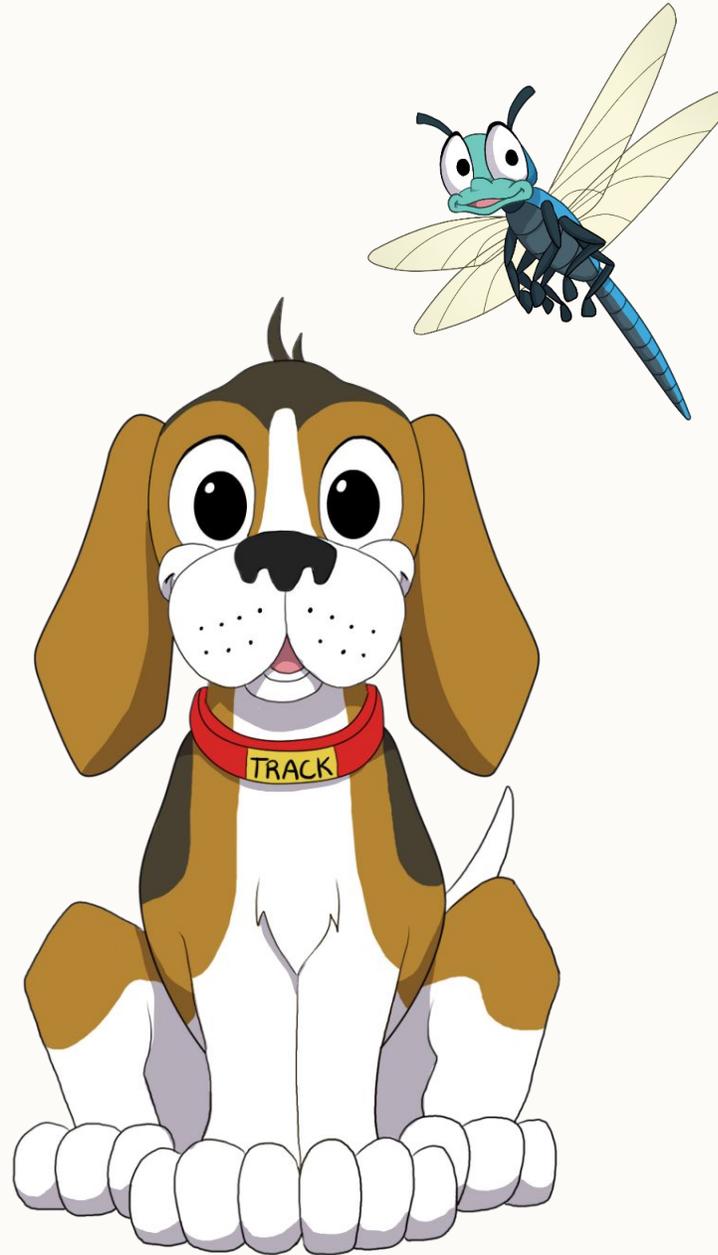
2026

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e-Adventures

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Introduction

By working with partners across the country, Kids in Parks strives to increase engagement with the natural world and physical activity through outdoor adventures, thus improving children's health and the health of our parks.

Partners in our TRACK Trails program receive a custom sign, trailhead kiosk, and up to four self-guided activity brochures. You'll join a national network of over 350+ TRACK Trails and have a page on our website: www.kidsinparks.org.

Brochures are 8.5" x 14" in a tri-fold format. The back panel is the same for all brochures and directs visitors to the KIP website to register their adventure and earn prizes.

TRACK your hike at kidsinparks.com and get **FREE** prizes!

Thanks for joining us today!

Visit our website to find more TRACK Trail adventures near you!

FOLLOW US!

@KidsInParks

@KidsInParksBRPF

Kids in Parks is a program of the **BLUE RIDGE PARKWAY FOUNDATION**

KIDS IN PARKS TRACK TRAILS

Welcome to **The Dalles Lock & Dam - Spearfish TRACK Trail**

Kids in Parks provides a nationwide network of trails for kids and families. Each TRACK Trail offers fun, self-guided activities that provide new adventures on every hike. Kids can earn rewards for each Kids in Parks adventure they "track" on kidsinparks.com

Hi, I'm **TRACK!**

I'm **KIP!**

JOIN US

Grab an activity guide or scan the QR code to play an e-Adventure

TRACK your adventure to earn **PRIZES** on your hike today!

Things to Know Before You Go

The Dalles Lock & Dam Spearfish TRACK Trail is a 1.1-mile loop around Spearfish Lake. It offers beautiful views of Mount Hood, a wide range of meadows and vegetation, and the chance to see various waterfowl like geese, coots, and ducks. Spearfish is also home to several eagles, including ospreys, so be careful when you are on the trail! Please keep your distance from all wildlife.

Spearfish Lake is a popular fishing spot and is stocked regularly with rainbow trout. Enjoy a walk around the lake and check out the other TRACK Trails at The Dalles Lock & Dam. Use the TRACK Trail activities to experience this trail in a new way. Have fun!

1.1 miles

US Army Corps of Engineers
Portland District

NATURE'S HIDE & SEEK

DECOMPOSERS OF THE DEAD

FLOWER POWER

Hikin' to Find Lichen

KIDS IN PARKS TRACK TRAILS

Standard Brochures

Our standard brochures are applicable to most trail sites and can be used year-round. These brochures are immersive and fun for all ages and include educational components as well as hands-on activities.

Several brochures have alternate versions and/or are translated into Spanish, such as:

- **Animal Athlete's**
- **Decomposers of the Dead**
- **Nature's Hide & Seek**

This ensures you get the best fit for your site.

We are always developing new brochures, so please reach out if we don't have a topic that would be a good addition to our collection!

NOTE: All Kids in Parks materials, including brochure art, are designed in house by our staff

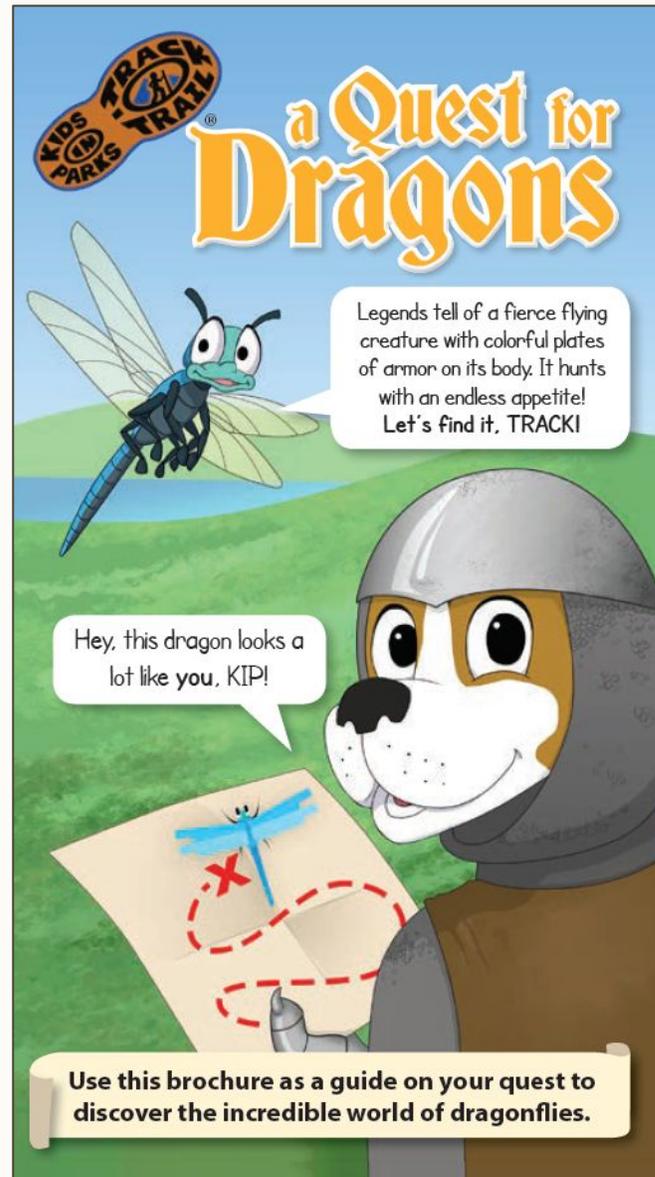


A Quest for Dragons

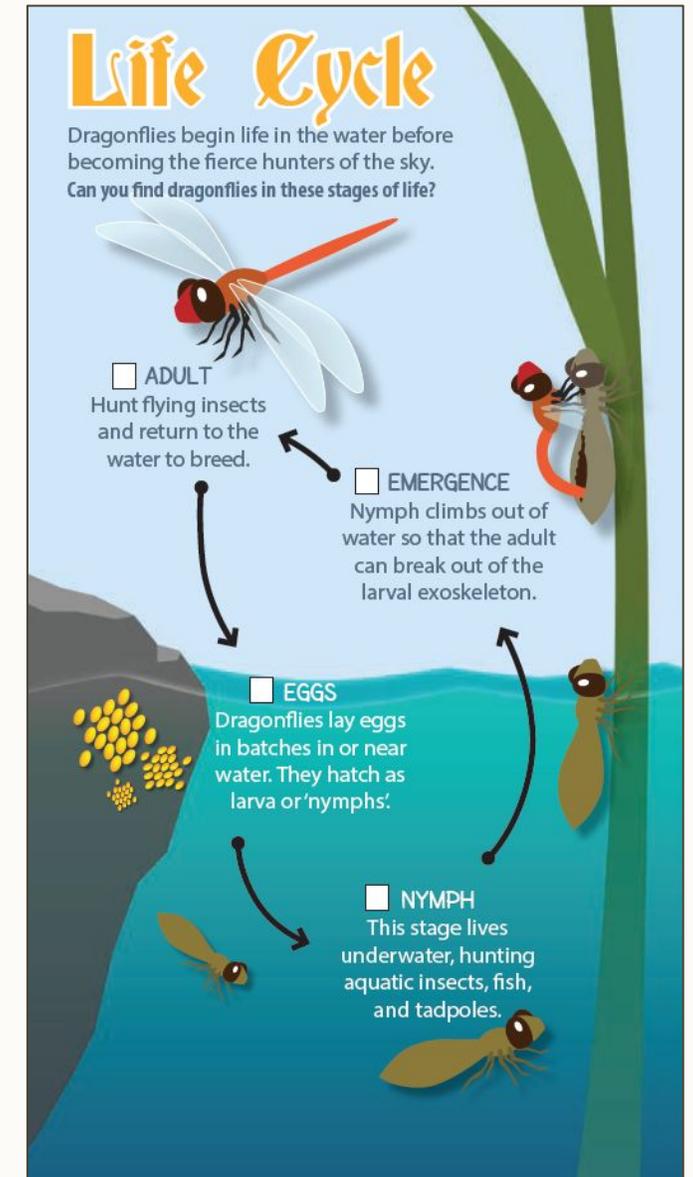
The “[A Quest for Dragons](#)” adventure provides an up-close look into the world of dragonflies.

This brochure illustrates the life of a dragonfly, including its anatomy, diet, and unique adaptations. characteristics of the dragonfly, like their life cycle, anatomy, and diet. adaptations of dragonflies, like their life cycle, anatomy, and diet. Kids also learn about a few species found throughout the United States and how each species is distinct.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

A Quest for Dragons

INNER PANELS

Dazzling Dragonflies

There are over 300 species of dragonflies in the United States. They can be found soaring and swooping over ponds, rivers, and swamps across the country.

A Closer Look

Eyes
Can quickly scan 360 degrees for prey.

Antennae
Work like anemometers, measuring wind speed and direction.

Jaws
Strong jaws and sharp teeth secure and cut through prey.

Cool Fact!
Dragonflies belong to the order *Odonata*, from the Greek word for 'tooth'.

Flight Path

Unique wings allow dragonflies to fly in any direction at any time. Focus on one dragonfly and draw its flight path below.



Prehistoric Pilots

Dragonflies have existed for about 300 million years. That's before the dinosaurs! Fossils show dragonflies with wingspans of over two feet. What is the biggest dragonfly you can find? Use this ruler to estimate the size.

size in inches



Many Shapes and Colors

Dragonflies come in many shapes, sizes, and colors. Color is one of the best ways to identify a dragonfly. Can you find these colored dragonflies?



Perfect Predators

A dragonfly's eyes, wings, and brain work together to make it one of the best hunters in the animal world. Dragonflies catch 95% of the prey they chase. A lion only catches about 15% of the prey they chase. Can you find some of the dragonfly's favorite snacks?



Insect Anatomy

Like all insects, dragonflies have three main body parts. Find these parts on a dragonfly. Use the illustration above as a guide.

- Head**
Eyes, antennae, mouth, and brain.
- Thorax**
Powerful muscles control wings and legs.
- Abdomen**
Has 10 segments on all dragonflies.

Animal Athletes

The “[Animal Athletes](#)” adventure challenges families to exercise along with the animals on the page.

This brochure provides eight different animal exercises that kids can do while on the trail. From lizard push-ups to hummingbird hand-swings, hikers are sure to get some energy out while having fun through these activities.

Age Suggestion: 4+ years old

[A bilingual \(Spanish/English\) version is available in a similar design](#)



COVER



OUTER PANEL

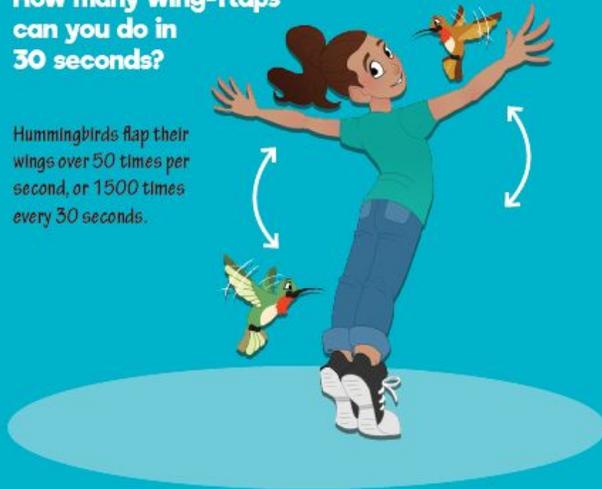
Animal Athletes

INNER PANELS

■ Hummingbird Hand-swings

How many wing-flaps can you do in 30 seconds?

Hummingbirds flap their wings over 50 times per second, or 1500 times every 30 seconds.



■ Deer High Jump

How high can you jump?

In order to move quickly through tall grass and shrubs, deer leap very high, sometimes up to 6 feet!



■ Squirrely Balancing

Walk like you're on a balance beam and see how fast you can go.

Squirrels have long tails to help them balance and move quickly along branches without falling.



■ Frog Hop

Hop like a frog escaping a predator!

Frogs use their strong back legs to hop away from predators such as snakes and herons.



■ Hawk Stance

How long can you balance on one leg?

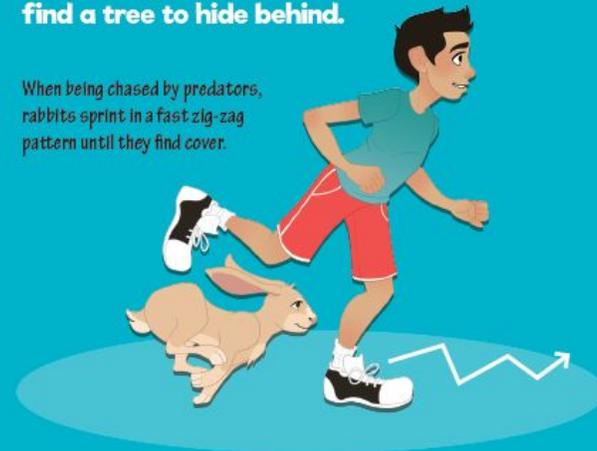
To conserve heat and energy, birds of prey sometimes perch on one leg for hours at a time.



■ Rabbit Dash

Run in a zig-zag until you find a tree to hide behind.

When being chased by predators, rabbits sprint in a fast zig-zag pattern until they find cover.



Bug Out

The “[Bug Out](#)” adventure highlights all the different shapes, sizes, and colors of arthropods found on the forest floor.

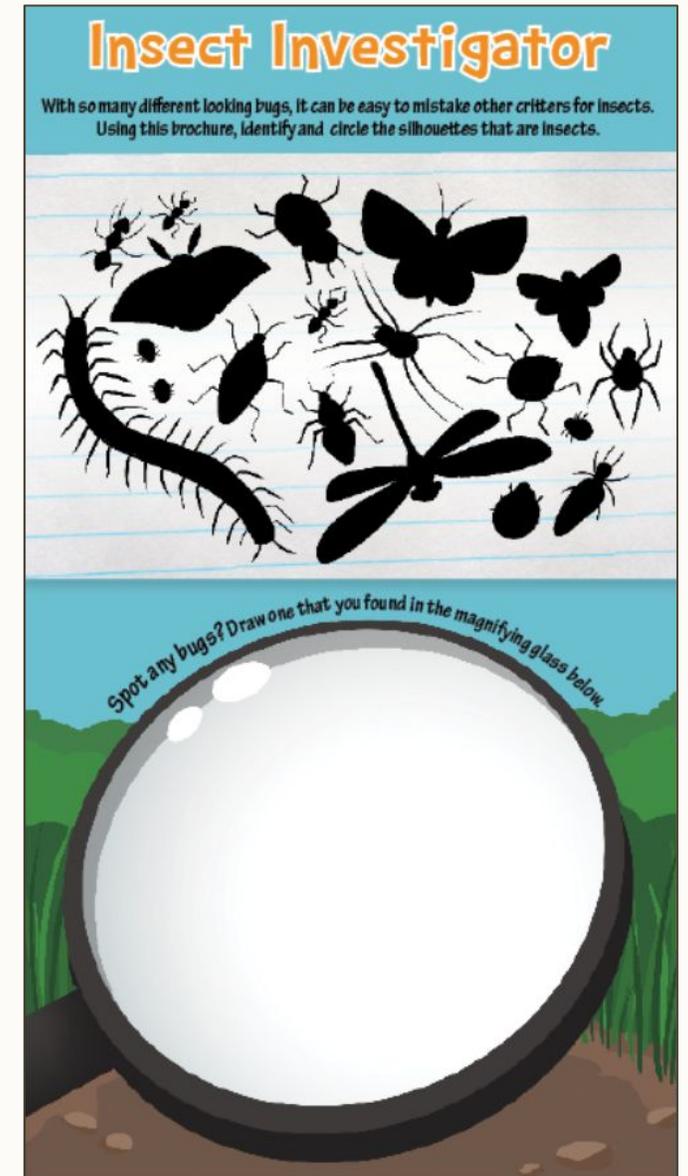
This brochure teaches kids how to distinguish common arthropods, including the key differences between spiders and insects. It also encourages children to apply this new knowledge while looking for “creepy crawlies.”

Age Suggestion: 5+ years old

[A similar version is available in Spanish](#)



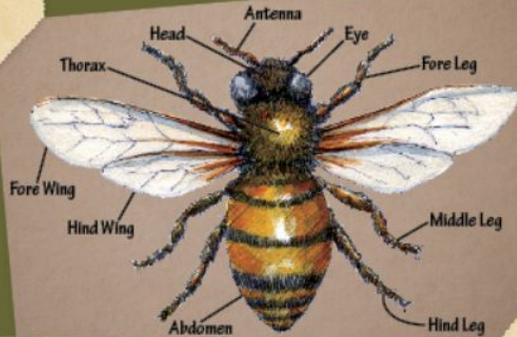
COVER



OUTER PANEL

Insects

Insects are an extremely diverse group of animals, with over a million different species. All insects, no matter how different their size or shape, have a three-part body with six legs.



The body of a honeybee is like that of most insects.

All insects have...

- ... a **head** with two antennae, compound eyes and mouth parts
- ... a **thorax** with six jointed legs and, if present, 2 or 4 wings
- ... an **abdomen** with respiratory, reproductive and digestive organs
- ... a hard, external skeleton called an **exoskeleton**



Exoskeleton

What is an Exoskeleton?

Instead of having a skeleton on the inside of their bodies, insects have their skeleton on the outside. A hard exoskeleton protects an insect like a knight's suit of armor.



How many of these different insects can you find today?



Butterfly



Dragonfly



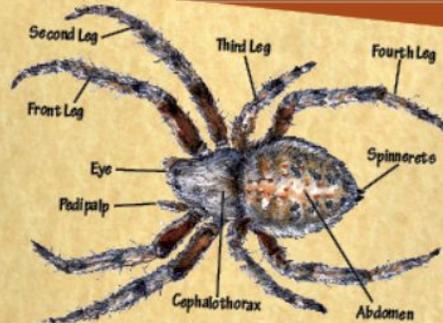
Ant



Grasshopper

Spiders

look similar to insects, but they are actually different.



Spiders have a hard exoskeleton, but instead of a three-part body, they have a two-part body made up of the cephalothorax and the abdomen. Spiders also have eight legs, pedipalps, venom injecting fangs, and web-making spinnerets.

Other Arthropods

Insects, spiders and crustaceans are all arthropods. Arthropods are a group of creatures that make up about 85% of all living things on Earth. They can be identified by their exoskeleton, segmented bodies, and jointed legs.

Millipedes, centipedes, pillbugs (rolly-polies), and harvestmen are commonly considered bugs. However, unlike their insect and spider cousins, they can have more body segments, legs, or even extra features like claws. Some are harmless critters like the millipede, pillbug and harvestman, while others can cause harm, like the venomous centipede and the scorpion.



Millipede



Centipede



Pillbug



Harvestman

Can you spot any of these bug homes?

Bugs have different ways of sheltering themselves from predators or weather. Or they can even use their homes as traps for food. CAUTION: Many bugs will defend their homes by biting and stinging. Look from a distance and DO NOT disturb them.



Spider web



Bee hive



Ant hill



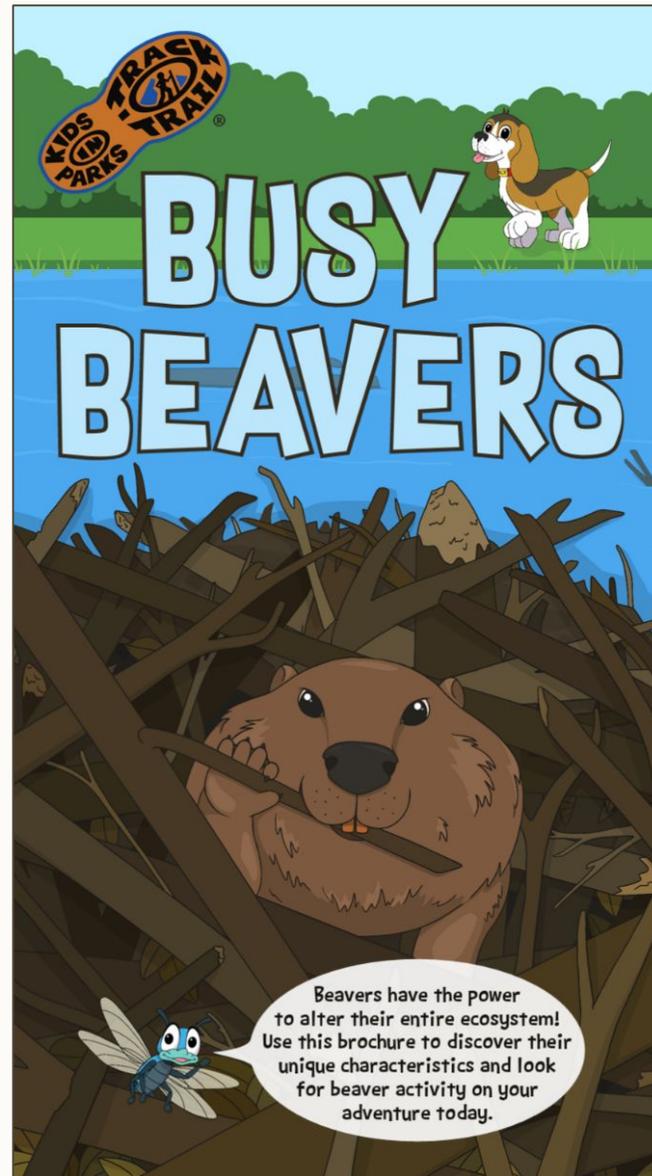
Cocoons

Busy Beavers

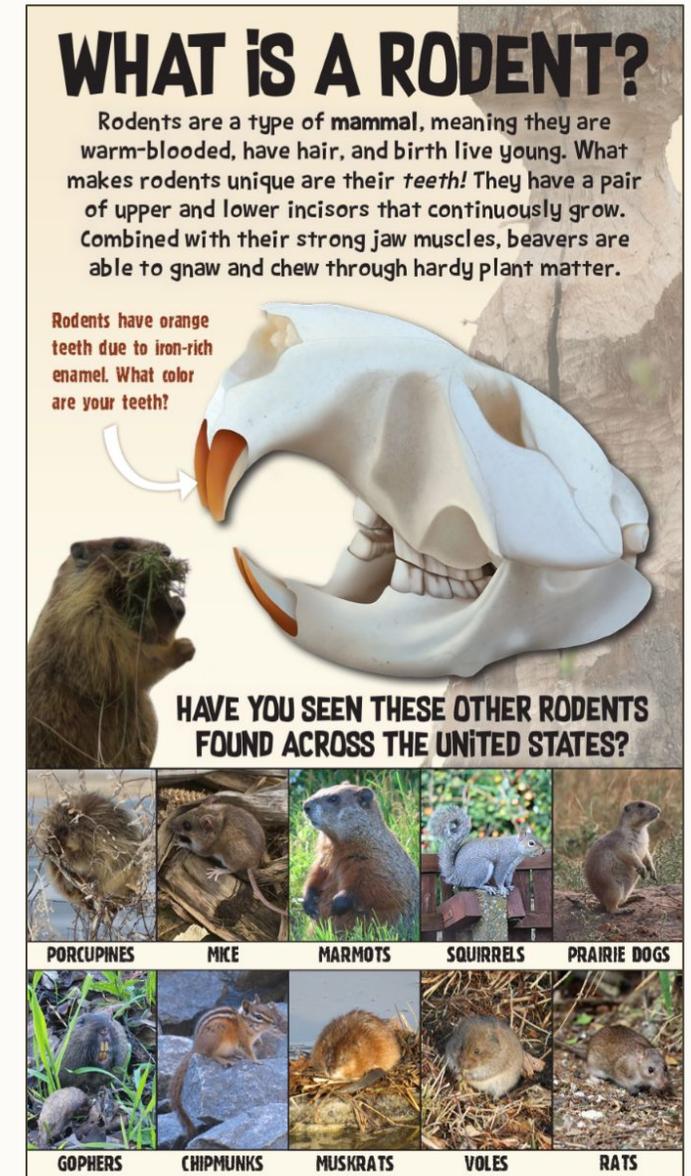
The “[Busy Beavers](#)” adventure focuses on beavers as ecosystem engineers and some of their useful adaptations.

This brochure provides an introduction to rodents as a type of mammal and features a scavenger hunt for signs of beaver activity at the TRACK Trail. Kids are also asked to draw connections between man-made objects and the physical characteristics of this animal.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

Busy Beavers

INNER PANELS

ECOSYSTEM ENGINEERS

Beavers play a HUGE role in their environment and are often called keystone species or **ecosystem engineers**. Through the construction of dams and rerouting of waterways, beavers change their entire ecosystem, improving water quality and biodiversity.

Check off all the beaver signs you can find!

ECOSYSTEM ENGINEERS

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Check off all the beaver signs you can find!

ECOSYSTEM ENGINEERS

- GIRDLED & FALLEN LOGS
- DEN
- SCAT
- BEAVER
- TRACKS
- CHEWED SAPLINGS

AQUATIC ADAPTATIONS

A beaver has many adaptations for aquatic life. These are physical traits that help a species survive better in their environment. Since we humans don't spend the majority of our lives outside and in the water, we don't have these unique body parts. Instead, we rely on objects and tools that serve the same purpose.

MATCH THESE MAN-MADE OBJECTS WITH THE BEAVER ADAPTATIONS BELOW.

AQUATIC ADAPTATIONS

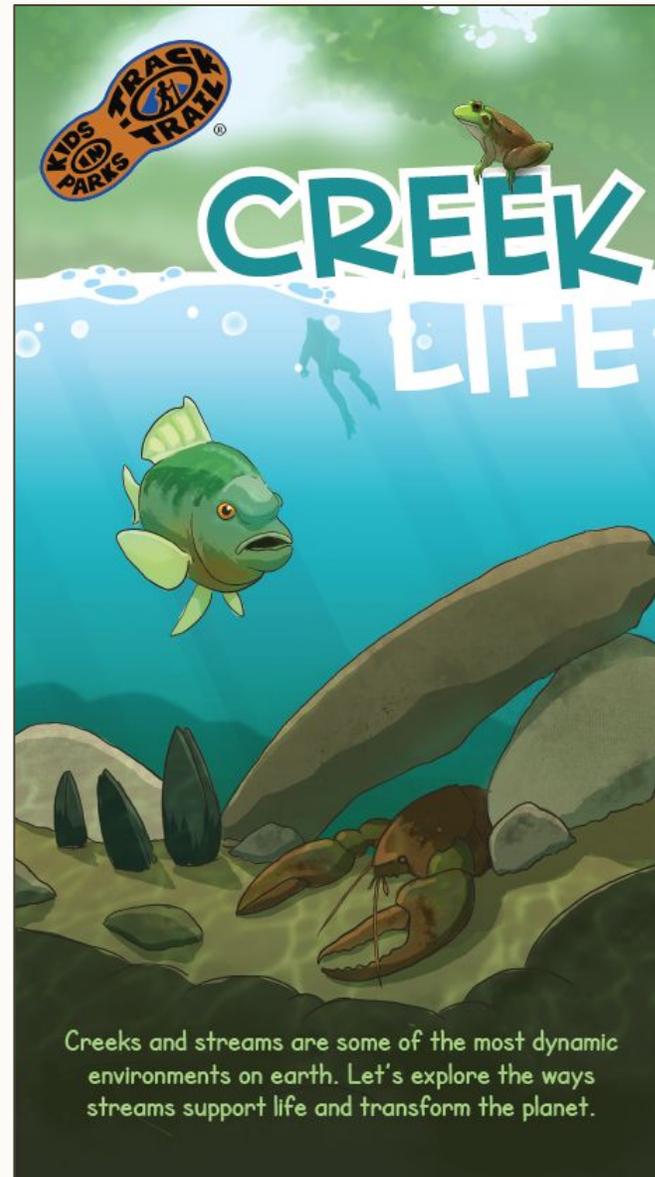
- NOSE AND EAR FLAPS TO KEEP WATER OUT
- PROTECTIVE THIRD EYELID FOR SWIMMING
- FLAT, STURDY TAIL
- STRONG INCISORS
- WEBBED BACK FEET
- THICK, DOUBLE-COATED FUR

Creek Life

The “[Creek Life](#)” adventure is an investigation into the many inhabitants of streams and creeks.

This brochure showcases the wide range of animals that can be found in and around a creek. Questions challenge families to think about their influence on waterways and how water as a force can impact us and our surroundings.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

Creek Life

INNER PANELS

A WORLD OF WATER

Creeks shape the world and create habitats as they move across the land. A healthy stream supports organisms that live in and around the water.

AQUATIC

The aquatic zone is the area of the creek that is on, in, or under water. Plants and animals that live in the aquatic zone may prefer some parts of the stream to others. The speed, depth, and temperature of the water can all attract different organisms.



FISH are animals like bass, sunfish, minnows, and trout. They swim with fins and extract oxygen from the water with gills.



MOLLUSKS are animals like mussels, clams, and snails. They often attach themselves to rocks. A hard shell protects their soft body.



CRUSTACEANS are animals like crayfish and shrimps. As invertebrates, they have a hard exoskeleton that protects them.

RIPARIAN

The riparian zone is the area that surrounds the creek. It can include the banks as well as areas that occasionally flood. With its constantly changing moisture levels, sediment deposits, and abundant food sources, the riparian zone attracts a great diversity of life.



REPTILES are animals like turtles, snakes, and lizards. They are cold-blooded so you can often see them warming up in a sunny spot.



AMPHIBIANS are animals like frogs, toads, salamanders, and newts. They absorb oxygen through their skin and must stay moist to breathe.



INSECTS are 6-legged arthropods and can be found on the surface or banks of the stream or flying through the air above the water.



MAMMALS are animals like raccoons, deer, beavers, and bears. Look for their tracks in the wet banks of the stream.



BIRDS can be found perched in trees, swooping after insects, or wading in the stream. Listen for their calls and try to spot them.

EARTH MOVERS

Creeks might seem gentle, but they are actually powerful forces that shape the landscape. With the force of rushing water, they carve into the earth and move tons of sediment miles away.

Look for clues that water is shaping the landscape.
Write down any evidence you find.



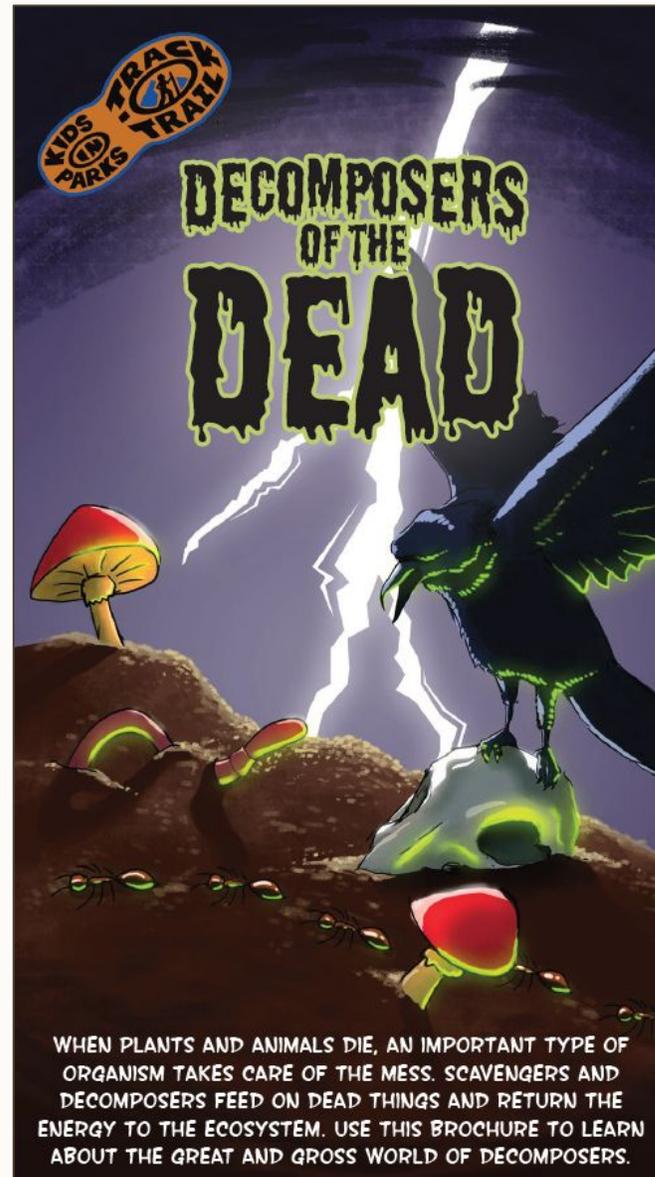
Decomposers of the Dead

The “[Decomposer of the Dead](#)” adventure stresses the importance of decomposers and scavengers in a healthy ecosystem.

This brochure emphasizes common decomposers and scavengers, the importance of these critters in cleaning up our environment, and what sort of natural elements they breakdown.

Age Suggestion: 5+ years old

[A similar version is available in Spanish](#)



COVER



OUTER PANEL

Decomposers of the Dead

INNER PANELS

GROSS-OUT GUARDIANS

Decomposers and Scavengers are the cleanup crews of nature. They break down debris like logs, dead animals, and animal poop to keep the world clean. It's gross work, but somebody has to do it. Let's explore the world of decomposers and scavengers!

WORLD WITHOUT DECOMPOSERS

Without decomposers, every hike would be a difficult climb across piles of fallen trees, dead animals, and poop.

TRACK is buried in a pile of plant and animal debris. Think like a decomposer and find things along the trail that need decomposed to free him. ✕ the items as you find them.

DEAD FOR DINNER

Scavengers are the first on the scene when an animal dies. Attracted by the smell of rotting meat, they search for the body. You might see vultures circling in the sky or flies buzzing as they look for food.

That's right. They eat dead things. It may sound gross, but they eat the meat, called carrion, and return the nutrients to the soil when they poop.

Ready for a Scavenger 'Scavenger Hunt'? Find as many scavengers on your hike as you can.

MICROSCOPIC MUNCHERS

Decomposers like fungi and bacteria use chemicals to break down and feed on dead matter. They eat plants, animals, poop, leaves, and other things. Many decomposers are too small to see, but mushrooms are a great way to see them in action.



LOGS FOR LUNCH

It can take over 100 years for fungi and bacteria to completely "eat" a fallen tree. As you hike the trail, count logs you find in different stages of decomposition.

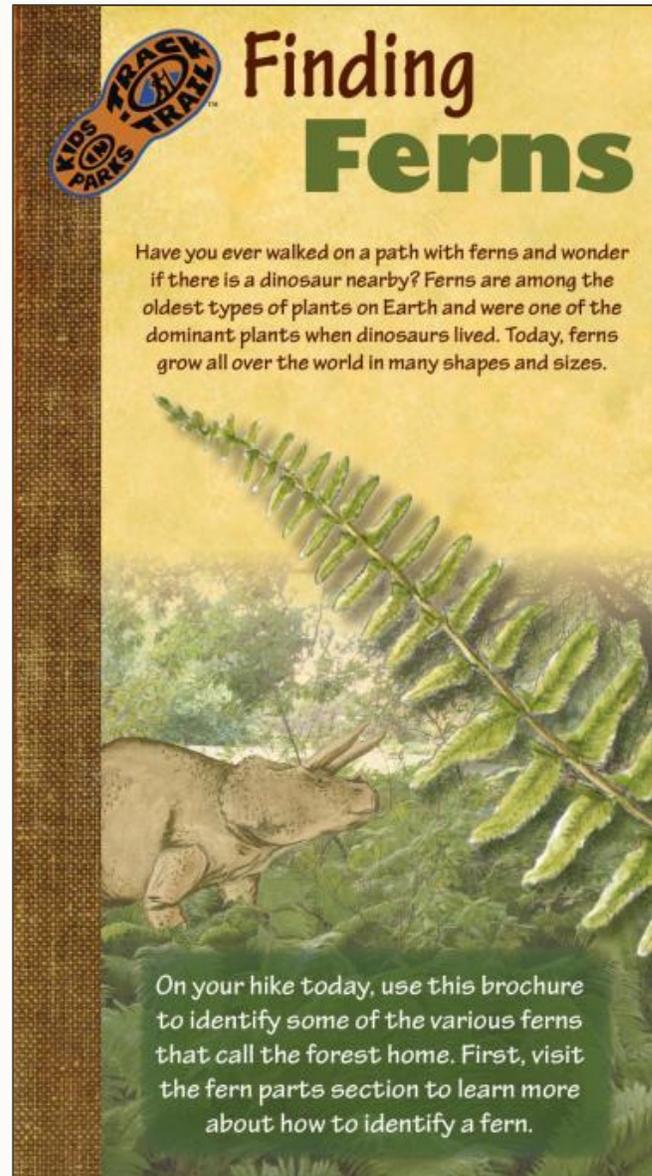
Finding Ferns

The “[Finding Ferns](#)” adventure shines a light on ferns - one of the oldest groups of plants on Earth.

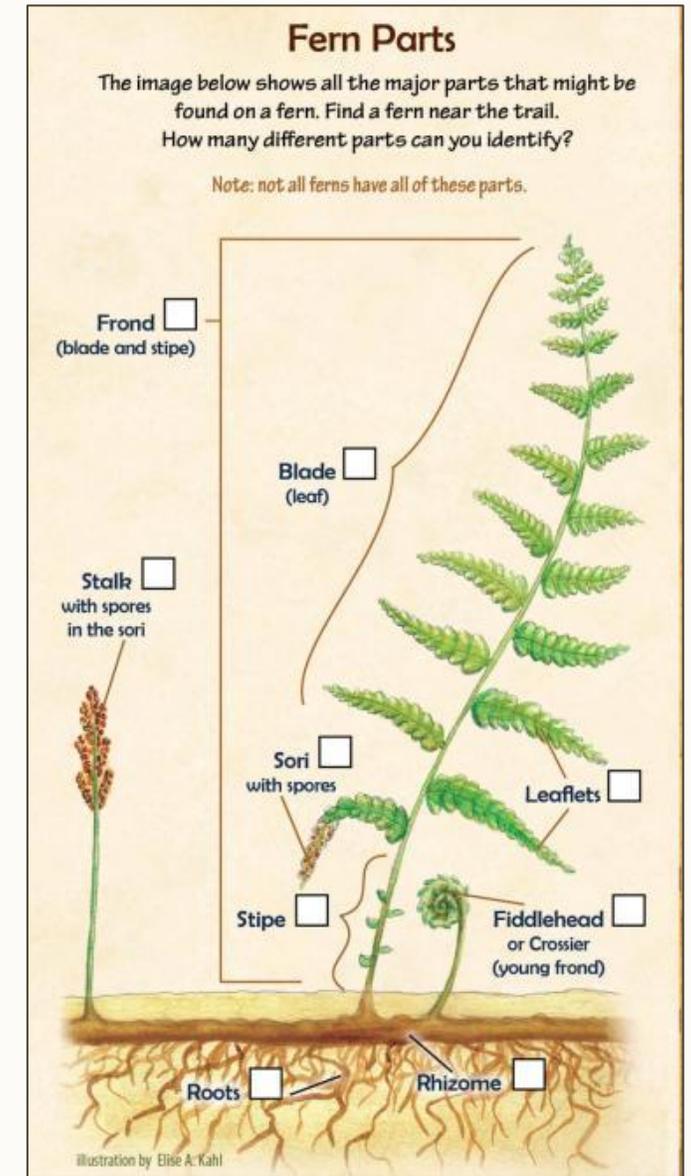
This brochure helps children learn the basic parts of a fern and how to identify several fern species in the area. Kids can search for these ancient plants popping out from the forest floor around them.

Age Suggestion: 6+ years old

[Alternate: A West Coast version is available with common PNW ferns](#)



COVER



OUTER PANEL

Finding Ferns

INNER PANELS

Fern Tracker

At first glance, many ferns look alike. But if you take a second look, these beautiful plants provide clues to help you identify them. Use the illustrations to the right to see how many you can find!

Fern Forms

The blade, or leaf, of a fern can be found in five major forms. Look at how the blade splits into leaflets. How many blade forms can you find?

Entire



Pinnatifid



Pinnate



Bipinnate



Tripinnate



Spores Not Seeds

Most plants use seeds to reproduce, but ferns use single cells called **spores**. Depending on the fern species, spore-producing objects called **sori** are found on either fronds or stalks. Some spores that are released and find moist ground will germinate. Can you find sori on a fern? _____



Leaflet with sori



Christmas Fern

(Polystichum acrostichoides)

Is the leaflet shaped like a stocking? Are there sori on the underside of some of the leaflets? Is the fern in a pinnate form?

Ht. 2-3' tall

Bracken Fern

(Pteridium aquilinum)

Do the fronds feel leathery? Are there spores along the curled edges of some of the leaflets?

Ht. 6-18" tall

Cinnamon Fern

(Osmunda cinnamomea)

Is there a cinnamon-colored stalk growing from the center of the plant? Are the leaflets divided into subleaflets?

Ht. 1-3' tall

Northern Maidenhair

(Adiantum pedatum)

Are the stems thin and black? Do the delicate fronds spread in a circular pattern? Are the leaflets round on the tips and square near the stem?

Ht. 18-36" tall

stalk with sori

subleaflets

sori with spores

Illustrations by David Williams, WingsIt!Works

Flower Power

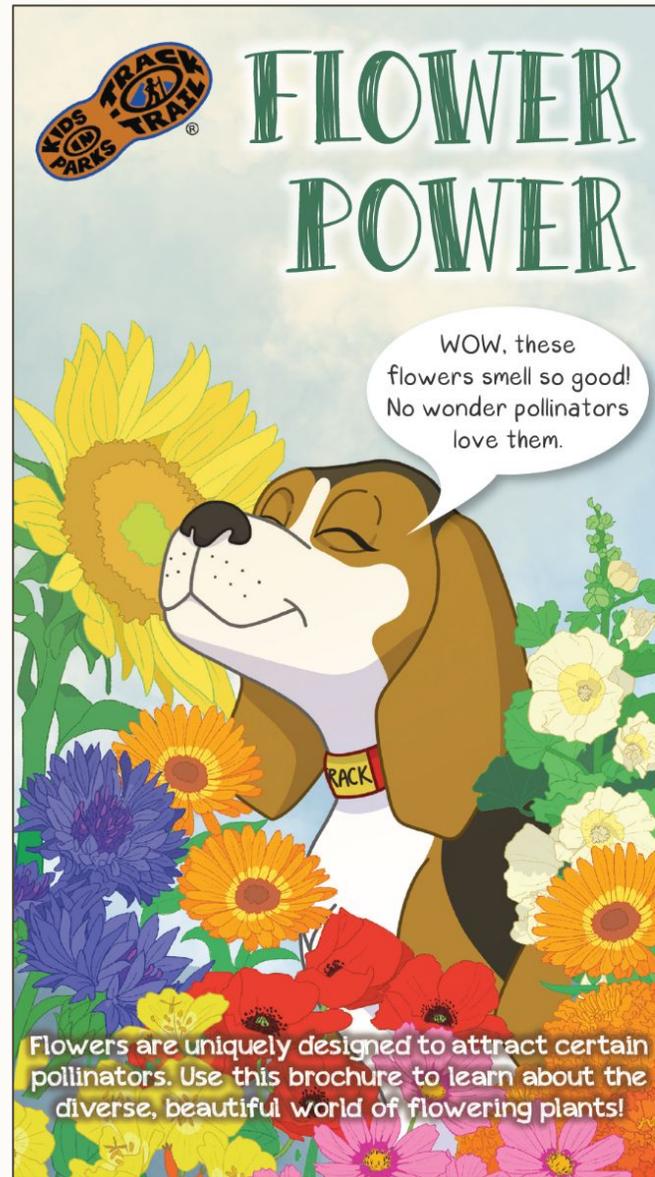
The “[Flower Power](#)” adventure explores the diverse world of flowering plants and their preferred pollinators.

This brochure not only illustrates the parts of a flower and how shape and size attract certain pollinators, but also the importance of this for producing fruit and continuing the plant’s life cycle.

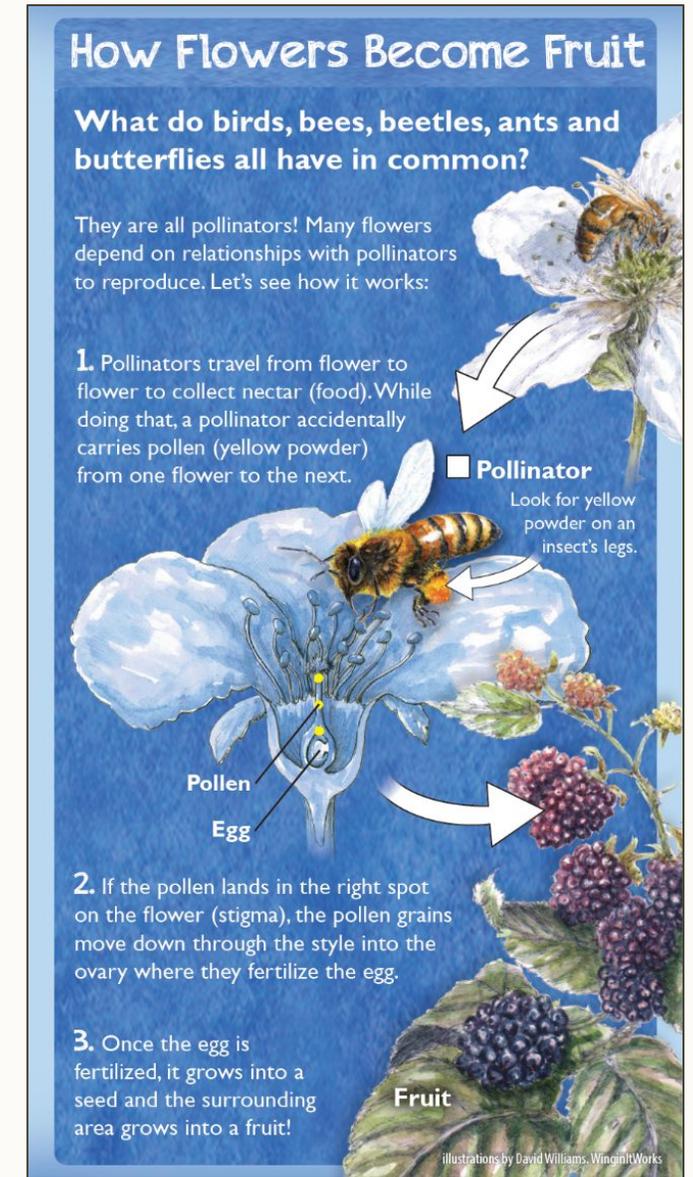
Age Suggestion: 4+ years old

Alternate: A version with more ornamental flowers is available for arboretums/gardens

[A similar version is available in Spanish](#)



COVER



OUTER PANEL

Flower Power

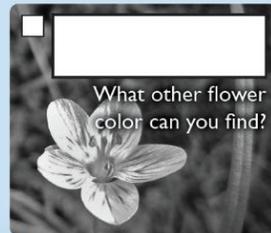
INNER PANELS

Flowers Attract Pollinators

Use the clues in this brochure to see how a flower's size, shape, color and smell have the power to attract unique pollinators.

Nature's Color Palette

Certain colors attract certain kinds of pollinators. How many colors of flowers can you find?



What flower color are you attracted to? _____

Petal Persuasion

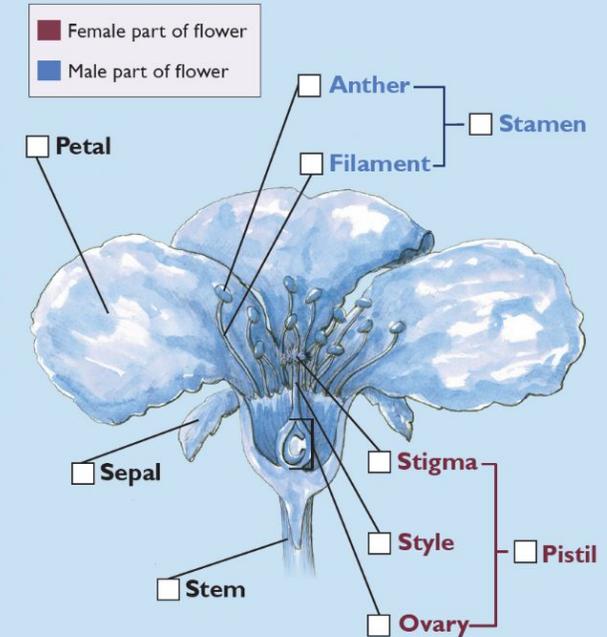
Like a billboard catches a person's attention, petals are used to attract pollinators to a flower. The petals' smell and shape depends on its pollinators' feeding and landing preferences. See if you can find shapes that look like a cup, pinwheel, or trumpet.



Draw a flower you find.

Parts of a Flower

Flowers come in many different shapes and sizes, but they all have the same basic parts. Look closely at a flower and see how many of its parts you can find.



The Need for Pollinators

Pollinators and the flowering plants that need them are both important to humans. More than 180,000 different plant species need pollinators, including many that produce fruits, vegetables, and nuts. Did you know that one out of every three bites of food you eat is there because of pollinators?

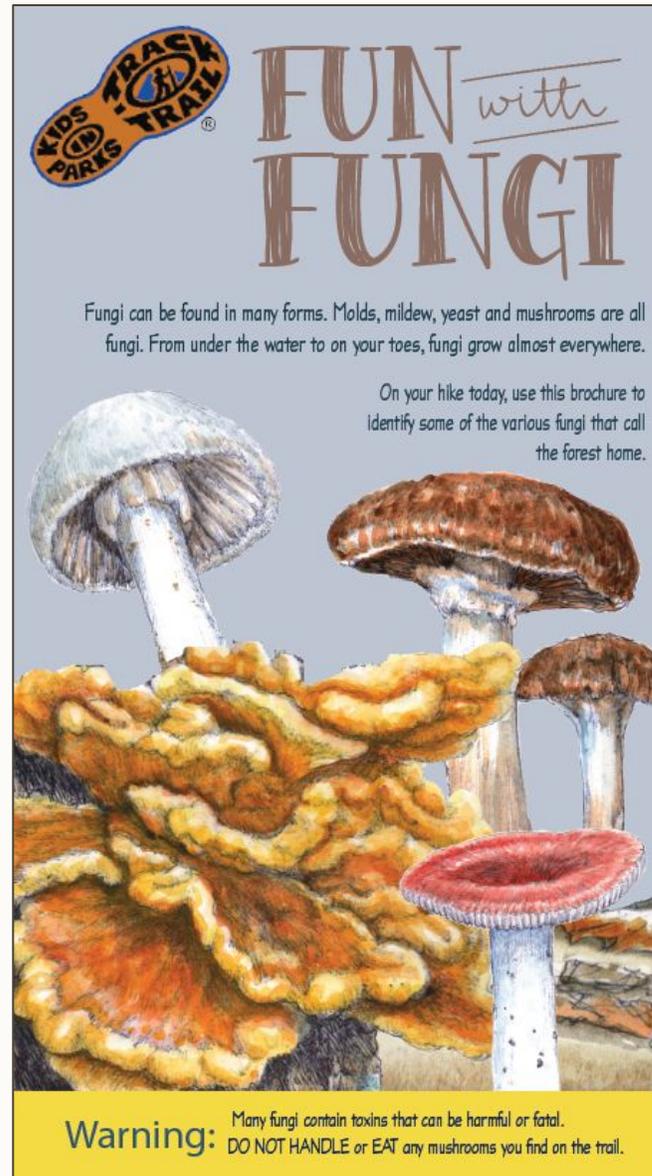


Fun with Fungi

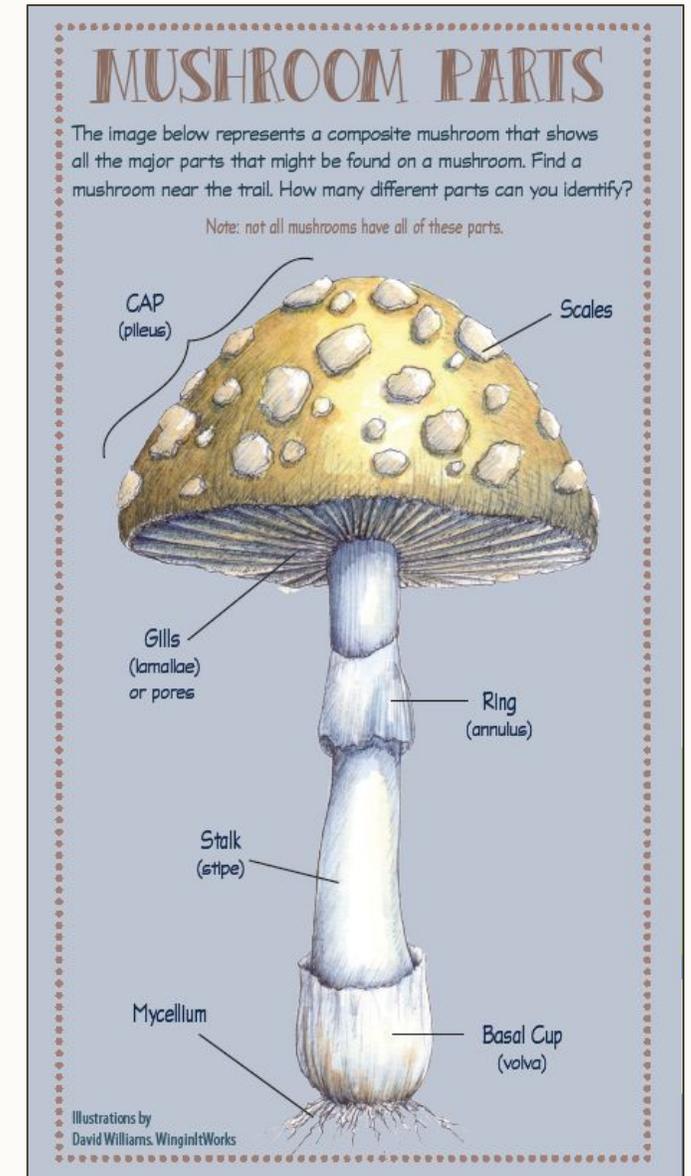
The “[Fun with Fungi](#)” adventure presents the funky, fantastic, fun world of fungi.

This brochure teaches readers about the different fungi parts and the important roles fungi play in the forest. Kids learn how to identify some of the more common mushrooms.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

Fun with Fungi

INNER PANELS

FUNGUS FRUIT

When you find a mushroom in the woods, you are seeing only a small part of the fungus. The mushroom is the "fruit" of the fungus, where spores ("seeds") are produced. Different types of mushrooms have different ways of releasing their spores.

MUSHROOMS AND FUNGI

Check the circle next to each type of fungi you find on your hike.

YOU ARE *WHERE* YOU EAT

Unlike plants, fungi do not make food from sunlight, but rather absorb nutrients from other living and dead organisms around them. Fungi are usually found growing in or on their food. Find a fungus near the trail.

Can you find its food source?

AGARICS Gilled Mushrooms

Most agarics are shaped like umbrellas; they have an open cap and a stalk. These gilled mushrooms have tiny ridges (gills) on the underside of the cap where the spores are released.

- The Destroying Angel
Amanita bisporagera

- Honey Fungus
Genus: *Armillaria*

- The Sickener
Russula emetica

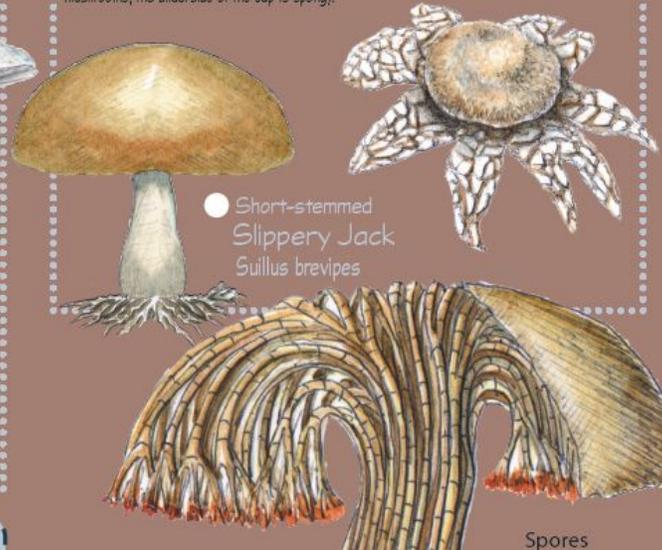


BOLETES

Boletes have a stalk and a round cap but unlike gilled mushrooms, the underside of the cap is spongy.

- False Earthstar
Astraeus hygrometricus

- Short-stemmed Slippery Jack
Suillus brevipes



BRACKET FUNGI

Often growing on tree trunks, shelf fungi look like, well, shelves. Many shelf fungi can be found throughout the year because they are woody. Look for tiny ridges on the underside of the shelf where the spores are released.

- Chicken of the Woods
Laetiporus sulfureus

- Turkey Tail
Trametes Versicolor



OH, MYCELIUM!

The mycelium, or "body" of the fungus, is usually hidden underground. The mycelium is made up of thread-like cells called hyphae which release enzymes and absorb nutrients.

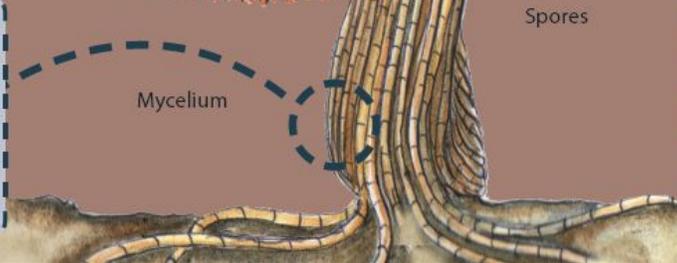
Turn over a decomposing stick. Or look under a rock or log.

Can you find the threads of a mycelium?

FUNGUS FUNCTIONS

Fungi play an important role as decomposers, helping to break down and recycle organic matter back into the soil. Without fungi, the forest floor would be littered with leaves, logs, and animal waste.

Can you find log that is being decomposed by mushrooms?

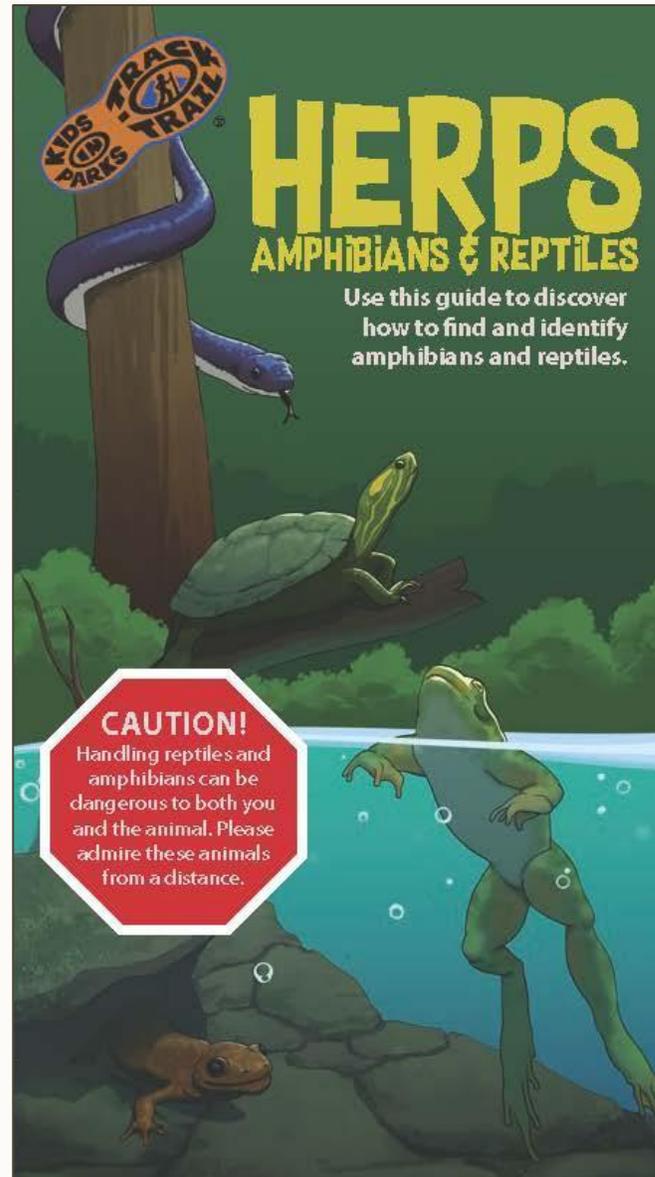


HERPS - Amphibians & Reptiles

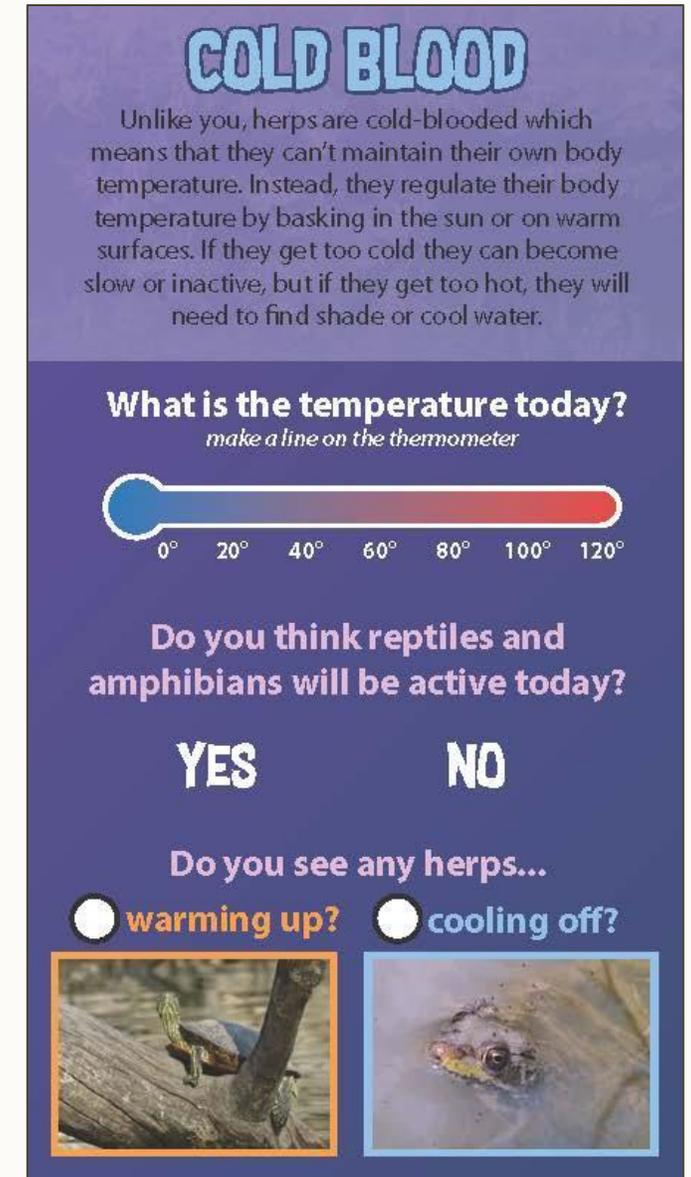
The “[HERPS - Amphibians & Reptiles](#)” adventure dives into the wild world of herptiles, aka amphibians and reptiles.

This brochure gives readers an inside look into the diversity of herptiles, their distinct adaptations, and how sensitive they are to their environment. Inside, a user-friendly, dichotomous key aids identification of any herptile seen in the wild through prompts and images.

Age Suggestion: 5+ years old



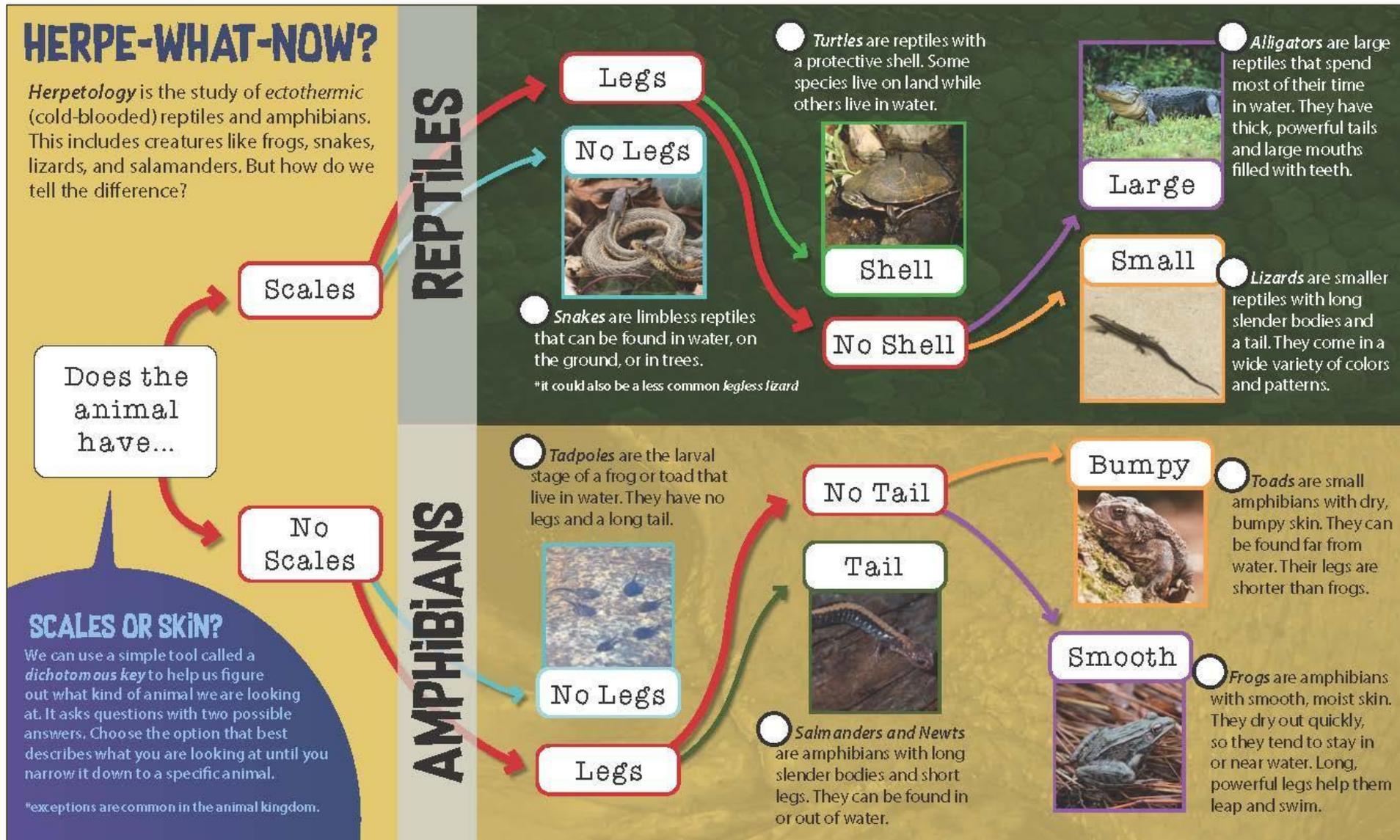
COVER



OUTER PANEL

HERPS - Amphibians & Reptiles

INNER PANELS

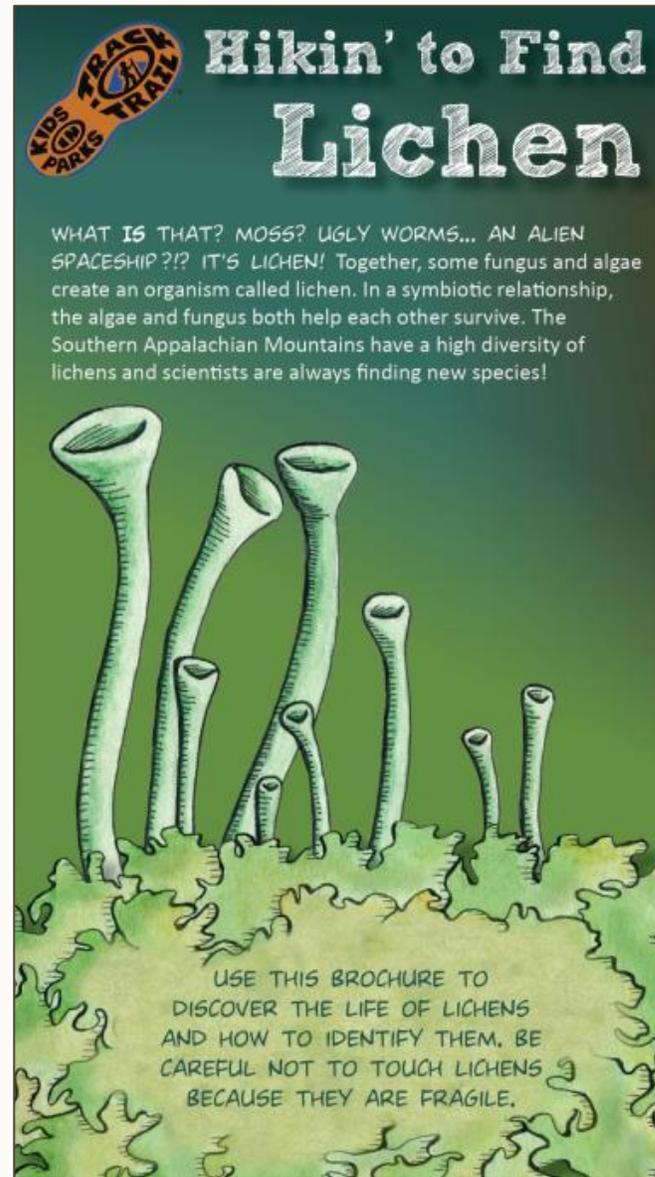


Hikin' to Find Lichen

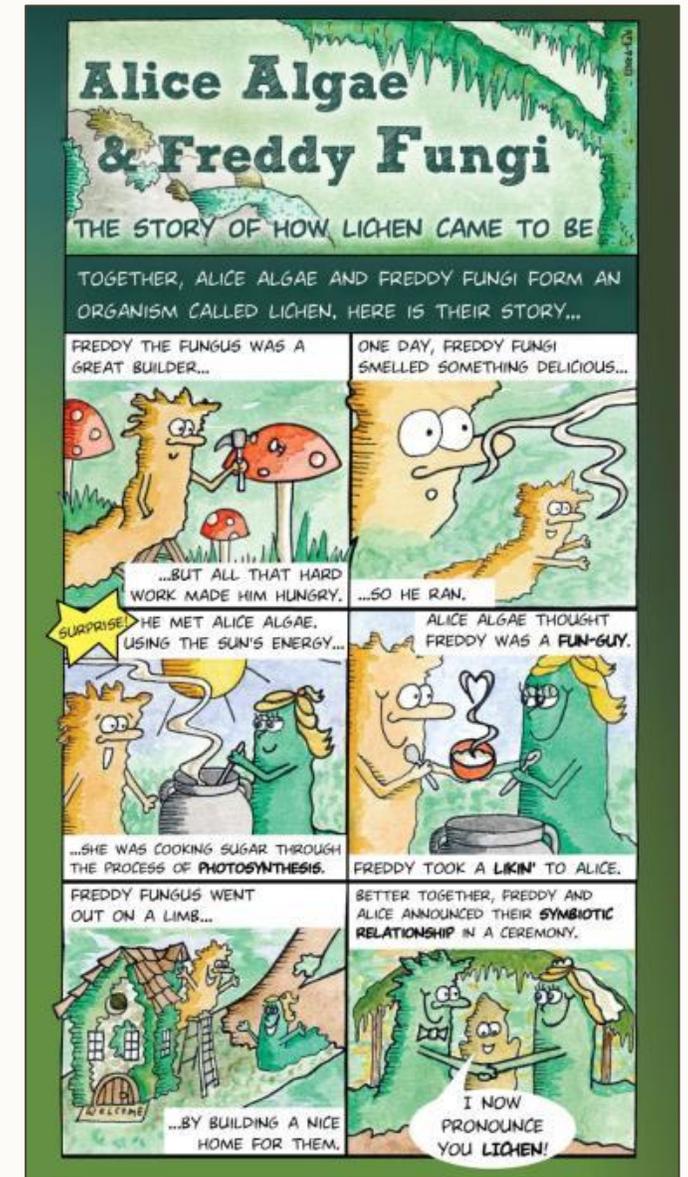
The “[Hikin' to Find Lichen](#)” adventure provides a kid-friendly understanding of the complex life form: lichen.

This brochure dives into the three types of lichen and how to distinguish them. The quirky story of Alice Algae and Freddy Fungi is also a fun way for readers to remember how lichen is created.

Age Suggestion: 7+ years old



COVER



OUTER PANEL

Hikin' to Find Lichen

INNER PANELS

Lichen, it's a Lifestyle

Although lichens are diverse, lichens can be found in three major forms. Check the box next to each lichen form you find on your hike.

Crustose

Crustose lichens are thin like crust. The lichen's edges stay flat against the object it is growing on. Crustose lichens grow slowly and some are among the oldest living organisms on Earth!

Porpidia
Porpidia cf. albocaulerulescens



Many lichens don't have a common name. What would you name this lichen?



Script Lichen
Graphis scripta



Gold Dust Lichen
Chrysothrix xanthina

Sensitive Species

Lichens get their food from light, air and rain so they are easily damaged by pollutants in the air. Scientists study lichens to learn about air pollution. The healthier the air, the more species of lichen there will be. 1) On your hike, count how many different lichens you can find. 2) Based on your findings, would you consider the area to have good or bad air quality?

# of Lichens						
0	1-4	5-9	10-19	20-29	30-39	40+
Air Quality:						

Foliose

Foliose lichens look like dry, wavy **foliage** (leaves). The edges curl off the surface the lichen is growing on.

Punctelia
Punctelia rudecta



Powdered Ruffle Lichen
Parmotrema hypotrappum
Look for little black 'hairs' called cilia!

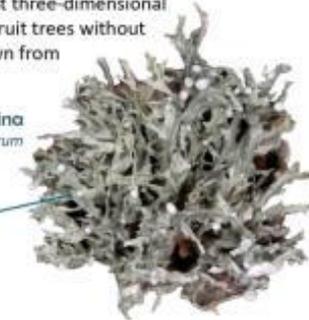


Lungwort Lichen
Labaria pulmonaria

Fruticose

Fruticose lichens are the most three-dimensional lichens. Some look like mini fruit trees without leaves while others hang down from branches like hair.

Ramalina
Ramalina culbersonianorum



What would you name this lichen?



Pixie Cup Lichen
Cladonia chlorophaea



Old Man's Beard
Usnea dasaea

Lichens come in many shapes, sizes and... colors! What colors of lichens can you find?

Tiny Pioneers

Crustose lichens are nature's pioneers because they can grow in places that are too extreme for most other organisms. Severe heat, cold and drought are no match for lichens because lichens are able to go **dormant**, or "turn off," during harsh conditions. What kind of surfaces can you find lichens growing on that plants are not growing on?



Leading the Way

Without lichens, plants may not grow in some places. Lichens are often the first to grow in a disturbed area. Over time, lichens are able to break down rock and produce thin layers of soil. More complex lichens, mosses and flowering plants are then able to take root. Find a community of lichens and describe the layers of lichens you see.



Lichens, The Next Frontier

Most questions about basic lichen biology remain unknown. The real mystery begins when lichens are studied under a microscope. Will you be the next scientist to make a lichen discovery?

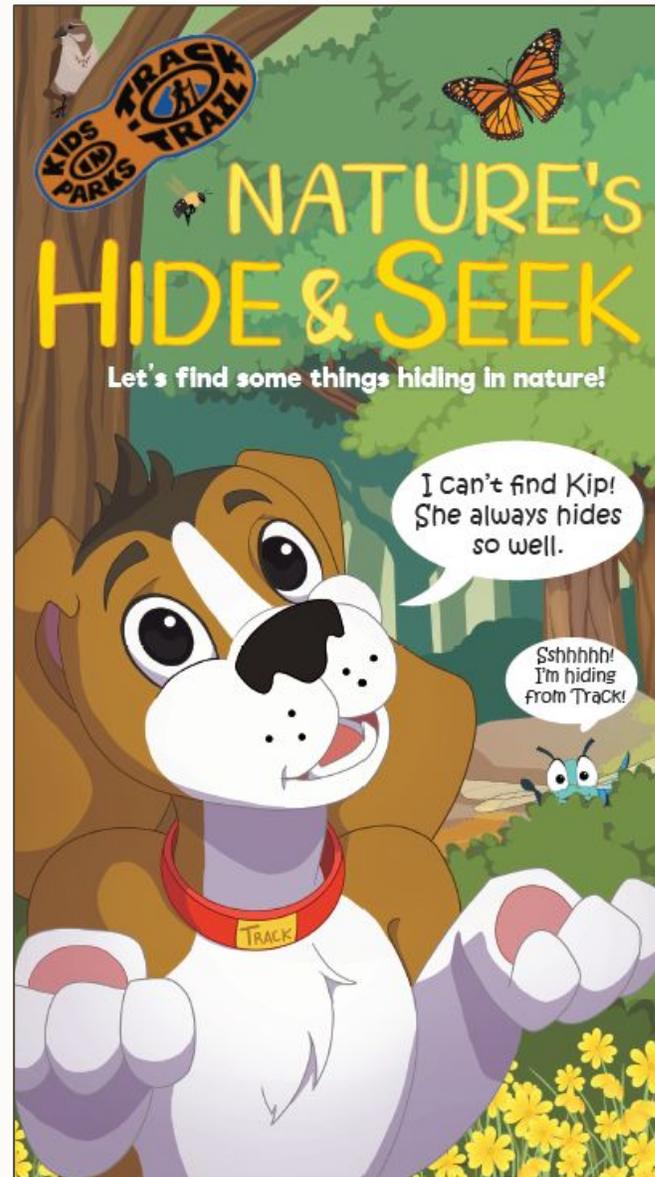
Nature's Hide & Seek

The “[Nature's Hide & Seek](#)” adventure is the most universal and frequently-used brochure among TRACK Trails.

This brochure is designed so kids of all ages can search along the trail to uncover common things overlooked in nature. Some may be easy to find, while others will require a sharp eye!

Age Suggestion: 4+ years old

[A bilingual \(Spanish/English\) version is available in a similar design](#)



COVER



OUTER PANEL

Nature's Hide & Seek

INNER PANELS



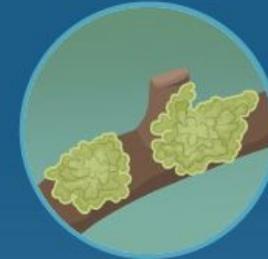
● Bird



● Spider



● Sapling
(young tree)



● Lichen



● Wildflower



● Water



● Feather



● Pollinator



● Animal Tracks



● Rough Bark



● Rock with 2 colors



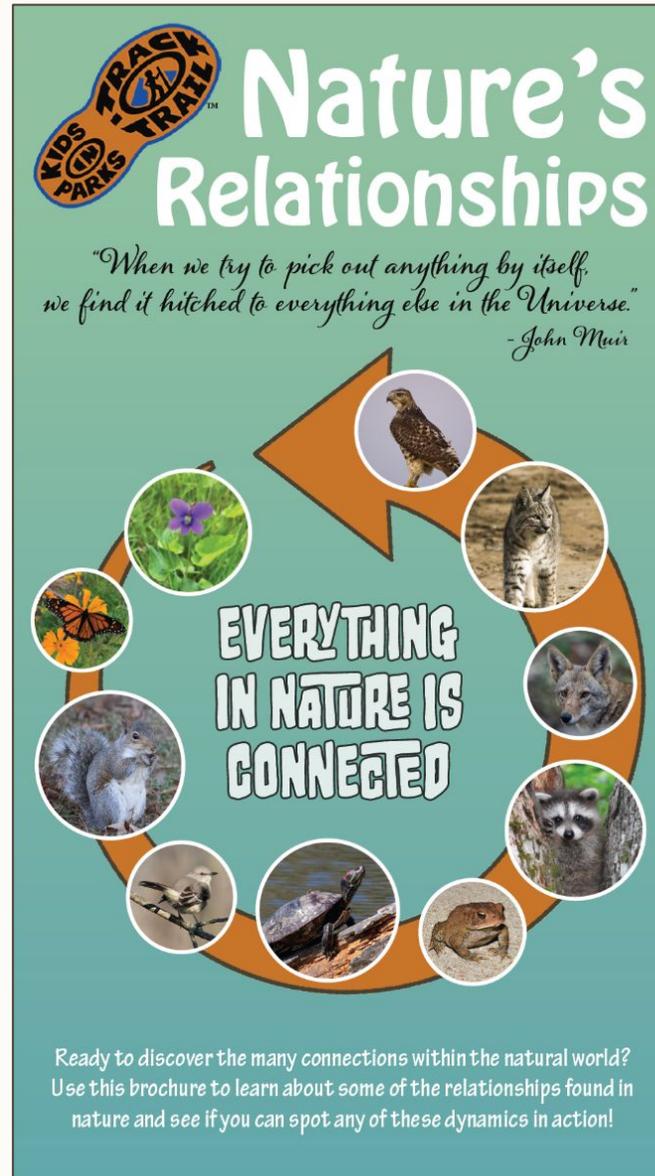
● Something Human-made

Nature's Relationships

The "[Nature's Relationships](#)" adventure connects everything in nature together.

This brochure highlights the intricate web of the natural world and provides examples of different relationships. Kids uncover the importance of both the living and non-living parts of an ecosystem that influence one another.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

Nature's Relationships

INNER PANELS

Many plants depend on animals, such as insects, small mammals, and birds, to reproduce. A flower's shape, size, color, and smell can help attract certain pollinators. Did you know butterflies LOVE bright colors, like red, yellow, orange, and pink?! Some flowers even have ultraviolet colors that guide pollinators to their pollen.



FIND A COLORFUL POLLINATOR



SEARCH FOR A PURPLE FLOWER



SMELL FIVE DIFFERENT PLANTS



FEEL THE SUN ON YOUR SKIN



LOOK FOR WATER BY THE TRAIL

Just like you, most living things need nutrients, water, and sunlight to thrive. The forest provides a home for a wide range of plants and animals, and different species will seek out specific spots depending on their needs.

Some species prefer to live along a streambank, while others live high up on mountaintops.



OBSERVE A SPIDER IN ACTION

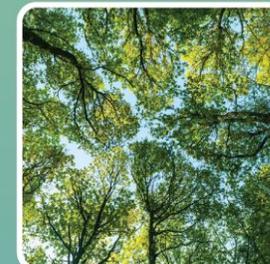
Small critters, like flying insects, may find themselves caught in a spider's web - you might even accidentally walk through one! Spiders build intricate webs to catch food and protect their eggs. They can even travel by releasing a strand into the wind! Though they may look a little scary, spiders serve an important role in their environment and help keep insects at bay, especially mosquitoes.

Think about the ways *you* are connected to nature. Maybe its the food you eat, your favorite park to play in, or the flowers you planted outside! There are connections all around us and everything we do impacts the natural world. Today, take time to...

CONNECT THE DOTS

Have you ever spotted a scaly, leaf-like structure growing on rocks and trees? This is called *lichen*, a complex organism made up of algae and fungus. These smaller organisms live together in a mutually beneficial relationship called *symbiosis*. The fungus provides protection for the algae, and the algae provides food for the fungus.

Trees provide coverage and shelter for countless species. If you stand beneath the trees and look up high at the leaves, this top layer is called the *canopy*. Breaks in the canopy allow the sun to reach the forest floor, which lets small plants and wildflowers grow. However, storms, insects, and disease can cause trees to fall - sometimes wiping out entire forests.



LISTEN TO THE TREES FOR 1 MIN.

When building homes out of natural and man-made materials, animals are very resourceful. Birds, like hummingbirds, are known for using lichen and the webs of spiders to construct their nests.



IDENTIFY AT LEAST ONE BIRD

The sticky webbing helps anchor their tiny nests to tree branches. Spotting a hummingbird's nest can be tricky since they're about the size of a golf ball!



FEEL LICHEN GROWING NEARBY



FIND THREE INTERESTING FUNGI



LIFT A LOG & SPOT MYCELIUM



UNCOVER A FALLEN TREE

Fungi help decompose everything in the forest, from fallen trees to leaf litter. *Mycelium*, which is the root-like part of a fungus, primarily breaks down organic matter and absorbs nutrients. The fruit of a fungus, or *mushroom*, is what we see above ground, and it is a vital food source for other organisms.

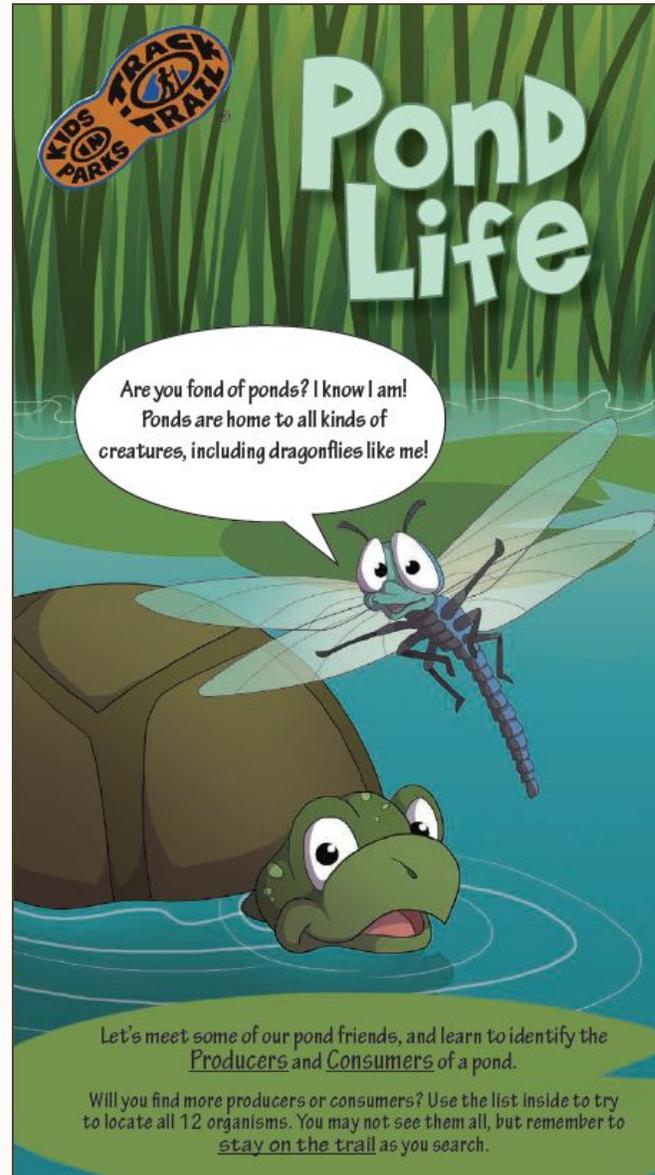
Pond Life

The “[Pond Life](#)” adventure depicts a typical pond ecosystem and the plants and animals that *love* to live here.

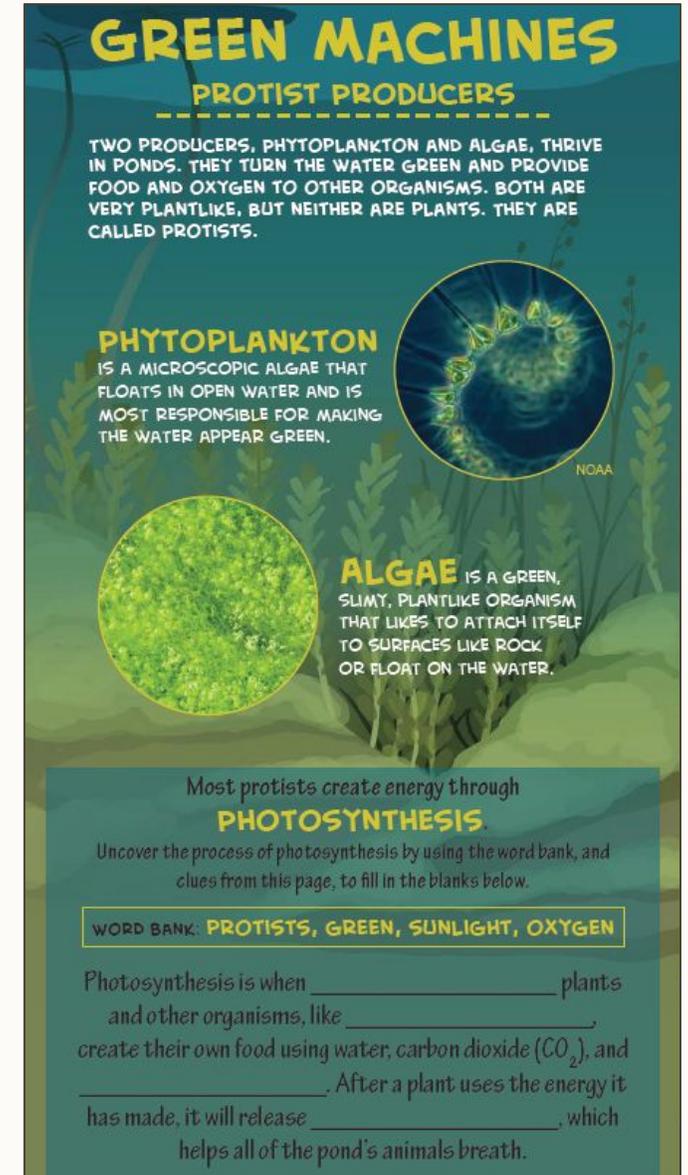
This brochure introduces the concept of producers and consumers and prompts kids to look for several common species in the area. Readers learn the important roles these species play and how they rely on one another.

Age Suggestion: 5+ years old

[A similar version is available in Spanish](#)



COVER



OUTER PANEL

Producers and Consumers

Check off any Producers or Consumers you may find at the Pond.

Producers make their own food using the Sun for energy. They include Plants, Algae, and Phytoplankton. Look around to see if you can find these six Producers.



Algae



Duckweed



Lily pad



Cattail



Sedge



Arrowhead

Consumers depend on other organisms for their food. They include animals and insects. Some Consumers will eat the Producers, while some will eat other Consumers. Look around the Pond and see if you can find these six Consumers.



Dragonfly



Water Strider



Turtle



Fish



Frog



Bird

Who's at the Pond?

THE ECOSYSTEM OF A POND PROVIDES FOOD AND SHELTER FOR THE CONSUMERS THAT DEPEND ON THE POND TO SURVIVE.

MANY MAMMALS

Mammals like raccoons, opossums, and beavers frequently visit ponds. Ponds make good homes for mammals that can swim, or like to hunt and forage in wet areas. Look for animal tracks around the pond.

INTERESTING INSECTS

Ponds are teeming with insects of all kinds. Mosquitoes, dragonflies, and water striders can be found living near ponds. They provide food for fish, frogs, and other small carnivores. Can you spot three different insects? Write down which ones you find.



BUOYANT BIRDS

Bird life is very abundant at ponds. Ducks can be spotted floating on the surface, while herons wade close to the shore to hunt for small fish or reptiles. As you explore, listen for different bird calls.

FLASHY FISH

A variety of fish call the pond home. Freshwater fish such as minnows, catfish, sunfish, and bass can be found in ponds. What types of food do you think fish eat?

ACTIVE AMPHIBIANS AND REPTILES

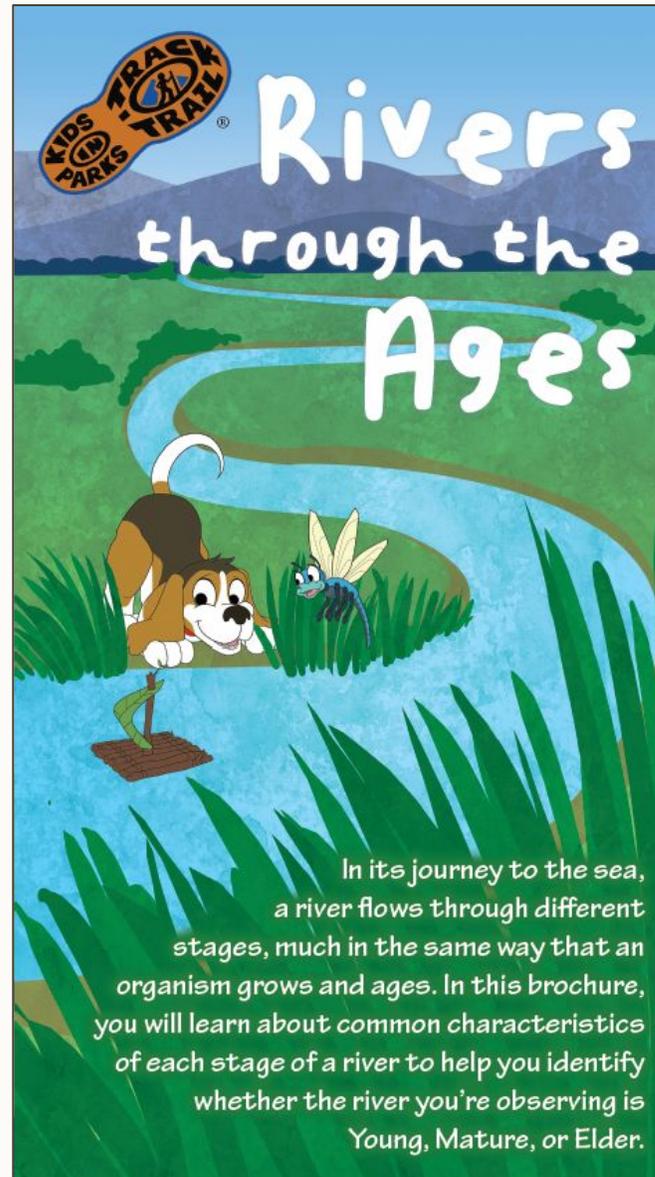
Keep an eye out for frogs, salamanders, turtles, and snakes. You can find them swimming through the water or basking in the sun. Reptiles and amphibians use the pond as a place to hunt, hide, and lay eggs. Keep count of how many you can find and fill in number.

Rivers through the Ages

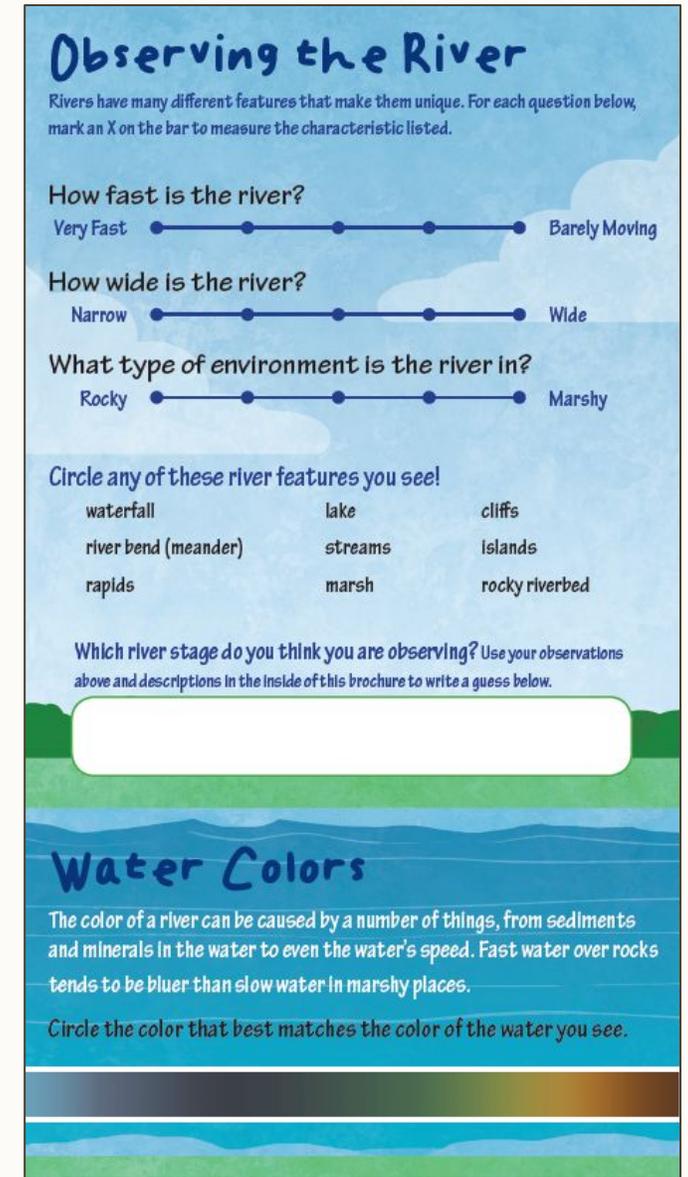
The “[Rivers through the Ages](#)” adventure explores the different stages, or ages, of a river.

This brochure teaches people how to recognize the differences between a “young,” “mature,” and “elder” river. A search-and-find activity connects kids to flora, fauna, and natural features around a river.

Age Suggestion: 7+ years old



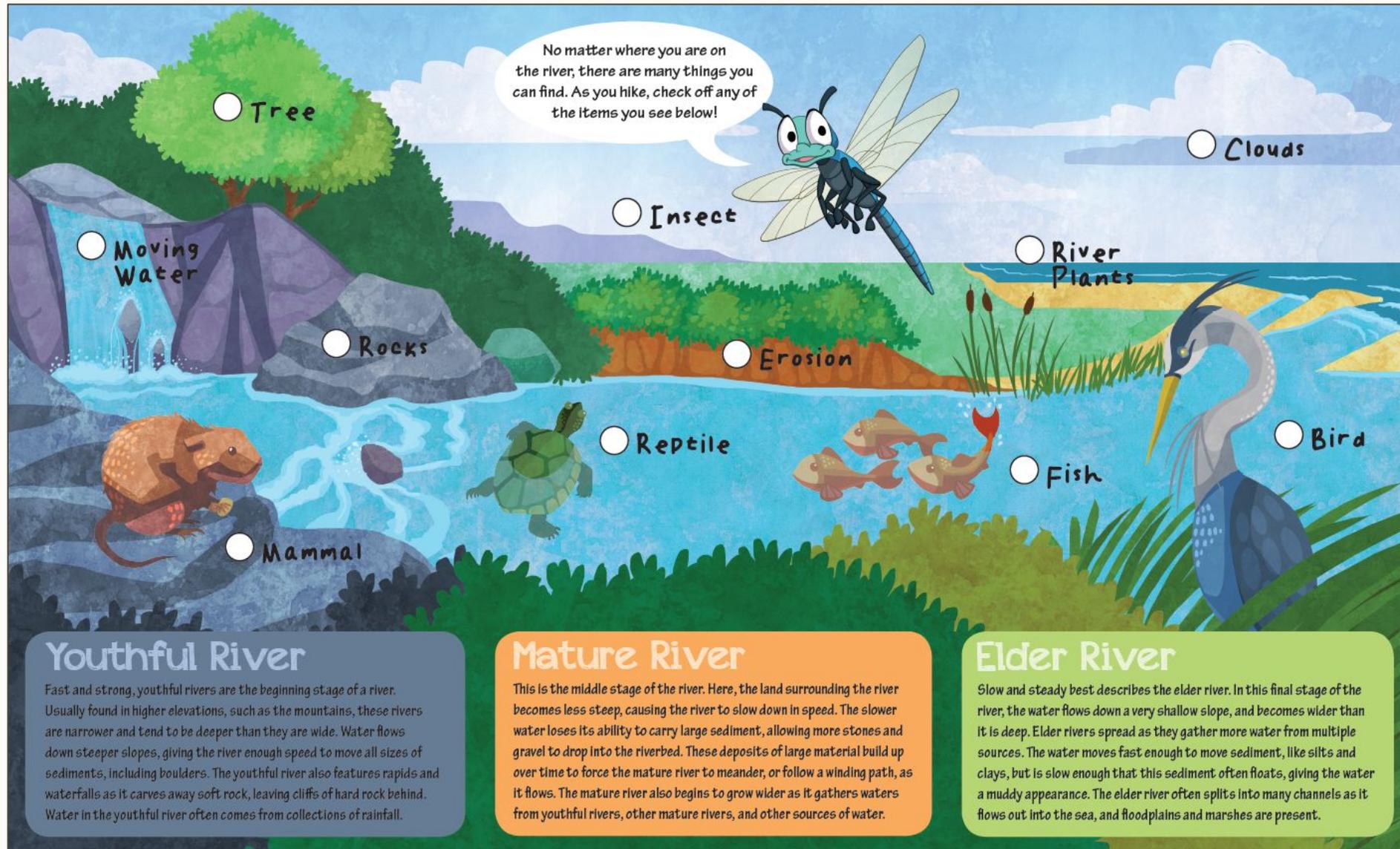
COVER



OUTER PANEL

Rivers through the Ages

INNER PANELS



Youthful River

Fast and strong, youthful rivers are the beginning stage of a river. Usually found in higher elevations, such as the mountains, these rivers are narrower and tend to be deeper than they are wide. Water flows down steeper slopes, giving the river enough speed to move all sizes of sediments, including boulders. The youthful river also features rapids and waterfalls as it carves away soft rock, leaving cliffs of hard rock behind. Water in the youthful river often comes from collections of rainfall.

Mature River

This is the middle stage of the river. Here, the land surrounding the river becomes less steep, causing the river to slow down in speed. The slower water loses its ability to carry large sediment, allowing more stones and gravel to drop into the riverbed. These deposits of large material build up over time to force the mature river to meander, or follow a winding path, as it flows. The mature river also begins to grow wider as it gathers waters from youthful rivers, other mature rivers, and other sources of water.

Elder River

Slow and steady best describes the elder river. In this final stage of the river, the water flows down a very shallow slope, and becomes wider than it is deep. Elder rivers spread as they gather more water from multiple sources. The water moves fast enough to move sediment, like silts and clays, but is slow enough that this sediment often floats, giving the water a muddy appearance. The elder river often splits into many channels as it flows out into the sea, and floodplains and marshes are present.

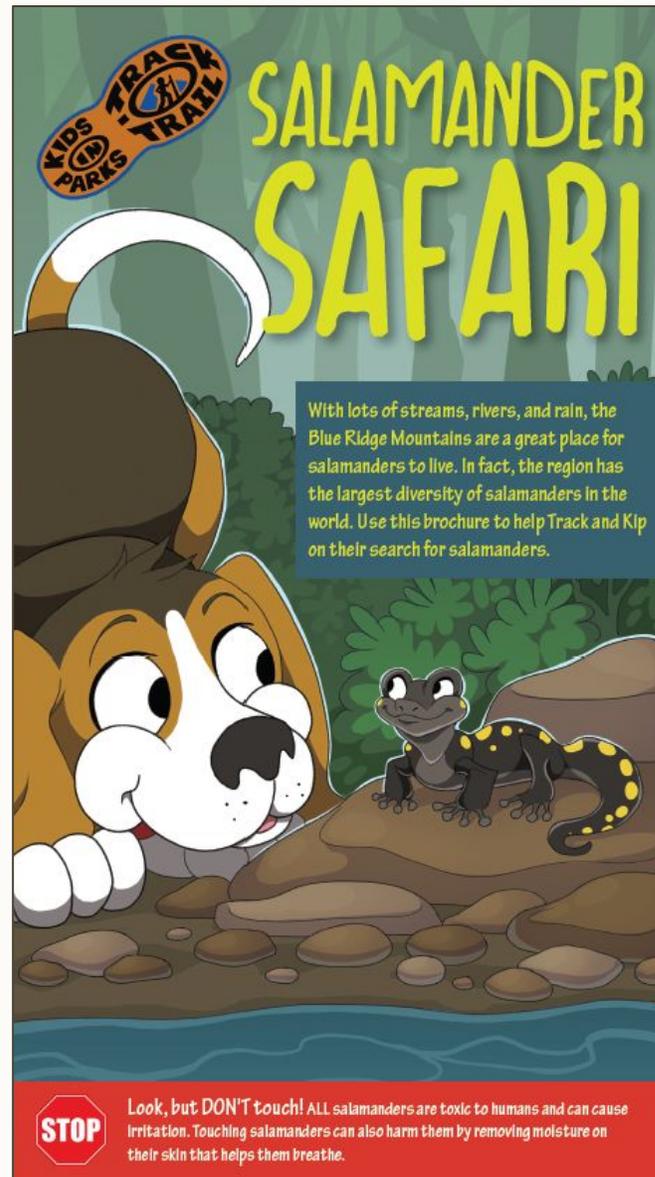
Salamander Safari

The “[Salamander Safari](#)” adventure spotlights the fascinating world of salamanders.

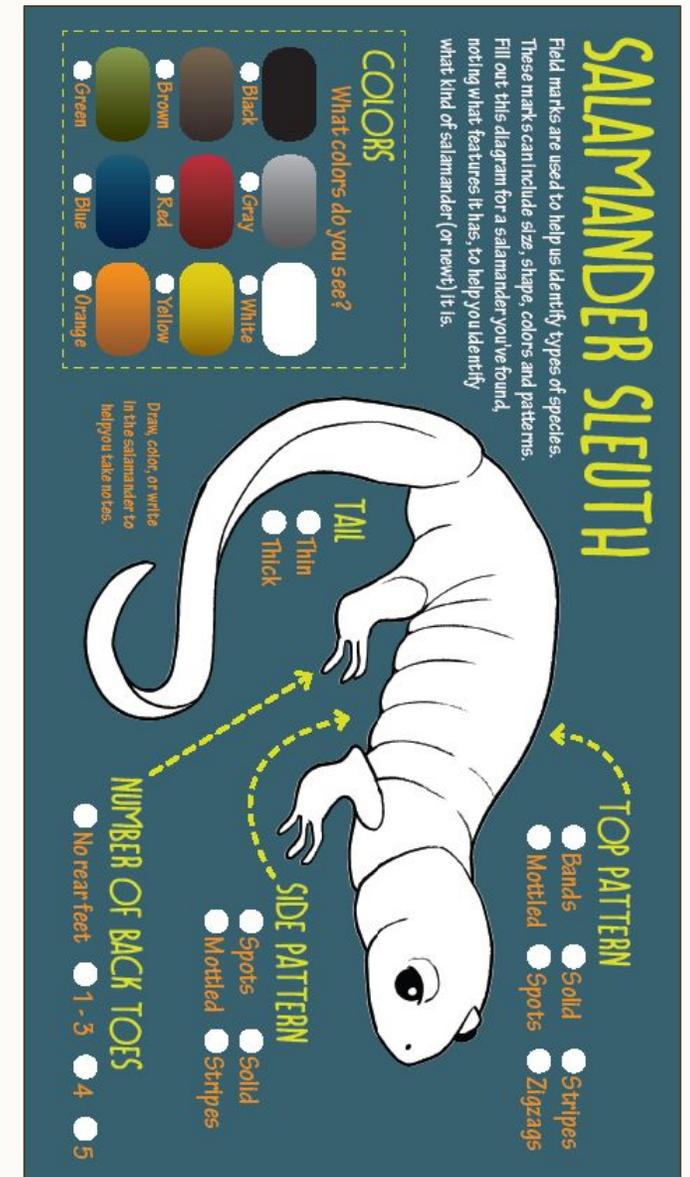
This brochure is filled with photos of salamander species and their favorite foods. Kids will discover the unique life cycle and traits of a salamander, and even learn how to crawl like one!

Age Suggestion: 6+ years old

[Alternate: A West Coast version is available with common PNW species](#)



COVER



OUTER PANEL

Salamander Safari

INNER PANELS

SALAMANDER SEARCH

Search for salamanders under leaves, rocks, or logs on the forest floor. You can also look on or under rocks in a creek. Most of the salamanders that you see on the trail are called lungless salamanders. They don't have gills or lungs, and breathe through their skin!

Remember to be extra careful when moving rocks and logs to avoid harming any animals that may live under them. Please help the habitat by putting things back the way you found them.



Northern dusky salamander
Desmognathus fuscus



White-spotted slimy salamander
Plethodon cylindraceus



Southern two-lined salamander
Eurycea cirrigera



Northern red salamander
Pseudotriton ruber ruber

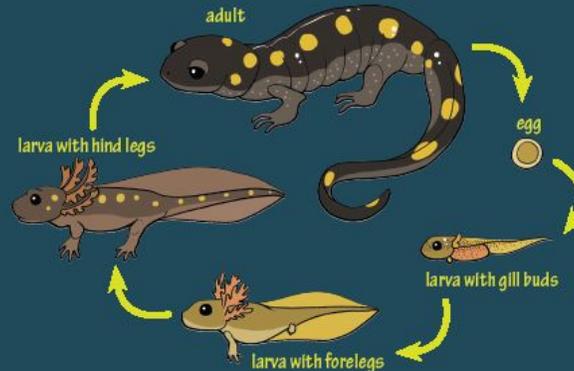
DID YOU KNOW

the world's third largest salamander lives in the Blue Ridge Mountains?

The eastern hellbender can grow to be more than 2 feet long! Hellbenders, also called "mud puppies" or "snot otters," like to hide under rocks in swift-moving water. Hellbenders can help tell us if a stream habitat is healthy, as they need clean water to breathe through their skin.

SALAMANDER LIFE CYCLE

Like all amphibians, salamanders spend their lives near water where they lay their eggs. When the eggs hatch, the newborn salamanders, or larvae, breathe with gills and swim. As they grow up, the larvae develop lungs, or other organs, for breathing air when they go on land.



What's another animal that has a similar life cycle to a salamander?

SALAMANDER OR NEWT?

Similar to how a toad is a type of frog, a newt is a type of salamander! Unlike most salamanders, newts have rough, bumpy skin. They also have an extra stage in their life cycle. As juveniles, they live on land before returning to live in water as adults.



Juvenile red-spotted newt known as a red eft



Adult red-spotted newt
Notophthalmus viridescens

SALAMANDER SNACKS

Most salamanders hide and sleep during the day, and then come out at night to hunt. Salamanders are carnivores and eat mostly insects. Can you find some of their favorite foods on your hike today?



CENTIPEDES



FLIES



MAGGOTS



TERMITES



SNAILS



WORMS



SPIDERS



SLUGS



CRICKETS

SALAMANDER SQUIRM

Salamanders have short legs, making their bellies drag the ground as they walk! Drop low like you're doing a push-up and try crawling. Pretend a predator is chasing you. How fast can you do the Salamander Squirm?

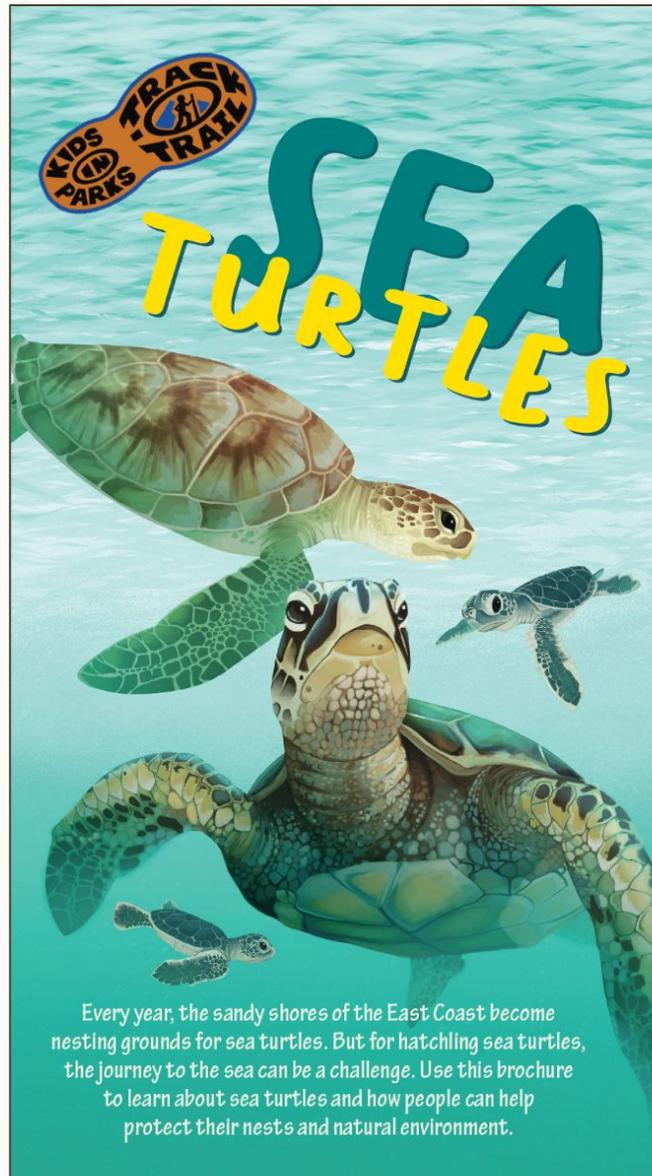


Sea Turtles

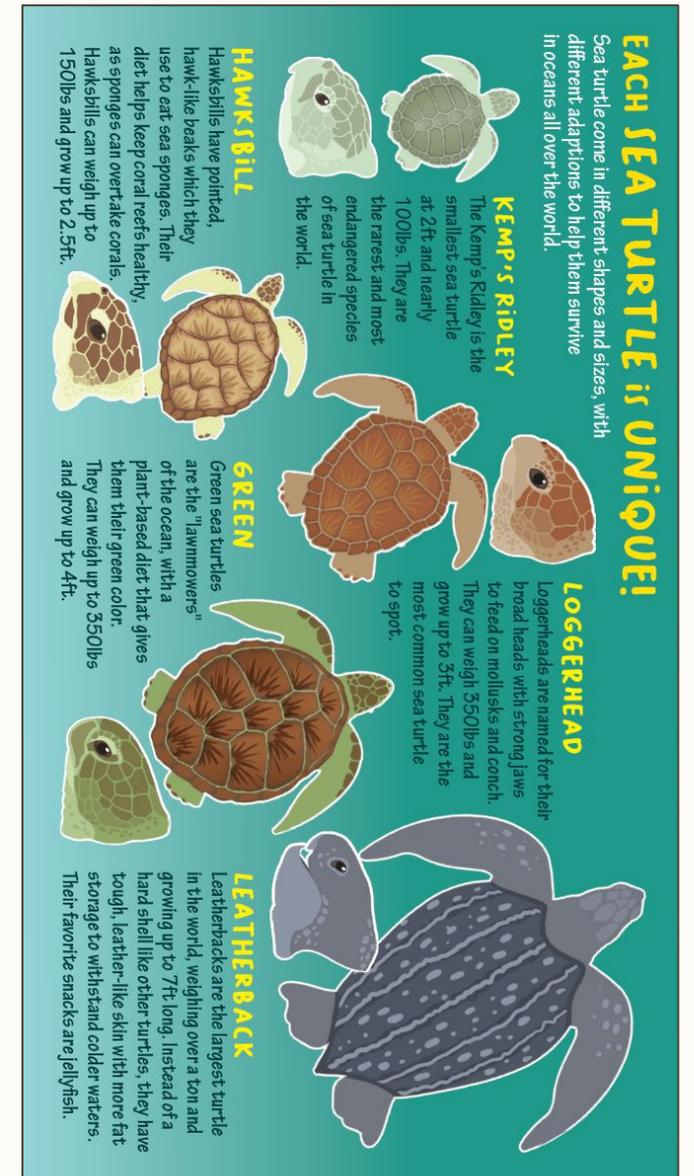
The “[Sea Turtles](#)” adventure sheds light on the challenging journey it takes for sea turtles to reach adulthood.

This brochure presents five sea turtle species found in east coast waters and the many obstacles faced when making their journey to and from the sea. Learn how to help our turtle friends out by removing some of these challenges, like picking up trash, while walking along the beach!

Age Suggestion: 6+ years old



COVER



OUTER PANEL

A JOURNEY TO AND FROM THE SEA

The life cycle of a turtle begins on the beach, but to grow to adulthood in the sea, hatchling sea turtles will face many obstacles. Obstacles like predators are natural part of life. But people can protect turtles from unnatural obstacles like litter, electric light, and holes dug by people. As you hike, be on the lookout for natural and human-made obstacles.

1 At night, females crawl to the dunes to make nests away from the tide. Using their flippers, they dig a deep hole where they'll lay over 100 eggs. Before returning to the ocean, they cover the eggs with sand to protect them. Turtles can do this up to eight times a year.

2 In 2-3 months, the eggs hatch and the hatchlings dig to the surface. When hatchlings come out all at once, it is called a boil. The hatchlings now have to crawl on the beach to the ocean.

3 Hatchling turtles face many challenges in their journey to the sea. Female turtles who reach adulthood will return to the same beach to lay her own eggs and then the cycle starts all over again.

CAN YOU CRAWL LIKE A SEA TURTLE?

Lie down on your belly and try to push yourself along the beach using your arms and legs. Next, while still laying down, try digging a hole in the sand with your feet.

● Vultures and sea birds hunt hatchlings from the air.

OCEAN OBSTACLE COURSE

From predators to human interference, problems arise for baby turtles. Check off any of these problems you may spot.

● Outdoor lights can cause turtles to go off-course, confusing it for the moon (When turtle watching, use a red light).

● Plastic bags can resemble jellyfish, a favorite food of many turtles. If they try to eat it, it could get stuck.

● Ghost Crabs also hunt the hatchlings as they hurry to the water.

● Tire tracks and other holes on the beach can trap the hatchlings.

● Sharks are predators for even adult turtles. Their strong jaws can break through the shell.

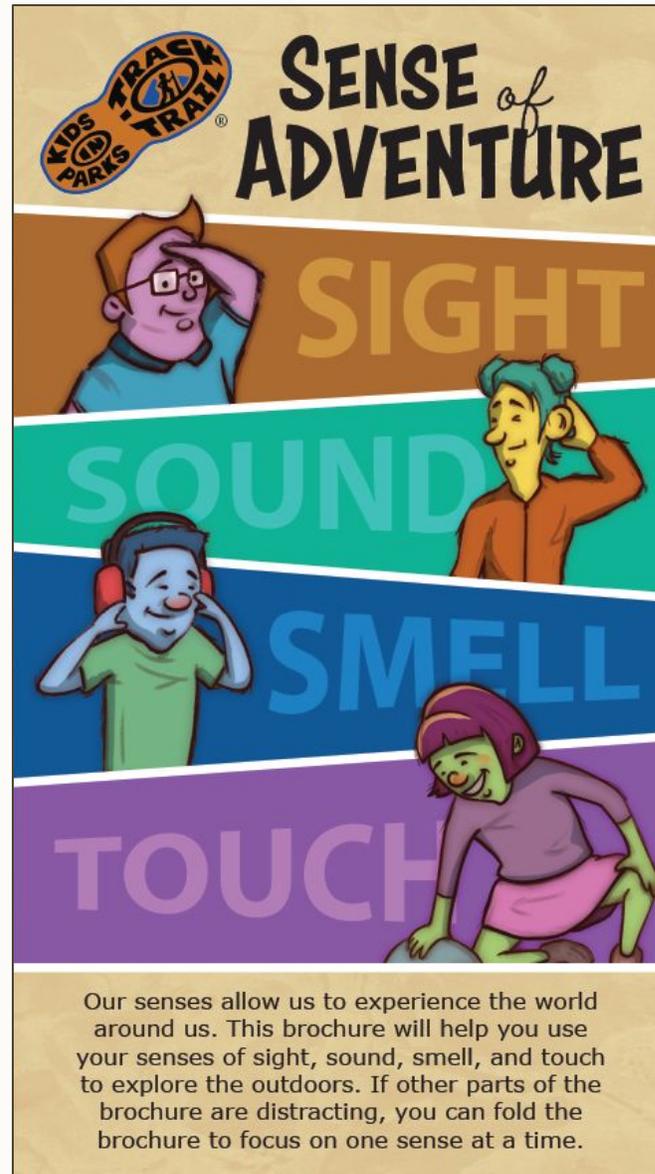
PEOPLE CAN HELP TURTLES BY PROTECTING NESTS FROM BEING WALKED ON.

Sense of Adventure

“[Sense of Adventure](#)” touches on all five senses as a way to experience nature.

This brochure provides engaging sensory exercises for all ages. These activities can help kids ground themselves, regain focus, and fulfill sensory stimulation. The content was [intentionally designed](#) for neurodiverse individuals and resemble that of a [visual communication board](#).

Age Suggestion: 4+ years old



COVER



OUTER PANEL

Sense of Adventure

INNER PANELS

<h2>Sight </h2>	<h2>Sound </h2>	<h2>Smell </h2>																		
 <p>Our eyes give us a sense of sight. We can use our eyes to see and understand our surroundings.</p>	 <p>Our ears let us sense sounds. We can use our ears to hear things around us that go unseen.</p>	 <p>Our nose gives us a sense of smell. We can use our nose to detect smells of things in the world around us.</p>																		
<p>Look around...</p> <p>1 A MAP can help you know what to expect and where to go on the trail. </p> <p>2 Look for leaves with...</p> <table border="0"> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>sharp points</td> <td>rounded points</td> <td>smooth edges</td> <td>jagged edges</td> </tr> </table> <p>3 Look for these colors...</p> 					sharp points	rounded points	smooth edges	jagged edges	<p>Listen closely...</p> <p>1 Find a spot to listen. You can choose a noisy or quiet place.</p> <p>2 Listen for...</p> <table border="0"> <tr> <td>BIRDS </td> <td>INSECTS </td> <td>WATER </td> </tr> <tr> <td>WIND </td> <td>PEOPLE </td> <td>VEHICLES </td> </tr> </table>	BIRDS 	INSECTS 	WATER 	WIND 	PEOPLE 	VEHICLES 	<p>Sniff the air...</p> <p>1 Can you smell something...</p> <table border="0"> <tr> <td>FLORAL </td> <td>STINKY </td> <td>EARTHY </td> <td>PINEY </td> </tr> </table> <p>2 Do you like the smell of the air?</p> <p><input type="radio"/> YES <input type="radio"/> NO</p> <p>3 What do you like or dislike about the smell of the air?</p> <div style="border: 1px solid black; height: 40px; width: 100%;"></div>	FLORAL 	STINKY 	EARTHY 	PINEY 
																				
sharp points	rounded points	smooth edges	jagged edges																	
BIRDS 	INSECTS 	WATER 																		
WIND 	PEOPLE 	VEHICLES 																		
FLORAL 	STINKY 	EARTHY 	PINEY 																	

The Mighty Maritime

“The [Mighty Maritime](#)” adventure features four coastal barriers and the animals and plants that thrive here.

This brochure emphasizes the importance of coastal barriers, not only for protection from the ocean but for the ways they keep our shores intact. A slight football theme throughout helps keep kids engaged while exploring these sensitive habitats.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

THE DEFENSIVE LINE

Coastal barriers not only protect the mainland, but they also provide unique habitats for plants and wildlife. What will you see in this ever-changing landscape?

1 BARRIER ISLAND

Barrier islands break up large storm surges and shield the mainland from wind and water erosion. Species that live here must tolerate salt spray, strong winds, sandy soil, and limited freshwater. A barrier island can also have other coastal barriers on it depending on its size.

2 DUNES

Dunes act as a wall against strong winds and high tides, taking the brunt of most storms. Though dunes may shift in the sand, plants with deep root networks, like sea oats, provide stabilization and minimize wind erosion.

3 MARSH

Salt marshes change daily with the tides and can tolerate extra water flow, decreasing inland flooding. Plants found here are salt-tolerant and help filter out pollutants and excess runoff during storms.

MARITIME FOREST 4

Maritime forests further weaken storm surges and strong winds. The dense vegetation stabilizes the soil and absorbs rain and excess floodwater. This habitat is dependent on dune formations - without these barriers, the entire coastline is at risk.

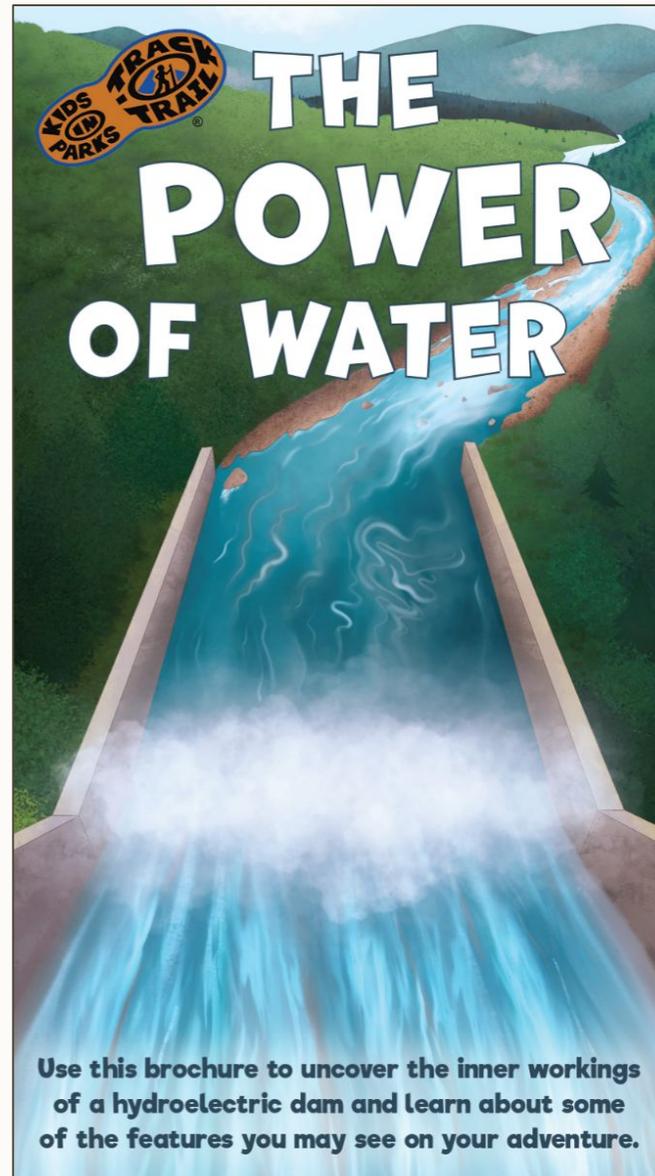
WAX MYRTLE
YAUPON HOLLY
WHITE BEGGAR-TICKS
SEA OATS
FIREWHEEL
SEA OX-EYE
SALTMARSH CORDGRASS
NEEDLEGRASS RUSH
LIVE-OAK
SPANISH MOSS
LOBLOLLY PINE
BALD CYPRESS

The Power of Water

“[The Power of Water](#)” adventure showcases how humans mastered the force of water to generate electricity.

This brochure uncovers the inner workings of a hydroelectric dam and important structures that keep everything running smoothly. While visiting the dam, kids can keep an eye out for water-loving wildlife nearby.

Age Suggestion: 7+ years old



COVER



OUTER PANEL

The Power of Water

INNER PANELS

WHAT IS HYDROPOWER?

FLOWING WATER HAS THE ABILITY TO CARVE CANYONS, DIG RIVER VALLEYS, AND POWER COMMUNITIES. HYDROELECTRIC DAMS HARNESS HYDROPOWER, THE POWER OF MOVING WATER, TO GENERATE RENEWABLE ENERGY. AS YOU EXPLORE TODAY, SEE IF YOU CAN SPOT ANY OF THESE MAIN FEATURES OF THE DAM.

- Reservoir:** When a river is blocked by a dam, the excess water forms a reservoir (an artificial lake). This water supply is not only used by the dam, but it can also provide irrigation, flood control, recreational opportunities, and drinking water.
- Fish Ladder:** Some fish, like salmon and steelhead, swim upstream to spawn (lay eggs). A fish ladder is a series of stairs that provides a way for fish to pass the dam safely. Can you spot any fish?
- Lock:** A lock provides a way for boat transportation. Boats are guided into the lock, and the water either rises or falls to match the water level on the other side.
- Booms:** Floating barriers called 'booms' keep large debris, like logs, from entering the dam. You can help keep the river clean by packing out any trash!
- Spillway:** When the reservoir is too full, water flows over the spillway like a giant waterfall. Is the water spilling over today?
- Bypass System:** Fish that do not go over the spillway can use the bypass outfall pipe, which guides them safely to the other side of the dam.
- Juvenile Fish Facility:** This building is where biologists can study and count young fish on their way to the ocean.
- Powerhouse:** The powerhouse is where electricity is produced. Water flows down through a large pipe called a penstock and over a turbine, causing it to spin and create mechanical energy. This turbine spins a generator that converts the energy into electrical energy. The electricity is transported away on power lines while the water goes back into the river via an outflow pipe.

Reservoir, Penstock, Turbine, Generator, Power Lines, Outflow

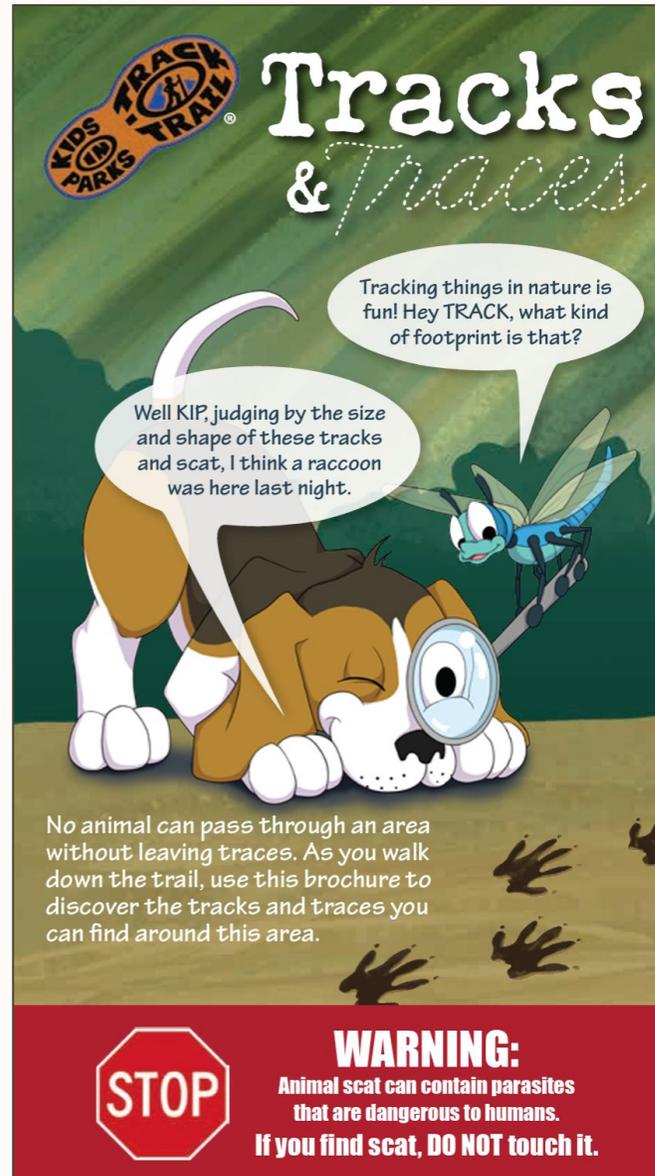
Tracks & Traces

The “[Tracks & Traces](#)” adventure shows off the various tracks and traces left behind by frequent animals in the area.

This brochure provides useful images of animal prints, scat, and even food scraps so readers can find out who made what! Kids stay busy looking for these animal clues while hiking along the trail.

Age Suggestion: 5+ years old

*Alternate: Region-specific versions exist
[A similar version is available in Spanish](#)*



COVER

Traces for You to Find



Bird Nest

A Bird's Home

Different bird species build unique nests. Some roost in the cavities of trees, some live in bushes and others build fancy nests. If you were a bird, where would you build your nest, in the hollow of a tree trunk like a woodpecker or in the canopy of a tall tree like the red-tailed hawk?

Diggin' for Food

The holes in this tree were created by a woodpecker in search of insects. How many trees can you find with traces left on them by woodpeckers?



Woodpecker Holes



Squirrel Midden

Yesterday's Lunch

Many animals leave traces of their food choices for us to find. Squirrels and chipmunks leave fragmented nuts and pine cones, while birds perch in thickets of berry bushes, picking the best berries. Can you find something an animal has eaten?

Sticky Situation

Spiders are usually solitary and shy, but if you look closely you may find the webs that they build. Different spider species make different styles of webs, so you can learn a lot just by looking at the web patterns. Orb Weavers build circular webs like the one in the photo, but there are also sheet webs, funnel webs, triangle webs, and more.



Spider Web

OUTER PANEL

Tracks & Traces

INNER PANELS

Rabbit

Rabbit tracks show up in a line of triangle-shaped prints. On closer inspection, you will see the triangle is made up of two small front paw prints on the inside and two large hind prints on the outside.



Track (Left/Front)



Scat



Trail

Rabbit scat and deer scat are similar, but rabbit scat is a lighter shade of brown. Also deer scat is oval shaped but rabbit scat is smaller and rounder. The average rabbit poops about 200-300 times a day.

Deer

Deer tracks are usually the easiest to find because their hard hooves leave better impressions than the soft paws of other animals. Look for heart shaped prints. The point of the heart points in the direction of travel.



Track



Scat



Bed

Found in clusters, a deer scat pellet has a dimple on one end and a point on the opposite end. A **deer bed** is a place where a deer likes to rest; look for an oval depression in the ground where leaves or grass are matted down.

Skunk

Every skunk track has five toes and five long claws on each paw. The skunk has longer claws on the front paws to use in digging up roots and insects.



Track



Scat



Track

Skunk scat is a rough tubular shape about the size of cat poop. You may be able to see seeds or bits of insects embedded in the scat. One of the most obvious signs that a skunk has been nearby is the odor of the spray.

Snake

Like most snakes, garter snakes have 'S' shaped tracks and can fit through small spaces. Look for tracks in loose soil or sand.



Track



Skin/shed



Sunny Spot

Garter snakes have long thin bodies and enjoy rocky hot climates. Look for them sunbathing on rocks. Without legs, snakes move their body with an 'S' shaped motion. Garter snakes also have long, slimy, white and brown scat.

Squirrel

Ground squirrels have four toes on the smaller front paws and five toes on the larger hind paws. The tracks are similar rabbit tracks.



Track (Left/Front)



Scat



Burrow

Ground squirrels live on or under the ground in burrows. The scat resembles small, dark pills. A trail of squirrel tracks resembles those of a rabbit, with the smaller front paws positioned inside the larger hind prints.

Coyote

Coyote tracks are approximately 2.5 inches long, capped with claw marks and are found in pairs. Their toes are closer together and not as wide as the toes of dog tracks.



Track



Scat



Den and Scat

Coyotes are **opportunistic eaters**, meaning they'll eat almost anything, so their scat can take many forms. In general coyote scat is long, with a rope-like twist and pointed ends.

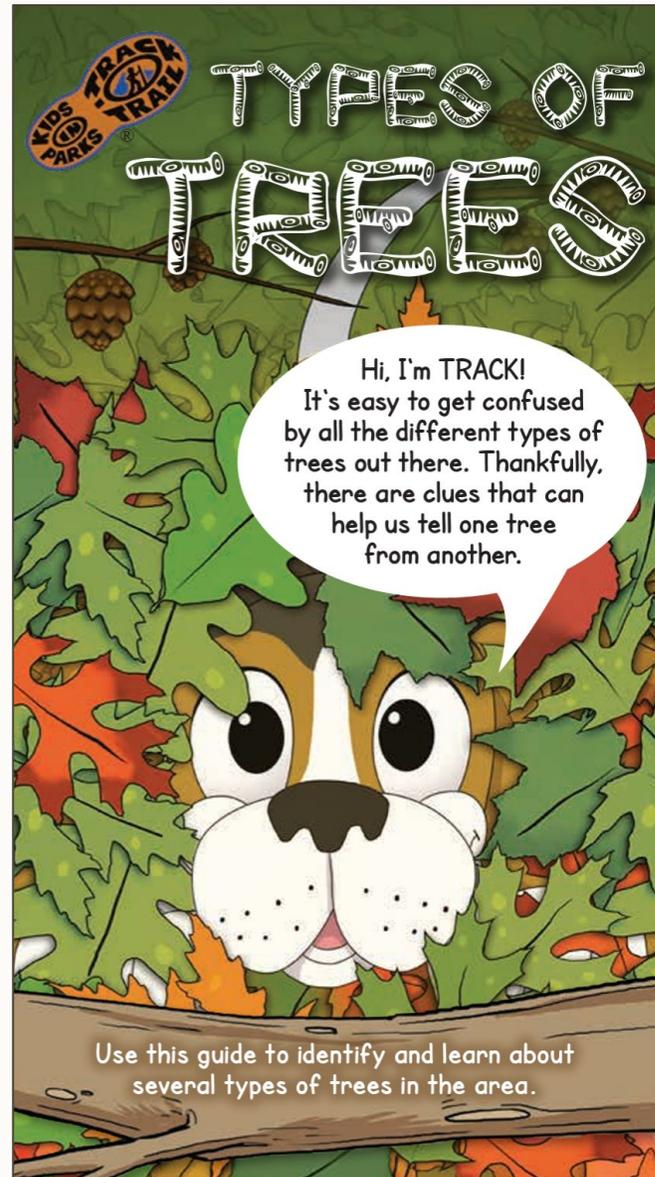
Types of Trees

The “[Types of Trees](#)” adventure highlights some common tree species in the area and how to distinguish them.

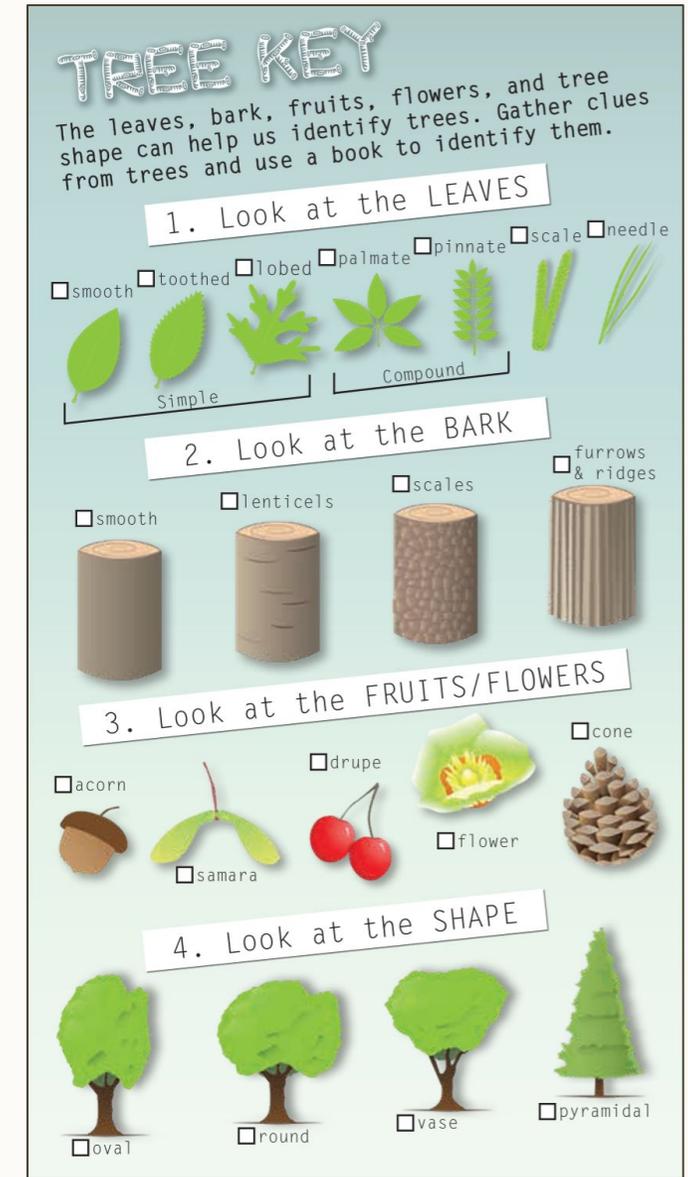
This brochure provides useful graphics and images so readers can easily identify the trees around them. It breaks down three types of trees and their distinct physical characteristics.

Age Suggestion: 6+ years old

[Alternate: A West Coast version is available with common PNW species](#)



COVER



OUTER PANEL

Types of Trees

OAKS

are usually **deciduous** trees that shed leaves in winter. Their broad leaves can vary widely from rounded lobes to sharply pointed lobes to smooth. Oaks produce nuts called acorns that usually have one seed inside. Their bark is typically gray with deep furrows and scaly ridges.

Can you find these Oaks?



WHITE OAK

- 7-10 rounded lobes
- Oblong acorn with shallow cup
- Ash gray bark that becomes rougher in older trees



RED OAK

- 7-11 bristle-pointed lobes
- Round acorn with flat cup
- Dark reddish bark with wide 'ski track' furrows and ridges

HUMANS USE OAKS FOR:

Boats



Acorn Flour



Furniture



MAPLES

are **deciduous** trees that are known for brilliant fall colors. They have broad leaves, usually with five lobes and pointed tips. Maples produce winged fruits called samaras that spin to the ground as they fall. Young maples have smooth bark that develops long deep furrows as the tree ages.

Can you find these Maples?



RED MAPLE

- 3-5 lobes with toothed edges
- Red twigs, flowers, and samaras
- Rough gray bark on older trees



SUGAR MAPLE

- 5 lobes with rounded notches
- Samaras with round, green seeds and brown wings
- Brown bark with long, thick ridges

HUMANS USE MAPLES FOR:

Syrup



Guitars



Bowling Pins



PINES

are **evergreen** trees, meaning they keep their leaves all year. Their bark is usually thick and scaly. Pines produce cones and have needles that grow in bundles (fascicles). Their crowns are tapered, being wider at the bottom and pointy at the top.

Can you find these Pines?



WHITE PINE

- Bundles of five long needles
- Long, thin cones
- Rough gray bark



VIRGINIA PINE

- Bundles of two short twisted needles
- Egg-shaped cones with sharp prickles
- Reddish-brown scaly bark



PITCH PINE

- Bundles of three slightly twisted medium length needles
- Fat egg-shaped cones with prickles
- Thick orange-brown puzzle-piece bark

HUMANS USE PINES FOR:

Turpentine



Paper



Tea

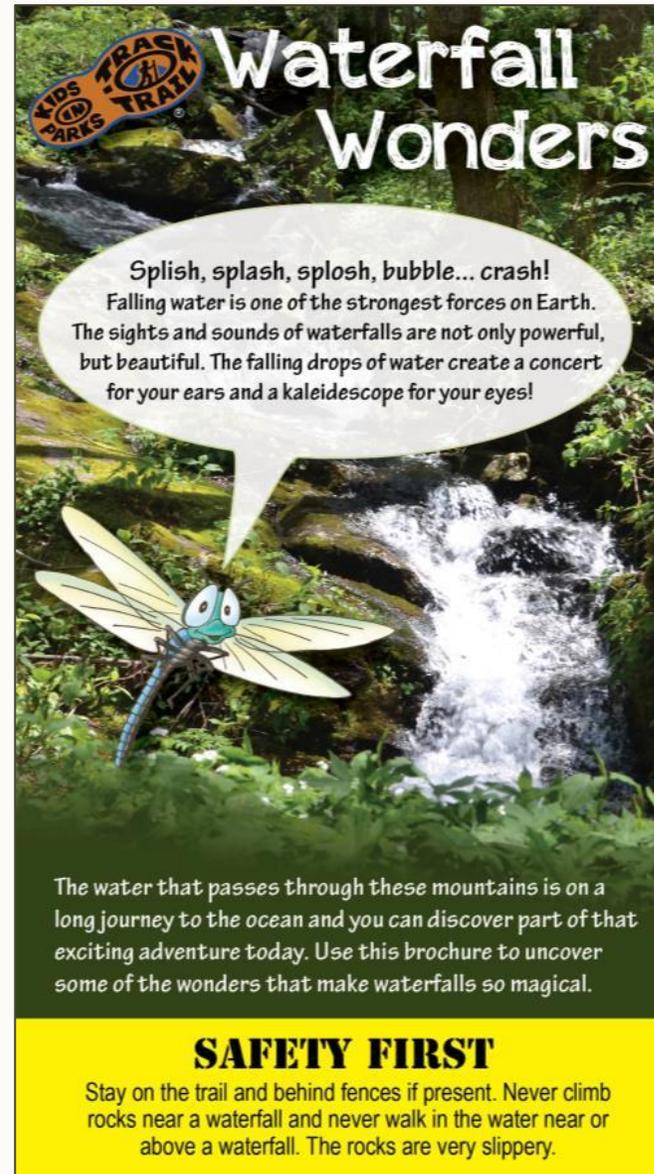


Waterfall Wonders

The “[Waterfall Wonders](#)” adventure provides an inside look at this beautiful and powerful natural phenomenon.

This brochure encourages observational skills through sight and sound activities and provides a checklist of common wildlife that live around waterfalls. Readers are introduced to three types of waterfalls and how they’re formed.

Age Suggestion: 6+ years old



COVER

Mix, Match... Splash!

Different names are used to describe the different types of waterfalls. First, match each description with its photo. Second, see if you can find examples of each waterfall type.

Note: not all waterfall types may be found in one park

Cascade
Water tumbles down along steep rocky steps.



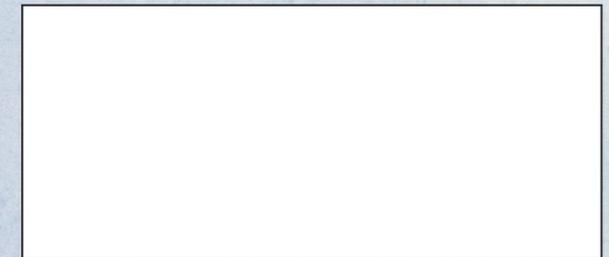
Plunge
Water flows over a cliff and falls through the air.



Slide
Water flows quickly along a very steep and flat rock.



Other words that describe waterfalls are horsetail, fan and punchbowl. Can you find any interesting shapes in the falls? Draw one shape you find and give it a name.

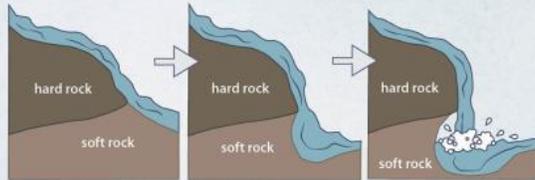


OUTER PANEL

Waterfall Wonders

Why Water Falls

Many waterfalls have formed in the Blue Ridge Mountains because it rains a lot and the ground is steep. The moving water in streams cuts down through the earth. Waterfalls can be found where water flows from hard ground upstream onto softer ground downstream.



Erosion is when the ground breaks away by the force of water or wind. It may take thousands of years for erosion to make a waterfall!

“Rock” Music



At the Waterfall

Listen to the waterfall. Does it burble, hiss, whisper, or... roar? Look all around to see if you can figure out which features are making the different waterfall sounds.

Write a few words that describe the sounds that you hear.

Give yourself Fox Ears! Cup your hands around your ears. How do your fox ears change the sound of the waterfall?



Hot or Cool

The water in lakes and rivers is usually a different temperature than the air. Do you think the air temperature will feel different near the waterfall?

Away from the Waterfall

What you are wearing (t-shirt, sweater, pants, etc.)?

Are you hot, cold, or comfortable? _____

At the Waterfall

Has the temperature changed? _____

Did it get warmer or cooler? _____

If the temperature changed, why do you think it did?

After the Waterfall

Once you begin to leave the waterfall, count your steps and listen carefully.

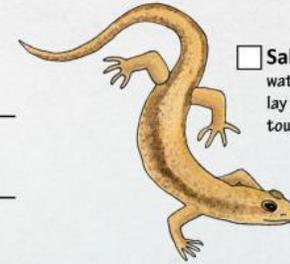


How does the waterfall sound...

	with fox ears	without fox ears
... 20 steps away?		
... 40 steps away?		
How many steps did you take before you could no longer hear the waterfall?		

Life in the Spray Zone

Many plants and animals live in misty air and on the wet rocks surrounding waterfalls. Watch carefully from the trail and see how many you can find.



Salamander Salamanders are often found near water because, like frogs, they are amphibians and lay their eggs in water. Salamanders should not be touched because they have sensitive skin.



Fern Ferns are among the oldest types of plants on Earth and need moisture to reproduce. Instead of seeds, ferns use single cells called spores to reproduce.



Snail Aquatic snails (snails that live in water) have gills for breathing. Land snails have a hole at the top of their shell to allow air through to their lungs.



Butterfly Butterflies drink water and minerals from the damp mud near waterfalls because they cannot drink directly from open water.

Moss Like ferns, moss uses spores to reproduce. Moss grows in wet areas because water helps moss spread from rock to rock.

Illustrations by Eisse A. Kahl

“We Can Take it!” - Life in the CCC

The “We Can Take It! Life in the CCC” adventure shares the various roles and responsibilities of a Civilian Conservation Corps (CCC) enrollee.

This brochure spotlights the impact of the CCC on U.S. infrastructure and the natural resources that were used to build roads, trails, and other structures. Kids are challenged to think like an enrollee and even take part in some of their physical training exercises.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

“We Can Take it!” – Life in the CCC

INNER PANELS

“WE CAN TAKE IT!”

“We can take it!” was more than just a slogan for enrollees of the CCC, it was a way of life. The program built the young men up through exercise, education, skills training, and a long list of projects to complete. The day began every day at 6 AM and ended with a strict lights-out call at 9PM. *Let’s get to work!*

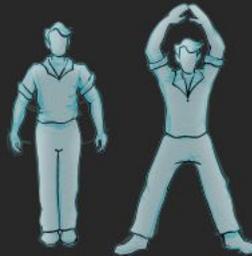
CALISTHENICS

Camp life included a strong focus on the health of enrollees. The men had access to medical care as well as opportunities for healthy activity. Every morning began with a routine of calisthenic exercises.

JUMPING JACKS

Find an open space to warm up with some calisthenics. Take 30 seconds with each exercise.

Check off the exercises you complete.



CRUNCHES



PUSHUPS



WOODSMANSHIP

For many enrollees, their CCC assignment was their first immersive experience in the wilderness. Building a collection of wilderness skills and knowledge was essential to completing projects.

OBSERVATION

Observation was the most important skill for enrollees. It kept enrollees aware of dangers, valuable resources, and prevented them from getting lost in the woods.

★ WAYFINDING CHALLENGE

Record 3 recognizable features along the trail. On your way back, look for those same features and check them off to verify you are still on the right trail.

Feature 1 _____ found again?

feature

Feature 2 _____ found again?

feature

Feature 3 _____ found again?

feature

TOOLS OF THE TRADE



What do you think these tools are for? Match each tool with its purpose below.

DIGGING

BREAKING SOIL / ROCK

1. _____

2. _____

FELLING TREES

CHOPPING

3. _____

4. _____

answers: 1. shovel, 2. mattock, 3. crosscut saw, 4. double-bit axe

WILDERNESS HAZARDS



STINGING NETTLE

POISON OAK

POISON IVY

WATER HEMLOCK

skin irritant

DEADLY if swallowed!

Multilingual Brochures

As part of our mission to provide fun and educational outdoor experiences for everyone, we want your TRACK Trail to serve the people of your community. Kids in Parks works with organizations, clubs, and tribal groups to translate brochures and design new content for the needs of our partners and their unique sites.

The following examples are of multilingual brochures and Spanish versions. Some are site-specific, while others are adaptations of our most popular brochures.

NOTE: All Kids in Parks materials, including brochure art, are designed in house by our staff

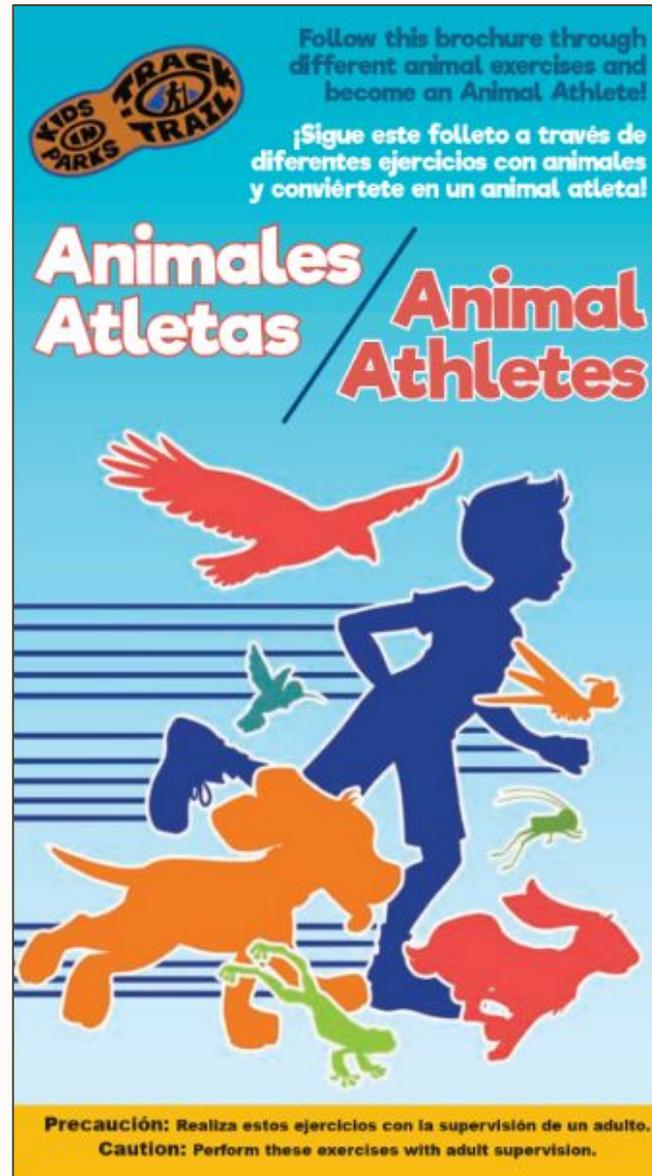


Animales Atletas

La aventura de los “[Animales Atletas](#)” desafía a los niños a hacer ejercicio junto con los animales que se encuentran en la naturaleza .

This brochure is a bilingual option for “Animal Athletes.” The brochure lists eight animal-themed exercises that kids can do along the trail while tapping into their imagination and having fun!

Age Suggestion: 4+ years old



COVER



OUTER PANEL

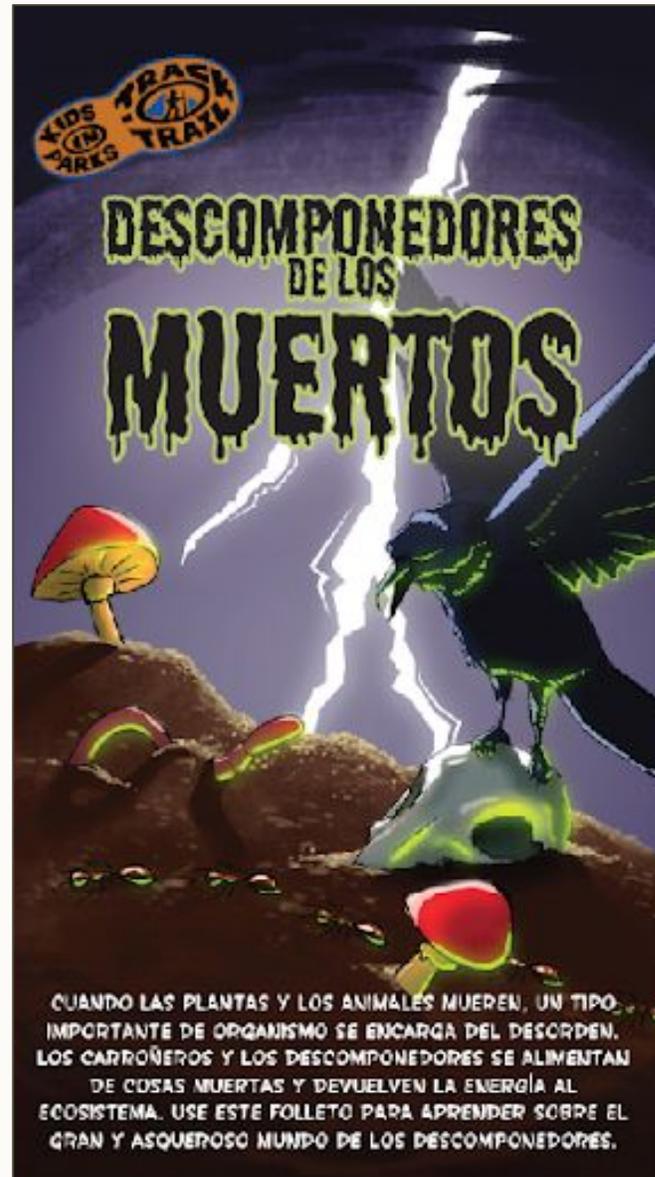
<p>■ Aleteos de Colibri</p> <p>Hummingbird Handswings</p> <p>¿Cuántos aleteos puedes hacer en 30 segundos? Los colibríes aletean sus alas más de 50 veces por segundo.</p> <p>How many wing-flaps can you do in 30 secs? Hummingbirds flap their wings over 50 times per second.</p> 	<p>■ Salto de altura de un venado</p> <p>Deer High Jump</p> <p>¿Qué alto puedes saltar? Para moverse rápidamente a través de la hierba alta, los venados saltan muy alto. ¡A veces 6 pies!</p> <p>How high can you jump? To move quickly through tall grass, deer leap very high. Sometimes 6 feet!</p> 	<p>■ Equilibrio de la ardilla</p> <p>Squirrelly Balancing</p> <p>Camina como si estuvieras en una barra de equilibrio. ¿Que tan rapido puedes ir? Las ardillas tienen colas largas para ayudarlas a mantener el equilibrio mientras se mueven por las ramas.</p> <p>Walk like you are on a balance beam. How fast can you go? Squirrels have long tails to help them balance as they move along branches.</p> 
<p>■ Salto de rana</p> <p>Frog Hop</p> <p>¡Salta como una rana que escapa de un depredador! Las ranas usan sus fuertes patas traseras para alejarse de las serpientes y las garzas.</p> <p>Hop like a frog escaping a predator! Frogs use strong back legs to hop away from snakes and herons.</p> 	<p>■ Postura halcón</p> <p>Hawk Stance</p> <p>¿Cuánto tiempo puedes mantenerte en equilibrio sobre una pierna? Para conservar energía, las aves rapaces se paran sobre una pata a la vez.</p> <p>How long can you balance on one leg? To conserve energy, birds of prey stand on one leg at a time.</p> 	<p>■ Carrera de Conejo</p> <p>Rabbit Dash</p> <p>Corre en zig-zag hacia un árbol para esconderte detrás de él. Cuando los persiguen, los conejos corren en zig-zag hasta que encuentran refugio.</p> <p>Run in a zig-zag to a tree to hide behind. When being chased, rabbits sprint in a zig-zag pattern until they find cover.</p> 

Descomponedores de los Muertos

La aventura de los “[Descomponedores de los Muertos](#)” enseña a los niños la importancia de los descomponedores y carroñeros en la naturaleza.

This brochure is the Spanish version of “Decomposers of the Dead,” and readers will learn about decomposers and scavengers, the importance of these species in maintaining a healthy ecosystem, and what they help breakdown.

Age Suggestion: 6+ years old



COVER



OUTER PANEL

Descomponedores de los Muertos

INNER PANELS

GUARDIANES ASQUEROSOS

Los descomponedores y carroñeros son los equipos de limpieza de la naturaleza. Descomponen escombros como troncos, animales muertos y excrementos de animales para mantener el mundo limpio. Es un trabajo asqueroso, pero alguien tiene que hacerlo. ¡Exploremos el mundo de los descomponedores y carroñeros!

MUNDO SIN DESCOMPONEDORES

Sin los descomponedores, cada caminata sería una escalada difícil a través de montones de árboles caídos, animales muertos y excrementos. TRACK está enterrado en una pila de restos de plantas y animales. Piensa como un descomponedor y encuentra cosas a lo largo del camino que necesitan descomponerse para liberarlo.

✕ los elementos a medida que los encuentres.



ESCREMENTO (CACCA)

PALOS Y TRONCOS

HUESOS

HOJAS

NUECES Y SEMILLAS

¡AYÚDAME, OBI DE-COMPOSI!
¡TU ERES MI ÚNICA ESPERANZA!

MUERTO PARA LA CENA

Los carroñeros son los primeros en llegar a la escena cuando un animal muere. Atraídos por el olor a carne podrida, buscan el cuerpo. Es posible que vea buitres dando vueltas en el cielo o moscas zumbando mientras buscan comida.

Así es. Comen cosas muertas. Puede sonar asqueroso, pero comen la carne, llamada carroña, y devuelven los nutrientes al suelo cuando defecan.

¿Listo para una 'Búsqueda del Tesoro'? Encuentra tantos carroñeros en tu caminata como puedas.



BUITRE

CUERVO

ZARIGÜEYA

MOSCA DE LA CARNE

LARVA

LOMBRIZ

HORMIGA

CUCARACHA

BACTERIAS MICROSCÓPICAS

Los descomponedores como los hongos y las bacterias usan productos químicos para descomponerse y alimentarse de la materia muerta. Comen plantas, animales, caca, hojas y otras cosas.

Muchos descomponedores son demasiado pequeños para verlos, pero los hongos son una excelente manera de verlos en acción.



Los hongos vienen en diferentes formas y colores. ¿Cuántos puedes encontrar?



PARE
Los hongos pueden ser venenosos. ¡No los toques!

TRONCOS PARA EL ALMUERZO

Los hongos y las bacterias pueden tardar más de 100 años en "comerse" por completo a un árbol caído. Mientras recorre el sendero, cuente los troncos que encuentre en diferentes etapas de descomposición.



1 2 3 4 5

Insectos

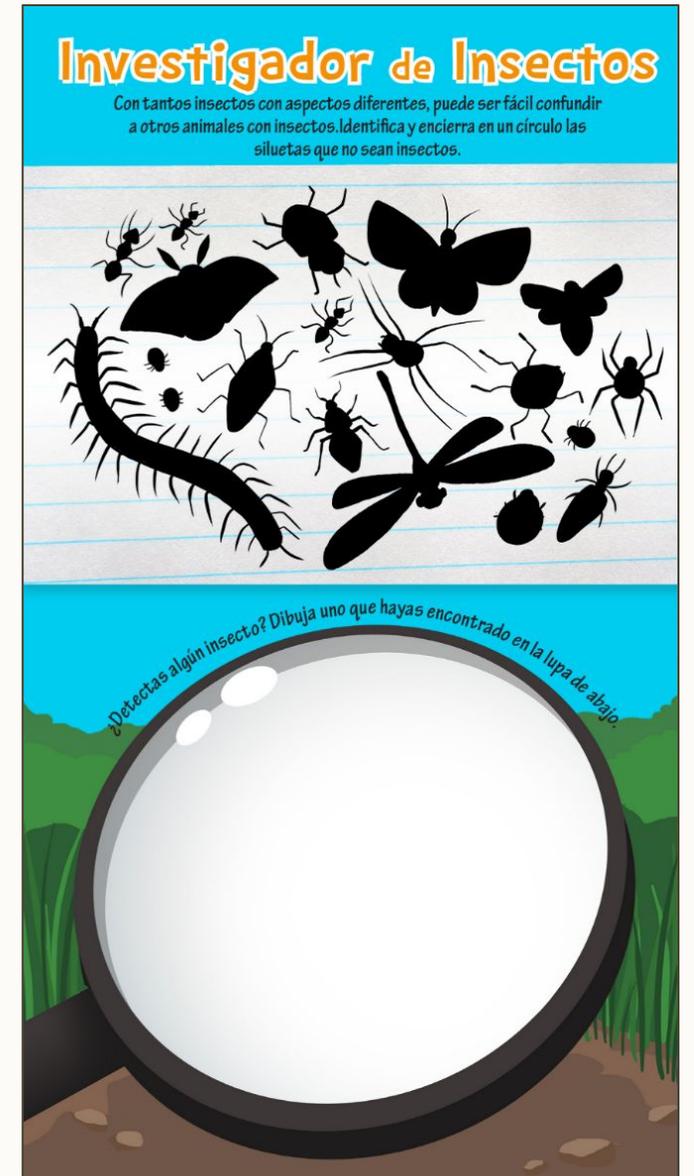
La aventura de los “Insectos” es una investigación sobre los animales voladores y rastreros del bosque.

This brochure is the Spanish version of “Bug Out” and teaches kids how to distinguish insects from other arthropods, including spiders and centipedes. Families can search for these critters while learning about all the shapes and sizes of arthropods.

Age Suggestion: 5+ years old



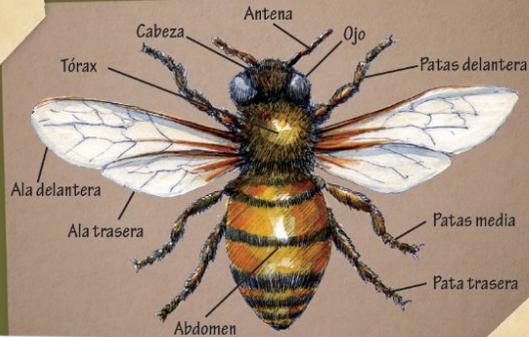
COVER



OUTER PANEL

Insectos

Con más de un millón de especies diferentes, los insectos son un grupo de animales extremadamente diversos. Todos los insectos, sin importar cuán diferente sea su tamaño o forma, tienen un cuerpo de tres partes con seis patas.



El cuerpo de una abeja es como el de la mayoría de los insectos. Todos los insectos tienen...

- ...una **cabeza** con dos antenas, ojos compuestos y piezas bucales
- ...un **tórax** con seis patas articuladas y, si las hay, 2 o 4 alas
- ...un **abdomen** con órganos respiratorios, reproductivos y digestivos
- ...un esqueleto externo duro llamado **exoesqueleto**

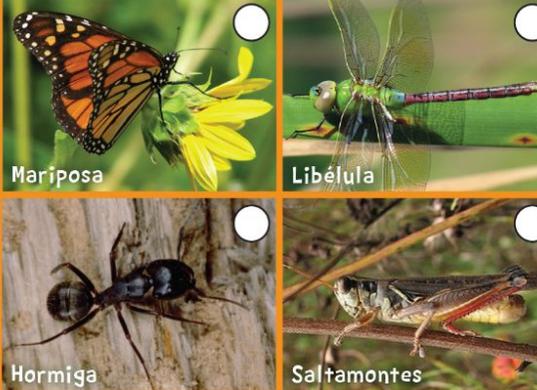


¿Qué es un exoesqueleto?

En lugar de tener un esqueleto en el interior de sus cuerpos, los insectos tienen su esqueleto en el exterior. Un exoesqueleto duro protege un insecto como la armadura de un caballero.

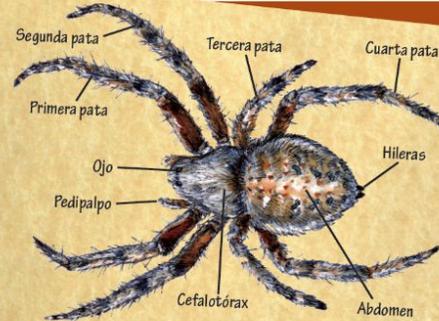


¿Cuántos de estos diferentes insectos puedes encontrar hoy?



Las Arañas

se parecen a los insectos, pero en realidad son diferentes

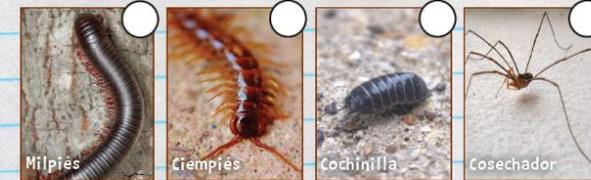


Las arañas tienen un exoesqueleto duro, pero en lugar de un cuerpo de tres partes, tienen un cuerpo de dos partes formado por el cefalotórax y el abdomen. Las arañas también tienen ocho patas, pedipalpos, colmillos que inyectan veneno e hileras para hacer telarañas.

Otros Artrópodos

Los insectos, las arañas y los crustáceos son todos artrópodos. Los artrópodos son un grupo de criaturas que constituyen aproximadamente el 85% de todos los seres vivos de la Tierra. Pueden ser identificados por su exoesqueleto, cuerpos segmentados y piernas articuladas.

Los milpiés, los ciempiés, los cochinillas (roly-polies) y los recolectores se consideran comúnmente insectos. Sin embargo, a diferencia de sus primos insectos y arañas, pueden tener más segmentos corporales, patas o incluso características adicionales como garras. Algunos son insectos inofensivos como milpiés, cochinillas y recolectores, mientras que otros pueden causar daño, como ciempiés venenosos y escorpiones.



¿Puedes ver alguna de estas casas de insectos?

Los insectos tienen diferentes formas de protegerse de los depredadores o del clima. O incluso pueden usar sus hogares como trampas para alimentarse. PRECAUCIÓN: Muchos insectos defenderán sus hogares mordiendo y picando. Mire desde la distancia y NO los molestes.

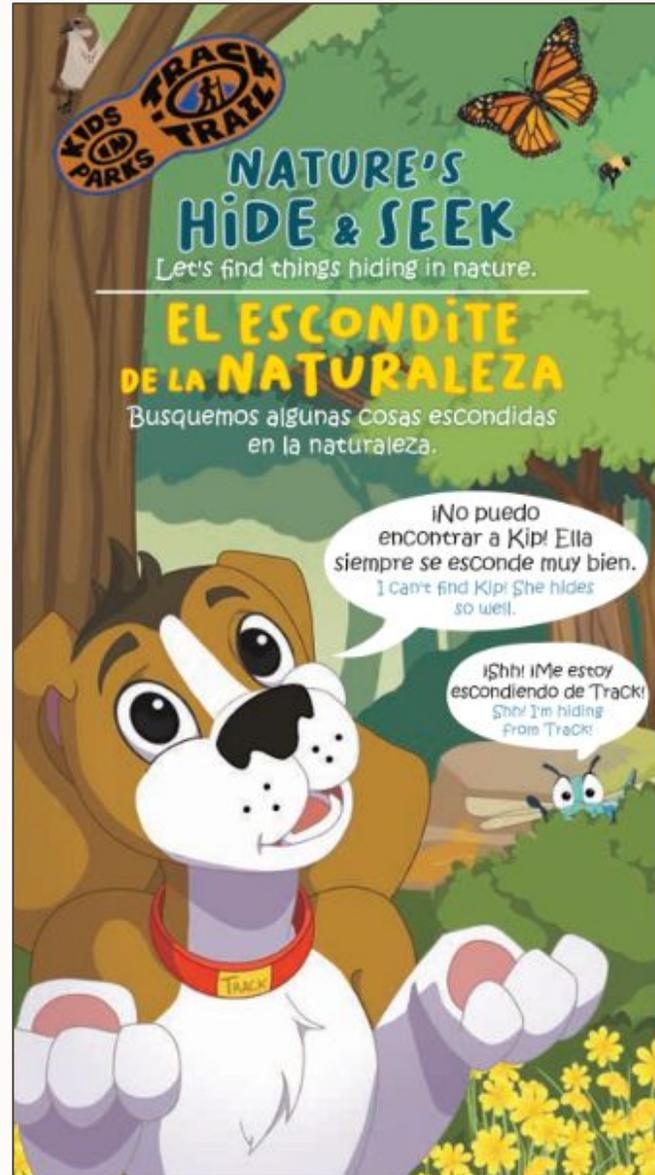


El Escondite de la Naturaleza

La Aventura de “[El Escondite de la Naturaleza](#)” es para que los niños de todas las edades caminen y descubran cosas comunes a menudo ocultas en la naturaleza.

This bilingual version of the “Nature’s Hide & Seek” brochure accentuates our most common brochure. The brochure offers a fun scavenger hunt that will have kids searching high and low.

Age Suggestion: 4+ years old



COVER



OUTER PANEL

El Escondite de la Naturaleza

INNER PANELS

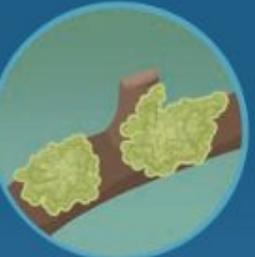


El tamaño, el color y la ubicación pueden hacer que muchas cosas en la naturaleza sean difíciles de encontrar. En tu caminata, busca estas cosas escondidas en la naturaleza.

Size, color, and location can make many things in nature hard to find. On your hike, seek out these things hiding in nature.

Recuerda que todas las cosas en la naturaleza tienen un lugar especial. Déjalos aquí para que otros también puedan encontrarlos.

Remember that all things in nature have a special place. Leave them here so others can find them too.

 <p>● Pájaro Bird</p>	 <p>● Araña Spider</p>	 <p>● Árbol joven Sapling (young tree)</p>	 <p>● Musgo Lichen</p>
 <p>● Flor silvestre Wildflower</p>	 <p>● Agua Water</p>	 <p>● Pluma Feather</p>	 <p>● Polinizador Pollinator</p>
 <p>● Huellas de animales Animal tracks</p>	 <p>● Corteza áspera Rough bark</p>	 <p>● Roca con dos colores Rock with two colors</p>	 <p>● Algo hecho por humanos Something human-made</p>

The Power of Plants

“[The Power of Plants](#)” adventure identifies several plants found along the Oconaluftee River and their traditional benefits to the Cherokee people.

This brochure highlights six common plants, in both their English and Cherokee names, and their uses and importance in southern Appalachia.

Age Suggestion: 6+ years old

Other brochures featuring the Cherokee Syllabary: [Animal Athletes](#) and [The Need for Trees & Cherokee Remedies](#)



COVER



OUTER PANEL

Customizable Brochures

Kids in Parks offers two standard designs that are customizable for your site or region. These brochures display common species found at your TRACK Trail and partners can choose between:

- Need for Trees
- Birds of the [Region/Site]

Certain standard brochures can also be customized for your site. Though some parts can be altered, such as species included, the design layout *cannot be changed*. For an example, check out the [coastal Nature's Hide & Seek version](#) for the east coast.

NOTE: All Kids in Parks materials, including brochure art, are designed in house by our staff



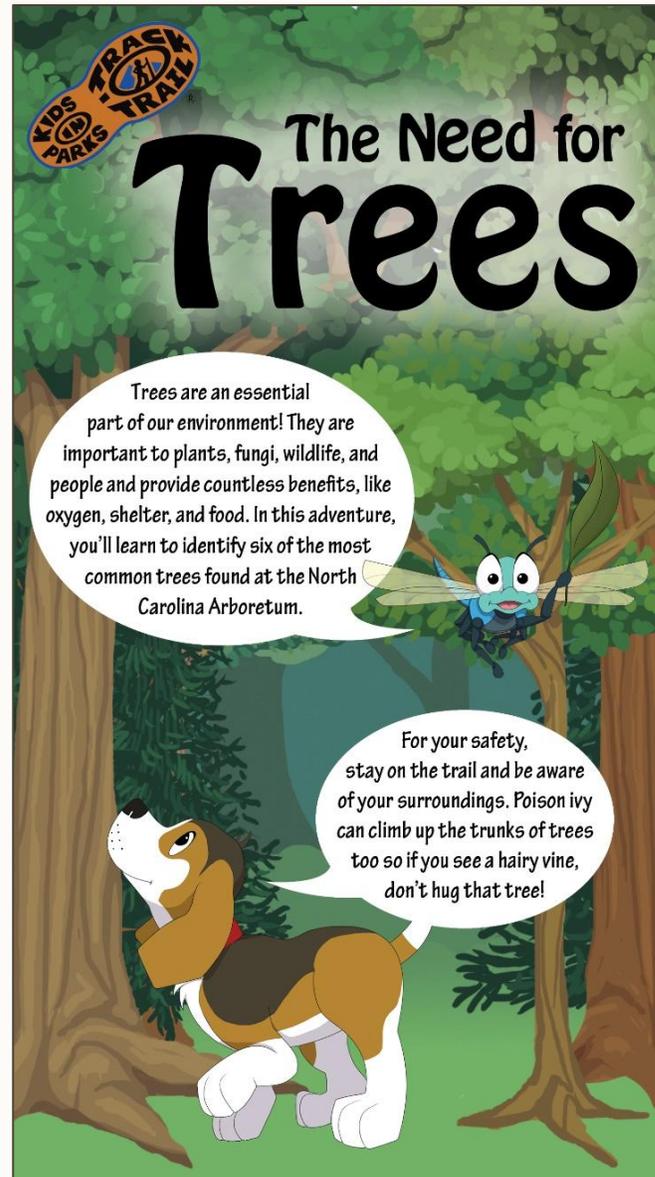
The Need for Trees

The "The Need for Trees" adventure shares six common trees found nearby.

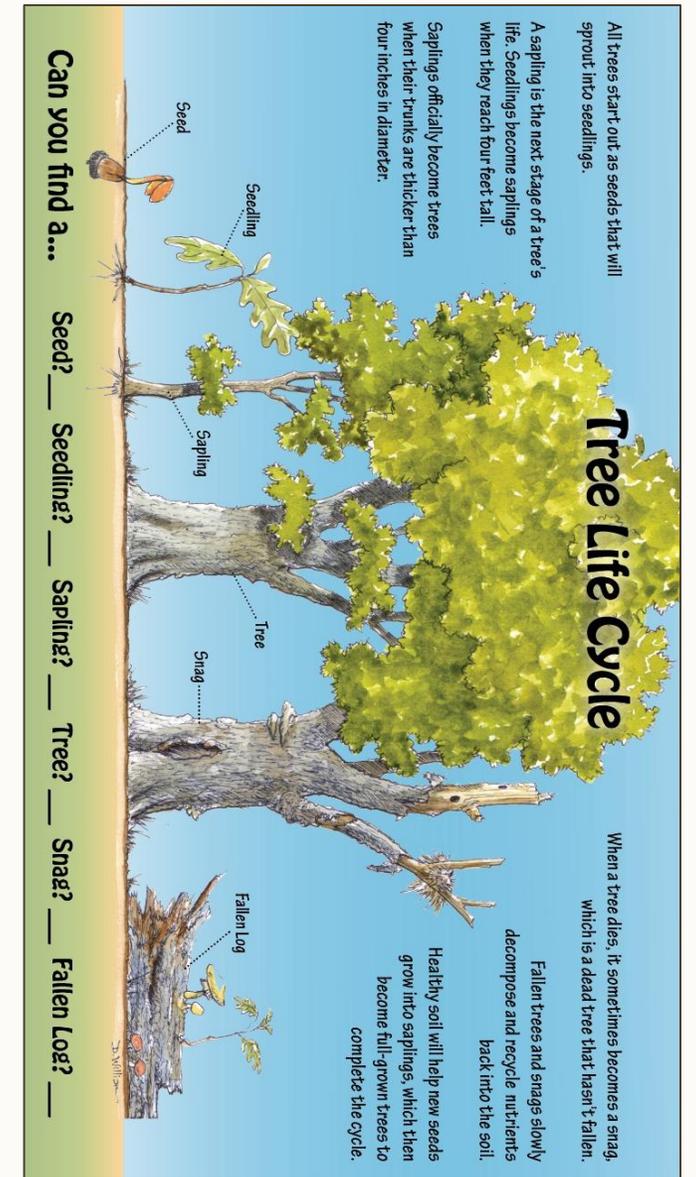
This brochure includes several facts about each species, how to identify them, and the uses they provide for humans and wildlife. Readers also learn about the tree's life cycle and what essentials are needed to survive in their environment.

Age Suggestion: 7+ years old

If interested in this brochure, please provide six common tree species to your site



COVER



OUTER PANEL

The Need for Trees

INNER PANELS

● Tulip Tree (*Liriodendron tulipifera*)



The tulip tree is easy to find in the woods given its straight, gray trunk that can span over 100 feet and its large, broad leaf that resemble a cat's face. Due to its large size and straight growth, this tree provides a variety of useful lumber. The tulip tree is very important for pollinators, and in the spring, bees collect nectar from the large and plentiful yellow-orange flowers to make a rich, dark honey.

● Red Maple (*Acer rubrum*)



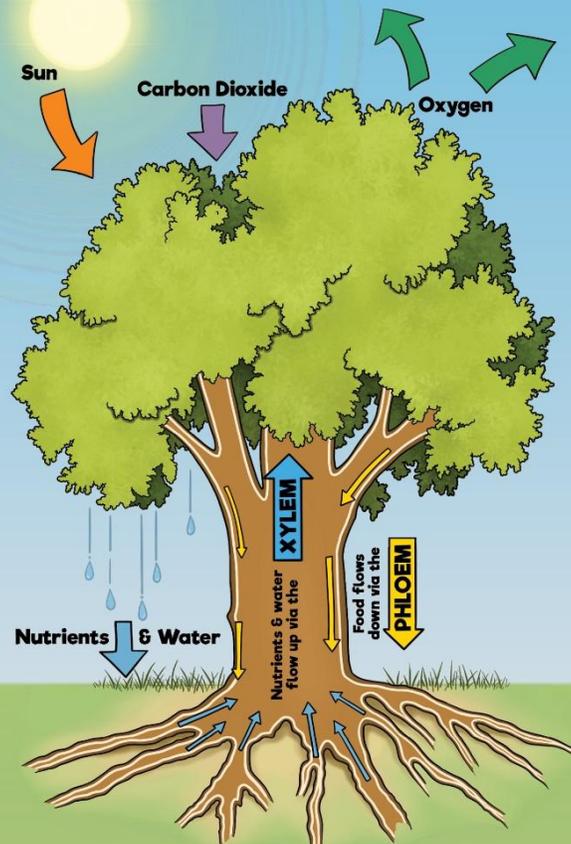
Able to grow in almost any soil condition, the red maple is one of the most abundant and widespread trees in eastern North America. With red twigs, buds, flowers, and seeds, it's easy to see how the red maple got its name. Red maple is favored for its flexible, sturdy, and beautiful wood, and it is often used to make musical instruments, such as guitars, banjos, and drums.

● White Oak (*Quercus alba*)



The white oak has leaves with rounded lobes and bark that is light gray and scaly as it ages. The acorns are long with a shallow cup and loved by squirrels, deer, wild turkeys, bears, and other wildlife. Because of its tight, water resistant wood, white oak was valued for shipbuilding and is still used today to make barrels!

The Need to Know How Trees Grow



Most plants make their own food through a process known as photosynthesis. This occurs when nutrients and water flow up from the roots via the xylem and combine with carbon dioxide and sunlight absorbed in the leaves. This chemical reaction produces oxygen, which is released into the air, and glucose, a type of sugar, that is dispersed throughout the rest of the tree via the phloem.

● Sassafras (*Sassafras albidum*)



Sassafras is a small tree distinguished by three different leaf shapes (entire, mitten, and three-lobed). Although the soft, brittle wood is of little value commercially, its resistance to rot makes it good for outdoor furniture and fence posts. For generations, people have used the sap and roots to make candies, tea, and root beer! Though not edible to us, the fruits are enjoyed by many birds.

● Sourwood (*Oxydendrum arboreum*)



Given its deeply furrowed, chunky bark and the way it grows crooked toward the sun, the sourwood can be easily spotted in the woods! In the spring, small, white flowers hang in clusters from the branch tips, and in the fall, the leaves turn crimson red. Sourwood is an importance source for pollinators, and bees create a tasty, light-colored honey that is prized in the mountains.

● Eastern White Pine (*Pinus strobus*)



The eastern white pine has an extremely straight trunk, needles in fascicles (bundles) of five, and long skinny cones. White pine is a valuable lumber tree, but the needles are also rich in vitamin C and used to make tisane - a type of herbal tea. Wildlife, like deer, rabbits, and mice, graze on the foliage and seeds.

Birds of the [Region]

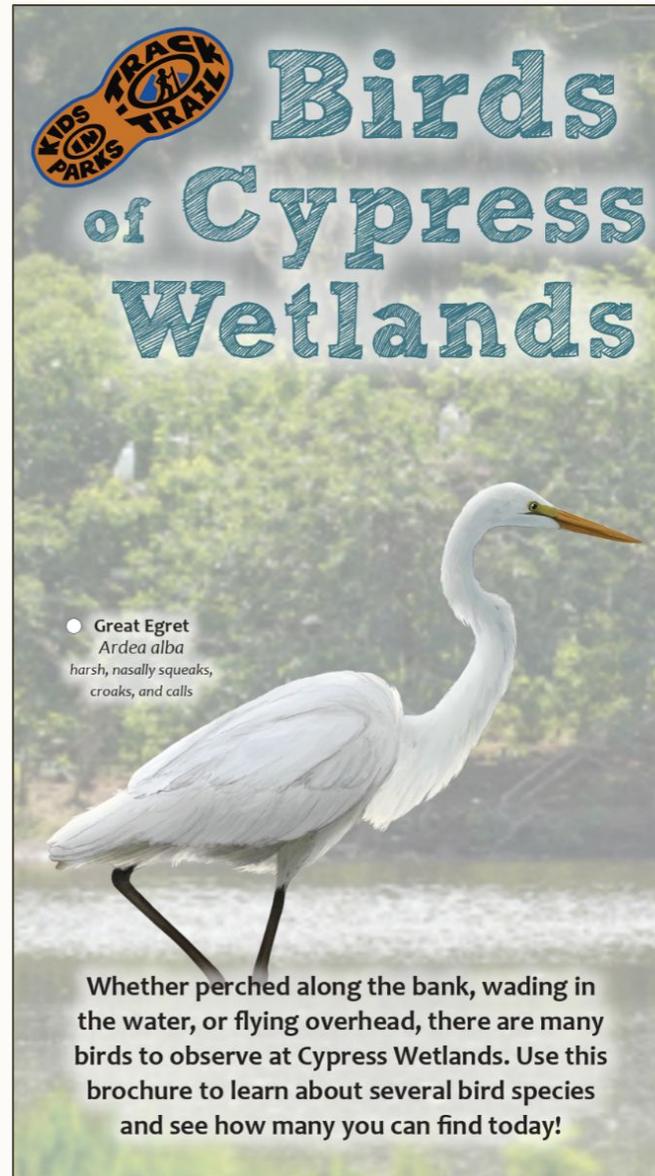
The "Birds of [XXX]" adventure shows off several common bird species in the area.

This brochure contains illustrations of up to 15 birds and includes information on how to identify them through calls and visual markings. The inside flap includes typical field markings to aid identification.

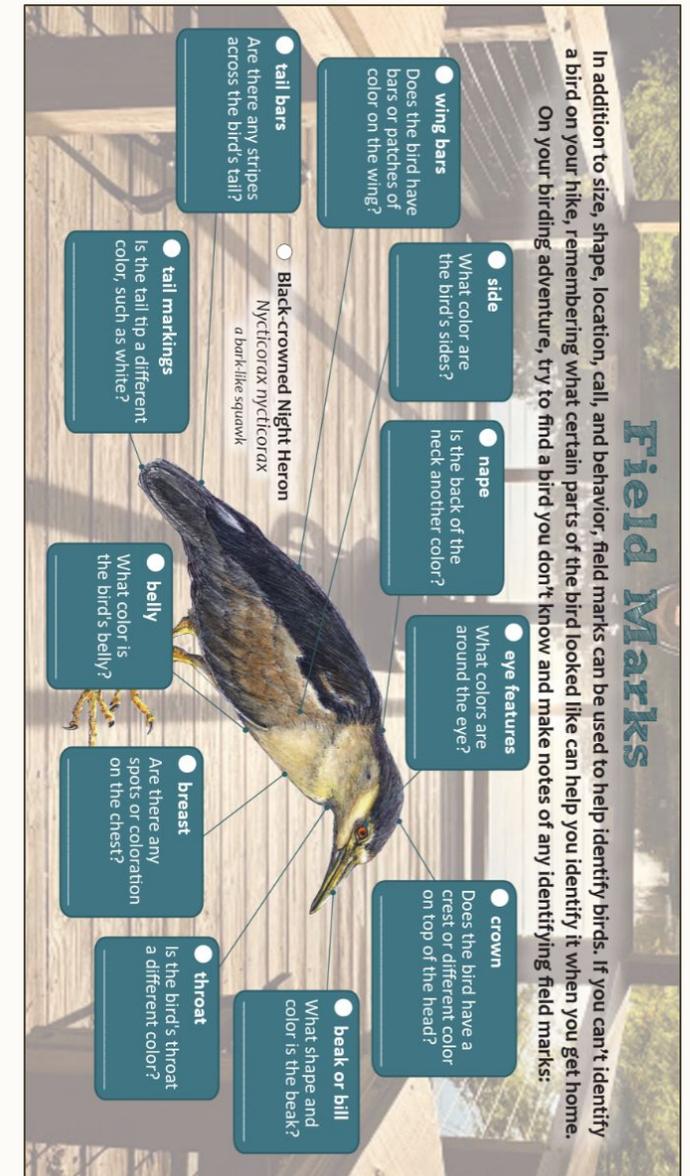
Age Suggestion: 6+ years old

For this brochure, select **up to 15 bird species** - see [Appendix](#) for full list of bird art.

*Regional bird brochures exist, such as [Birds of the Blue Ridge Mountains](#), [Coast](#), [Eastern Grasslands](#), and [Carolina Piedmont](#), so ask about local options



COVER



OUTER PANEL

Birds of the [Region]

INNER PANELS

What kind of bird is that?

When identifying birds, start by observing their location and behavior. Is the bird up high making noise? Is it on the ground digging in leaves? Or is it in the water swimming?

Next, observe its appearance. Is it big like a raven or small like a chickadee? Does it have pointy wings or a long tail? What color is it, and what types of markings does it have?

The answers to these questions can help you identify the birds you observe in the Cypress Wetlands.

✔ Check off the birds you find on your adventure!



● **Barred Owl**
Strix varia
hoots "Who cooks for you?
Who cooks for you-all!"



● **Carolina Wren**
Thryothorus ludovicianus
Loud, rhythmic "teakettle,
teakettle, teakettle"



● **Tricolored Heron**
Egretta tricolor
quivering, scratchy call



● **Pied-billed Grebe**
Podilymbus podiceps
rapid whoops, coos, or
a "kuk-kuk-kuk" call



● **Snowy Egret**
Egretta thula
raspy, nasally calls



● **Wood Stork**
Mycteria americana
silent; sometimes makes
sounds by snapping their bill



● **White Ibis**
Eudocimus albus
a harsh, nasally honk



● **Green Heron**
Butorides virescens
harsh, explosive "skeow"
or raspy clucks



● **Red-shouldered Hawk**
Buteo lineatus
loud "kee-aah," often repeated



● **Great Blue Heron**
Ardea herodias
squawk "roh-roh-roh" or
a series of deep "frawnk"



● **Little Blue Heron**
Egretta caerulea
hoarse squawks or croaks



● **Common Gallinule**
Gallinula galeata
chicken-like clucks, squawks,
whinnies, and yelps



● **Western Cattle Egret**
Ardea ibis
raspy 'rick-rack' calls

Site-Specific Brochures

Our site-specific brochures are designed alongside partners to create entirely new options for sites and/or particular regions. Brochure topics from current TRACK Trails cover a wide range - such as natural events, history, landmarks, and endangered or endemic species and habitats.

The following brochures are just a few examples from our large inventory of site-specific brochures. If you're interested in designing a brochure for your location, please contact us. We may already have a brochure that covers your topic of interest, so don't hesitate to ask for a full list of designs.

NOTE: All Kids in Parks materials, including brochure art, are designed in house by our staff



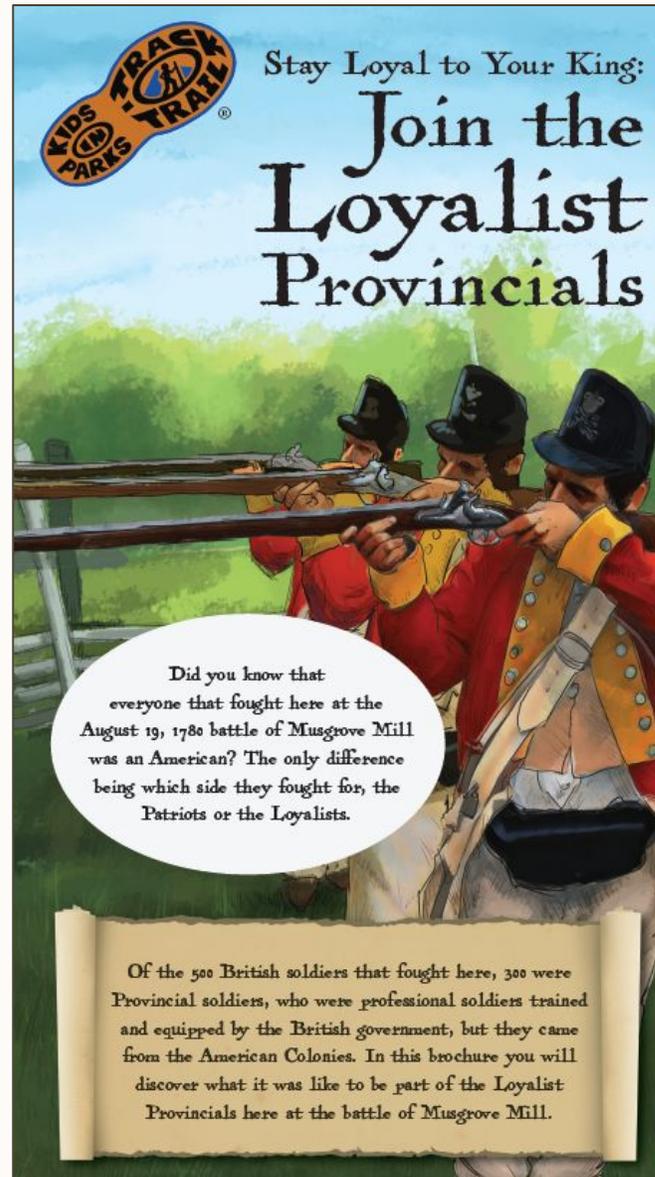
Battle of Musgrove Mill

There are two adventures to choose from for the Battle of Musgrove Mill - "[Join the Loyalists Provincials](#)" or [the Patriot Militia](#).

These two brochures differentiate the two sides of this Revolutionary War site and what it took to be a soldier back then. Visitors can walk the battlefield grounds while enjoying the wildlife and scenery that have reclaimed the land.

Age Suggestion: 7+ years old

Designed for the Musgrove Mill State Historic Site in Clinton, South Carolina



COVER



OUTER PANEL

Battle of Musgrove Mill

INNER PANELS

Dressing for Battle

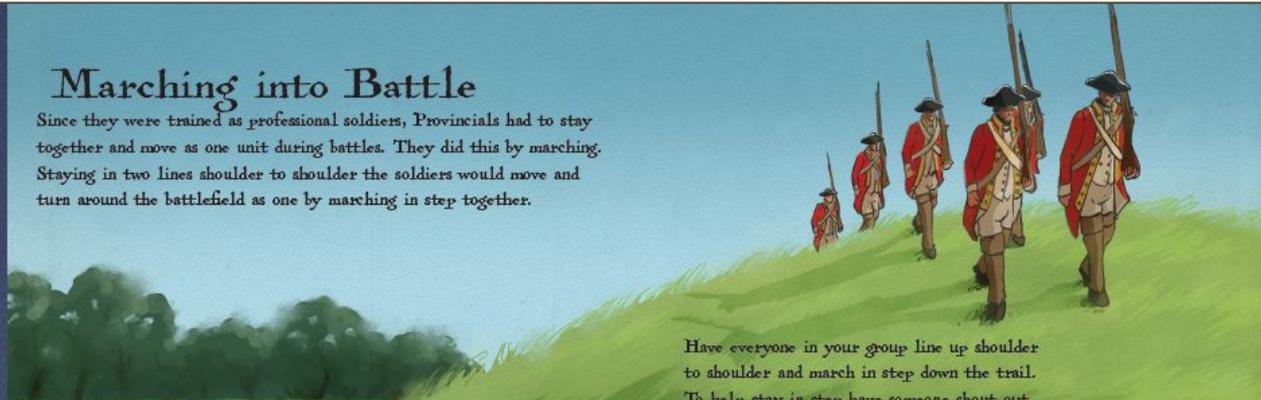
Since they were professionals, Provincial soldiers were given the same uniforms, weapons, and gear by the King that British Regular soldiers got. This included their famous red coats, and 'Brown Bess' muskets.



How does your clothing compare to what the Provincial soldier is wearing in this image? How would you like to wear and carry all this while hiking this trail? (Remember this battle was fought during the summer in August)

Marching into Battle

Since they were trained as professional soldiers, Provincials had to stay together and move as one unit during battles. They did this by marching. Staying in two lines shoulder to shoulder the soldiers would move and turn around the battlefield as one by marching in step together.

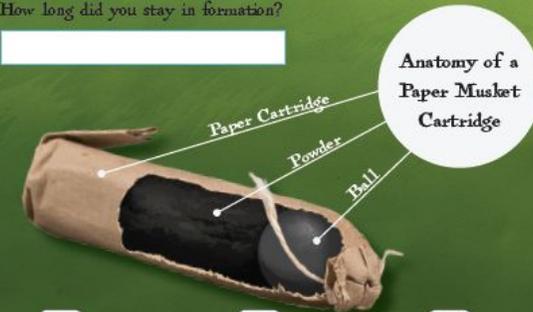


Have everyone in your group line up shoulder to shoulder and march in step down the trail. To help stay in step have someone shout out **LEFT, RIGHT, LEFT, RIGHT.** How long did you stay in formation?

Training Like a Provincial

Provincial Soldiers were trained just like British Regular soldiers and they carried military muskets. These muskets had barrels that were smooth so you could load them very quickly. Provincial soldiers were expected to load and fire their muskets 3-4 times every minute.

Imagine you are holding a musket and follow the picture instructions. See if you can load and fire your musket 3 times in a minute.



1

Hold musket on your right side.

2

Take out your paper cartridge and tear one end with your teeth

3

Put musket on your left side and pour the cartridge down the barrel

4

Push the cartridge down the barrel with the ramrod

5

Pull the cock back and put musket up to your shoulder

6

Fire the musket by pulling the trigger and yelling **BANG!**



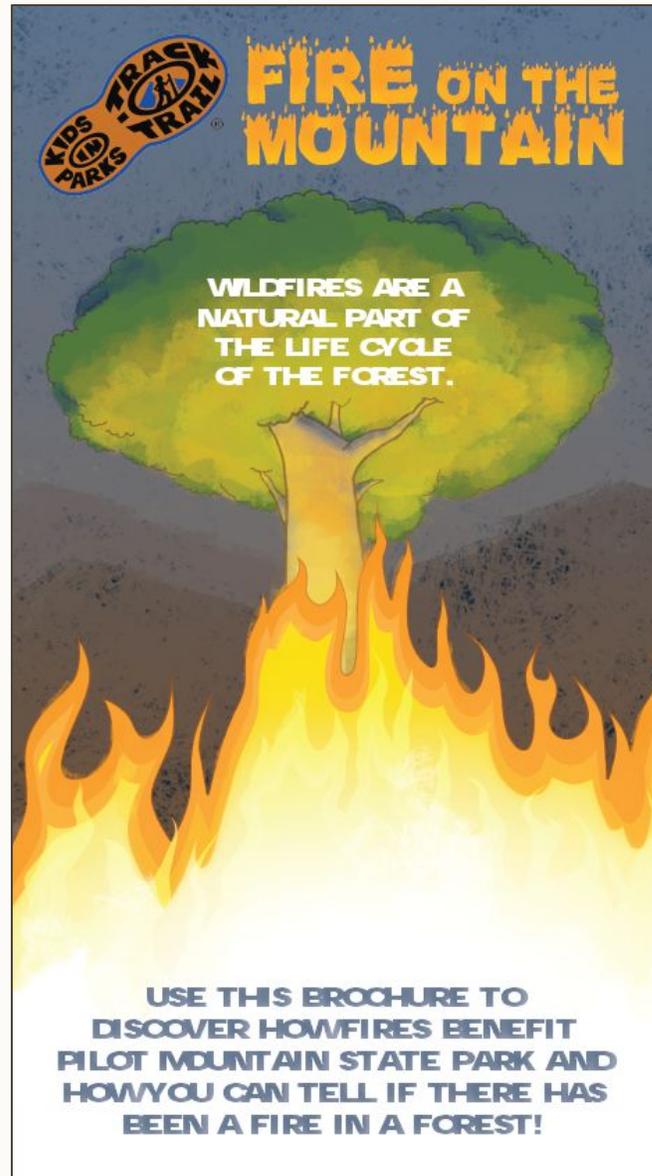
Fire on the Mountain

The “[Fire on the Mountain](#)” adventure shares the benefits of wildfires and how they are a natural part of a forest life cycle.

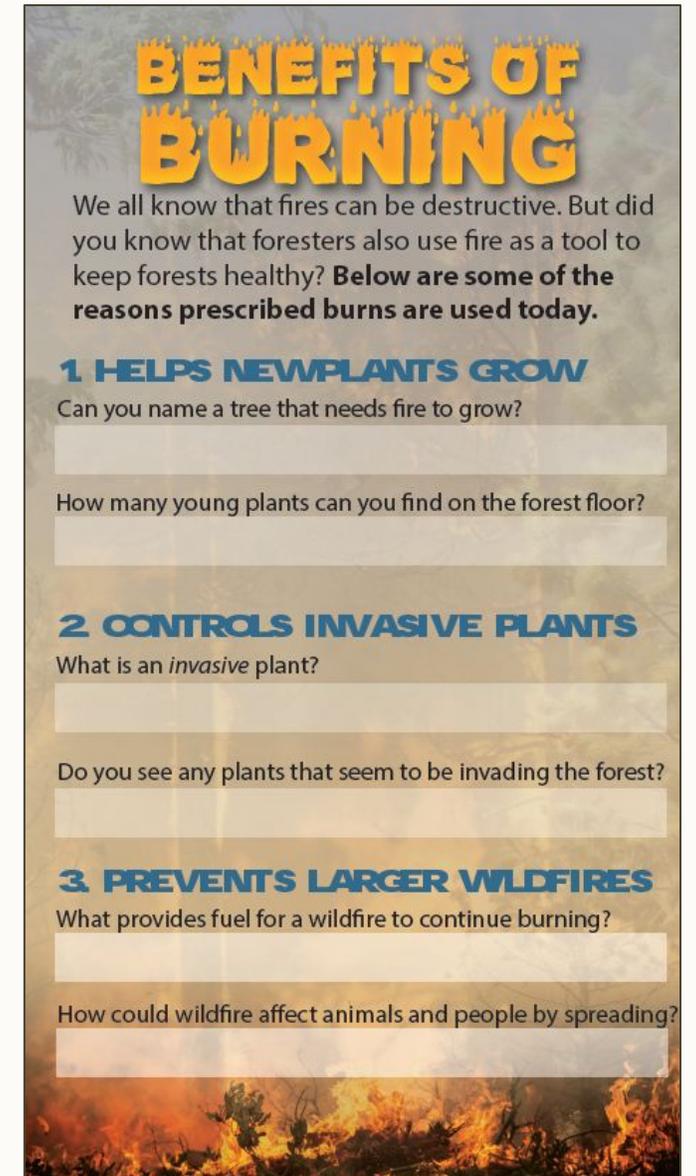
This brochure explains the importance of heat for the reproduction of certain plants. Kids can search for fire scars on surrounding vegetation and opportunistic plants that pop up first after a fire.

Age Suggestion: 7+ years old

*Designed for Pilot Mountain State Park (NC)
and Table Rock State Park (SC)*



COVER



OUTER PANEL

Fire on the Mountain

INNER PANELS

SMOKE SIGNALS

How can you tell if a fire has occurred in a forest? Organisms that survive the fire display evidence while new, opportunistic life emerges. Look for these signs of fire along the trail.

SURVIVORS

Plants that survive a wildfire often bear the scars of their battle with the flames. Can you find these fire clues?

FIRE SCARS

Fire scars can be seen in a tree's rings, creating a record of the fires it has lived through. On a standing tree, fire scars can look like an upside-down "V", called a "catface", cut into the base of the trunk.

Circle which side of the tree you find scars:

Uphill

Downhill

EPICORMIC BRANCHING

Epicormic branches are shoots that grow directly from the trunk of a tree. These can sprout to life out of injuries from fire.



OPPORTUNISTS

While a wild fire is the end for a lot of organisms, it also creates opportunities for new plants to grow by restoring soil nutrients, clearing undergrowth, and removing canopy that blocks sunlight. Do you see any of these signs of new life?

PINE SPROUTS

Fire exposes mineral soil and clears out competing plants, allowing pine seedlings to sprout. Without fire, trees such as pitch, shortleaf, and table mountain pines would vanish from the landscape.



FIRE FLOWERS

There are certain wildflowers that are adapted to grow in soils that are cleared and renewed by fire. Below are a few examples. Can you find any of these blooms along the trail in spring or summer?



Jack in the Pulpit



Bloodroot



Pink Lady's Slipper

SEROTINOUS CONES

These cones are found only on trees adapted to fire. They do not open until fire melts the "glue" that holds the scales closed. This way, seeds are only released when the forest floor is burned clear.



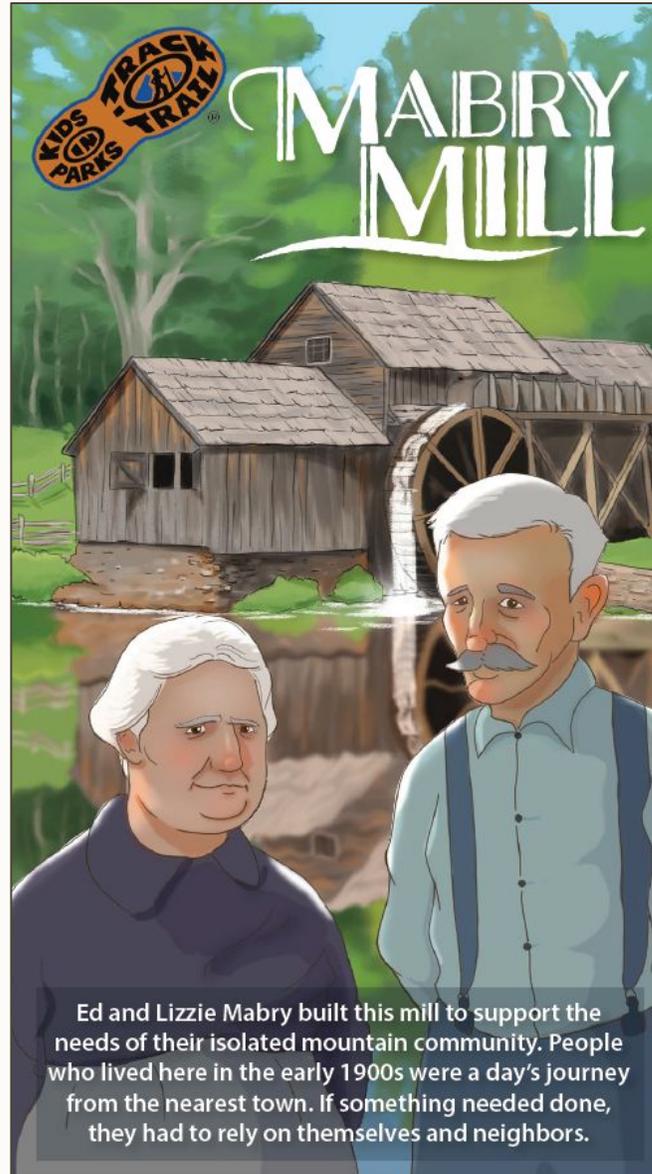
Mabry Mill

The “[Mabry Mill](#)” adventure steps into the past to uncover the origins of the mill.

This brochure illustrates different tools and skills needed to survive the isolated mountains in the early 1900’s, including woodworking and blacksmithing. While exploring the Mabry homestead, look for the waterwheel, millstones, and other primitive structures on the grounds.

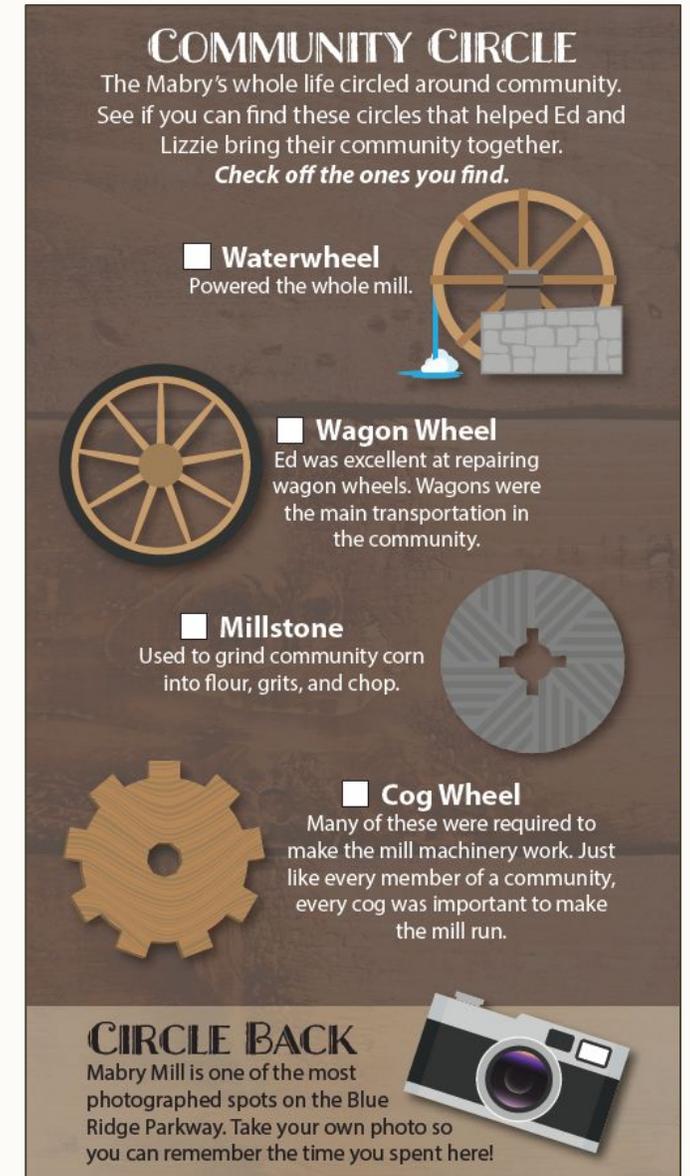
Age Suggestion: 6+ years old

Designed for Mabry Mill at Milepost 176.2 on the Blue Ridge Parkway



Ed and Lizzie Mabry built this mill to support the needs of their isolated mountain community. People who lived here in the early 1900s were a day’s journey from the nearest town. If something needed done, they had to rely on themselves and neighbors.

COVER



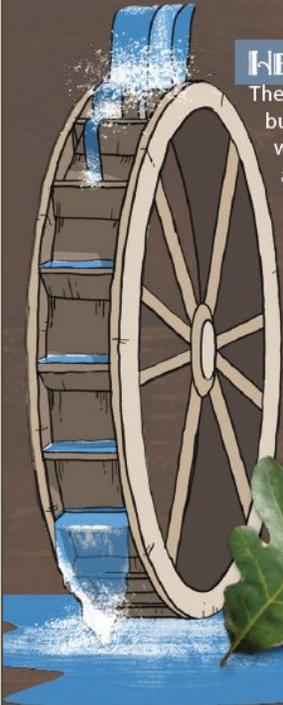
OUTER PANEL

Mabry Mill

INNER PANELS

THE COMMUNITY MILL

Mabry Mill was used for grinding corn as well as sawing lumber. Let's discover some of the ways the mill provided for the community.



HELP FROM NEIGHBORS

The Mabrys built a lot by themselves, but needed help constructing the waterwheel. It powers the entire mill and had to be perfect. Luckily one of their skilled neighbors offered help.

The wheel is made of white oak, a local hardwood tree known for its water resistance.

Can you find a white oak?

check the box



leaf



acorn

MILLSTONES MILES AWAY

The waterwheel drives the mill but millstones do the grinding work. These millstones came from about 45 miles away and Ed chiseled the grinding faces himself.



STRIKE WHILE THE IRON'S HOT

With the success of the mill, Ed thought of other ways to provide services for the community. He set up a blacksmith shop to make metal products.

Can you find these tools?

Anvil



Hammer



Other: _____

"NOSE TO THE GRINDSTONE"

Too much water on the waterwheel spins the millstones too quickly. This builds heat and can burn the corn. To check for scorching, millers put their nose down close to the grinding and sniffed for the smell of burning.

Press your hands together and rub them slowly. Now rub them as fast as you can. Which speed makes your hands hotter?

SLOW or **FAST**

Mabry Mill ground slowly, never scorching the corn. The Mabrys were known for the best tasting cornmeal in the area.

How fast is the waterwheel turning? Pick one spoke and count how many full turns it does in one minute.

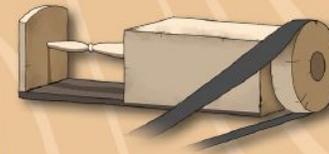
turns per minute

SAWMILL & WOODWORKING SHOP

The waterwheel also powered the sawmill. When the Mabrys lived here there were no electric tools. All the tools needed for community lumber products were powered by the turning wheel. Can you find these tools around the mill?

Circular Saw

Cuts logs into board lumber.



Lathe

Turns wood for making table legs or wagon wheel spokes.

Other tools: _____

A GROWING COMMUNITY

Mabry Mill brings together millions of people from around the world. You may hear different accents or languages and see different styles of clothing. Look at license plates in the parking lot. Which states and countries can you find?

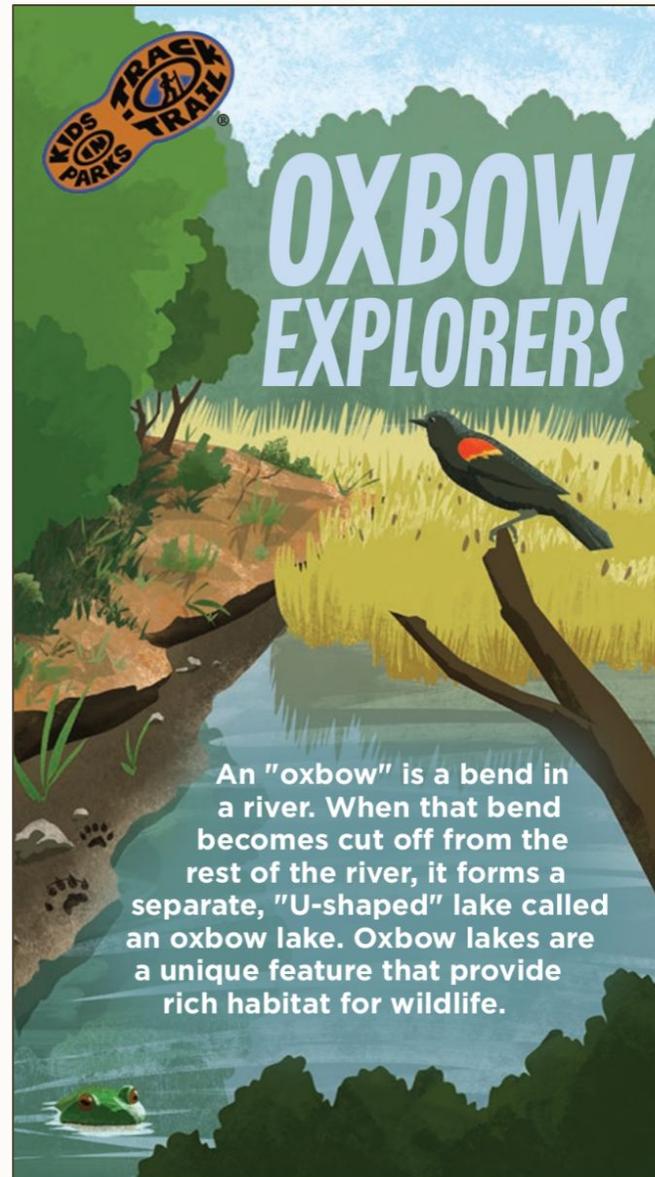
Oxbow Explorers

The “[Oxbow Explorers](#)” adventure dives into the characteristics of an oxbow lake, specifically the one at Sertoma Park after the Big Sioux River was rerouted.

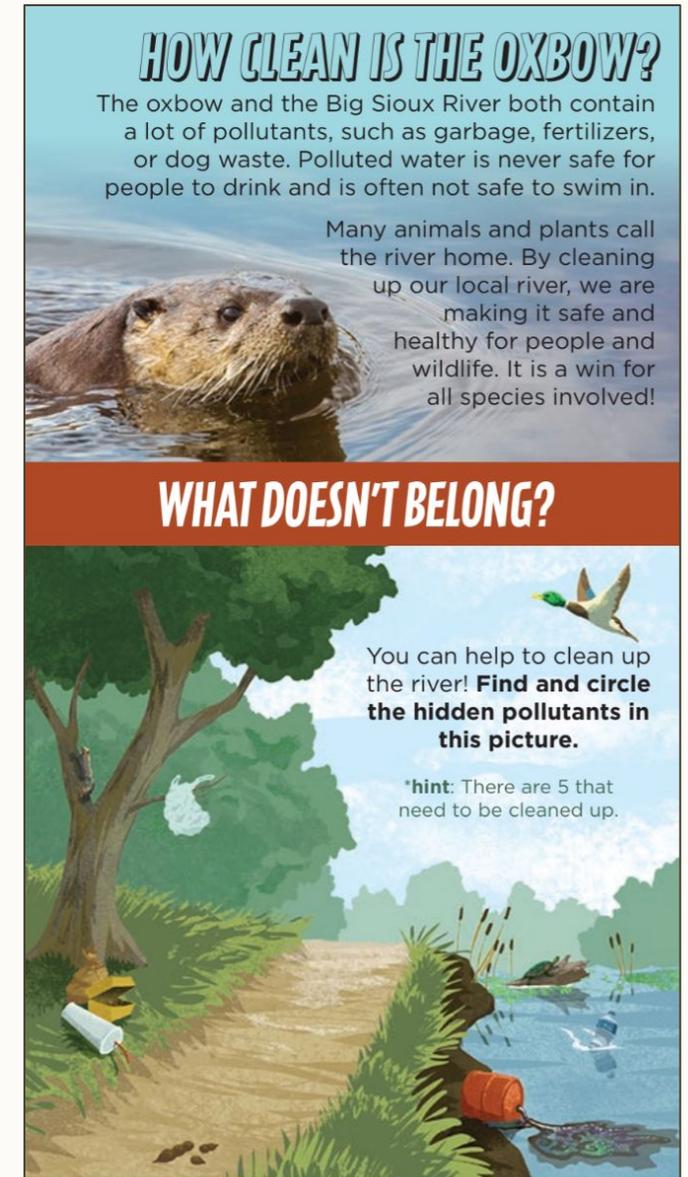
This brochure uses all of one’s senses to learn more about the habitat and wildlife nearby. Through prompts, visitors can contemplate the human impact on this environment, including the pollution and man-made levees that impact this lake.

Age Suggestion: 5+ years old

Designed for Sioux Falls, South Dakota



COVER



OUTER PANEL

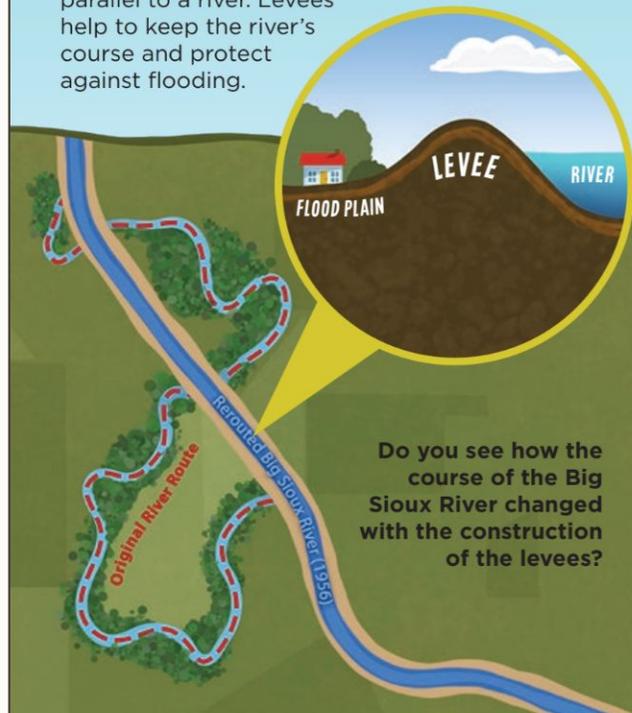
Oxbow Explorers

INNER PANELS

WHY IS THE OXBOW HERE?

Sioux Falls is located along the Big Sioux River and has experienced periods of flooding over the years. In 1956, levees were created for flood control management. The levees redirected the Big Sioux River, cutting off the water around Sertoma Park and creating the oxbow lake.

A **levee** is a structure, often made of earth, that runs parallel to a river. Levees help to keep the river's course and protect against flooding.



Do you see how the course of the Big Sioux River changed with the construction of the levees?

5 SENSE SCAVENGER HUNT

Discover the hidden secrets of the oxbow lake!

The Oxbow Lake is more than meets the eye. Use your 5 senses to explore and discover the hidden secrets here.



SIGHT What plants and animals do you see?

As you walk the Riparian Trail, can you spot these plants and animals?



Mallard

Painted Turtle

Duckweed

Cattails



SOUND What do you hear that is in or near the oxbow?

A variety of different animals use the oxbow lake as their home or as a resting place on their journey. Check the animals below that you hear (or see).



Green Heron

Bull Frog

Wild Turkey



SMELL Why does the oxbow stink?

When water is not moving, some plants and aquatic creatures die because the oxygen levels drop. The natural breakdown or rotting of these plants and animals creates a "rotten egg" smell.

What do you think the oxbow smells like?



TASTE Why wouldn't you drink this water?

Do NOT drink the oxbow water!

Take a drink out of your water bottle and appreciate the clean water the city provides for us.

What can you do to help clean up our waterways?

1.

2.

3.



TOUCH How does the water of the oxbow lake move?

Roughly 1,514 acres drain into the oxbow and exit into the Big Sioux River through one-way pipes when it rains or snows.

Drop a leaf on one side of the bridge and time how long it takes for it to flow to the other side.



Record that time

seconds

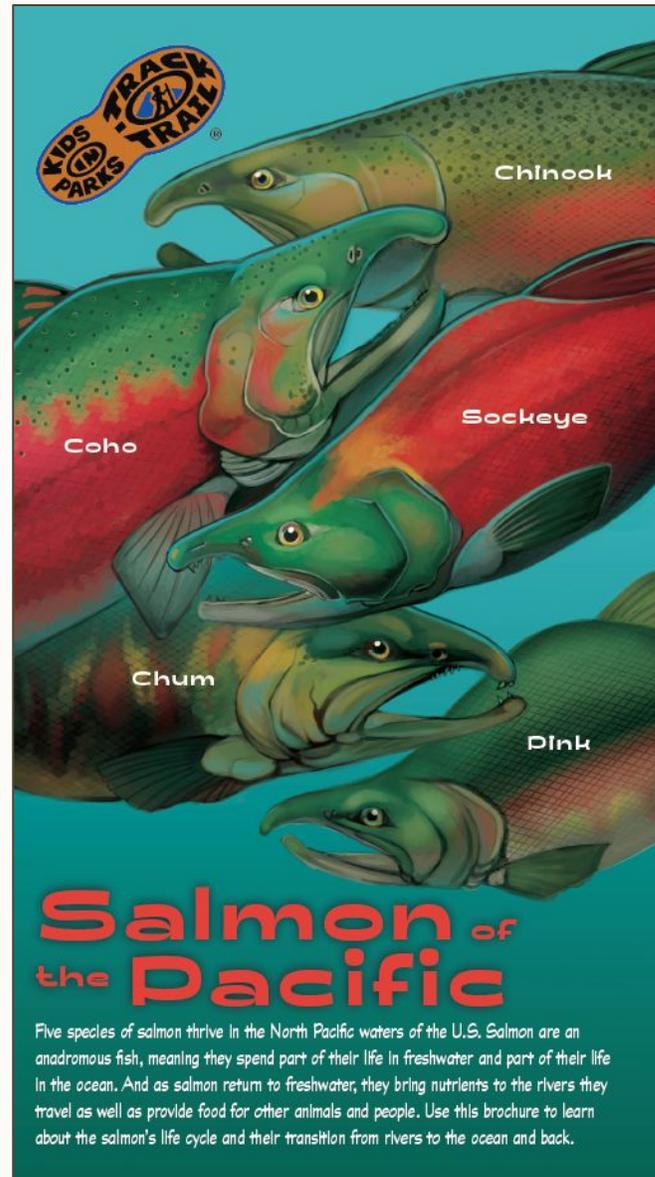
Salmon of the Pacific

The “[Salmon of the Pacific](#)” adventure is dedicated to the five salmon species found in the Pacific Northwest waters.

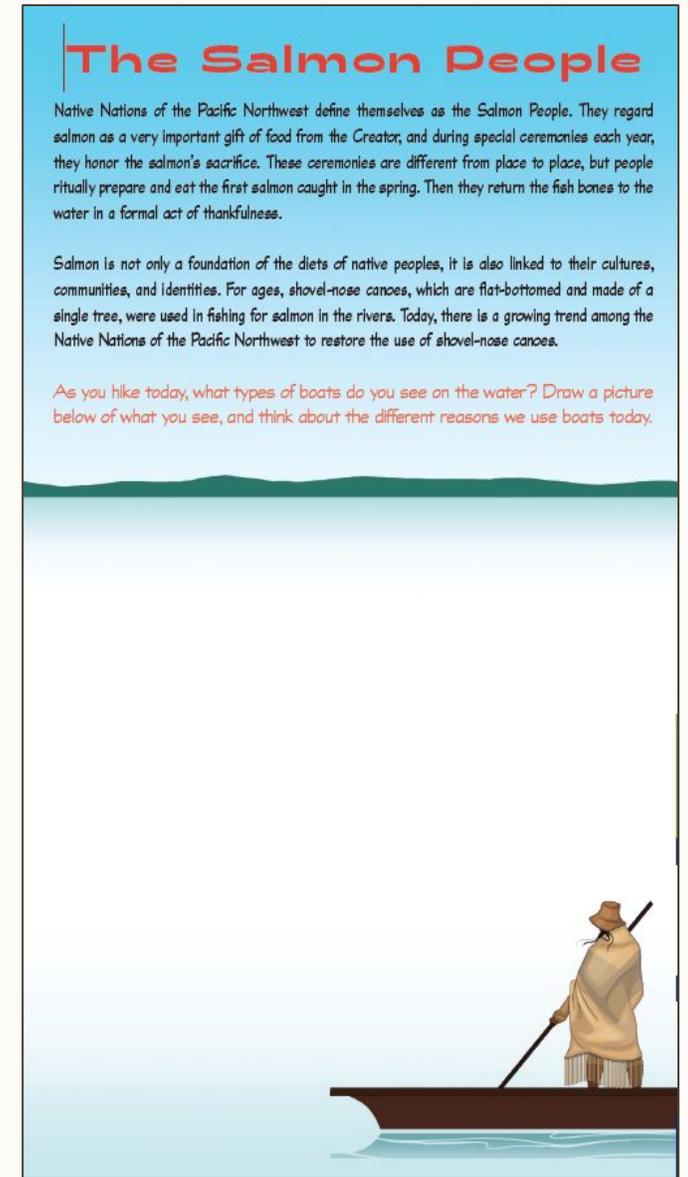
This brochure walks readers through the unique life cycle of salmon and highlights their significance to the people and ecosystem of the region. Several of our site-specific brochures, like this one, highlight groups of animals or plants.

Age Suggestion: 6+ years old

Designed for Renton, Washington



COVER



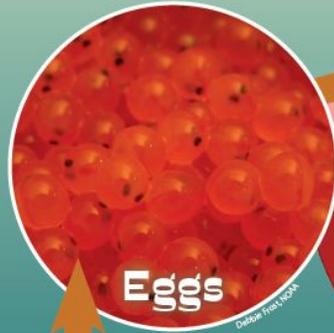
OUTER PANEL

Salmon of the Pacific

INNER PANELS

Life of a Salmon

Eggs are laid in a nest by a spawning female and are fertilized by a spawning male. Females can lay 3-5 nests in just a few. Shortly afterward, both the adult female and adult male salmon will die.



Spawning salmon are in their final stage of life. This is when many salmon develop bright colors and they return to the streams where they were born.

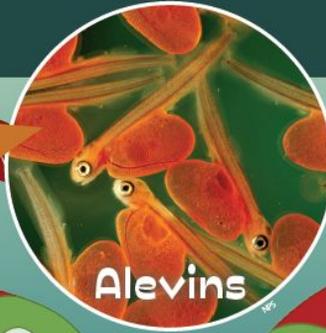


Salmon Run

Salmon face many predators. Orcas, seals, and sharks will hunt adult salmon in the ocean. Find a spot on the trail to run to and then run back. As you run back, have a partner play a "predator" and try to tag you. Make it back without being caught



Alevins are newly-hatched salmon. They stay in the nest and live off a food sac that is attached to their bodies.



Can you spot any spawning salmon swimming underwater?



Adult salmon will stay in the open ocean until maturity. Most salmon remain silver in color and it can take 1-7 years for the fish to become spawning adults.



Like newborn salmon have food to carry around with them, did you bring a snack with you today? What's your favorite food to take hiking?



Parrs are salmon fry that have grown large enough to leave the nest and find food on their own. They swim to a body of freshwater where they feed and mature for the next one or two years.



Smolt are young salmon that are ready to make their transition to the sea. They become silvery to match open water, and their gills and kidneys change to process saltwater.

Salmon Swim

Swimming upstream requires a lot of muscle power for young salmon. You can build strength too by laying on your belly and lifting you legs and arms away from the ground. How long can you hold that pose? Pretend you're swimming for an added challenge.

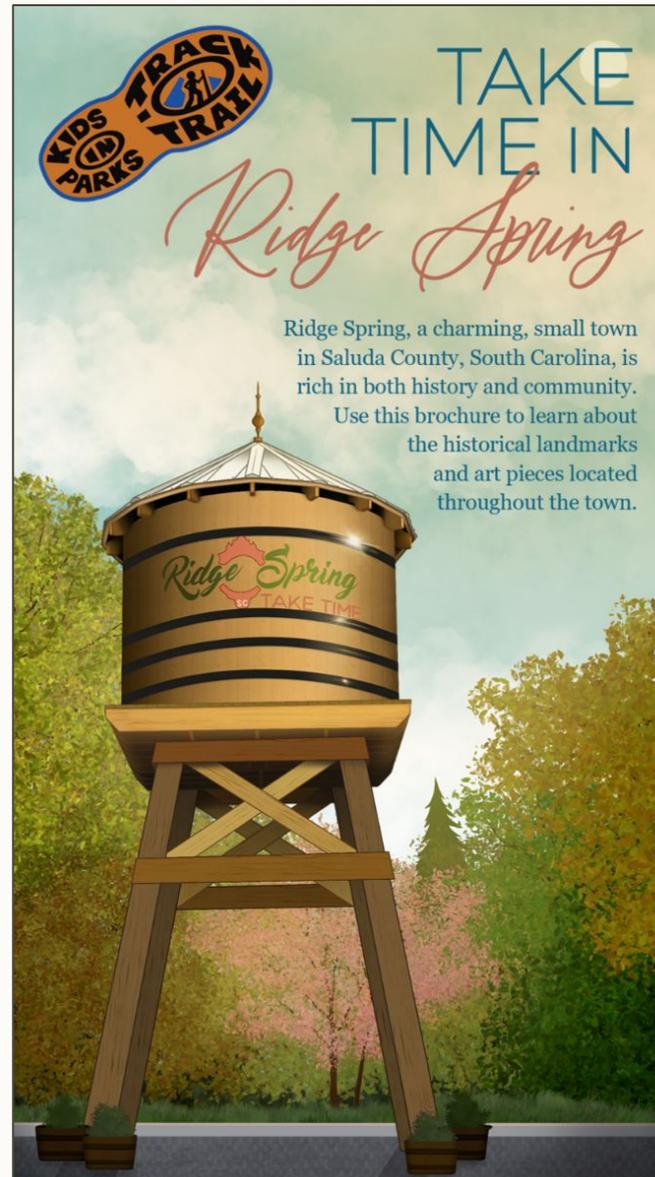
Take Time in Ridge Spring

The “Take Time in Ridge Spring” adventure walks visitors through the town of Ridge Spring, pointing out local art and important landmarks.

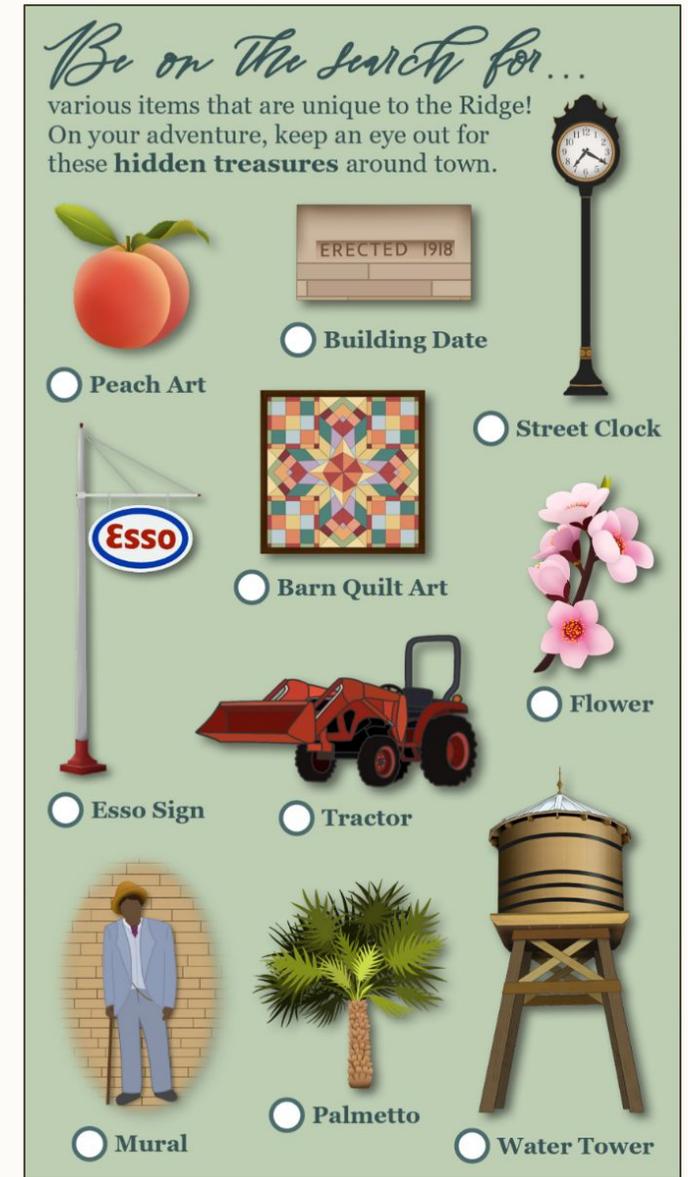
This brochure provides a new way to experience this small South Carolina town. Kids can search for different things scattered along the route while checking out historical spots, including the Nut House for free candied pecans!

Age Suggestion: 6+ years old

Designed for Ridge Spring, South Carolina



COVER



OUTER PANEL

Take Time in Ridge Spring

INNER PANELS

1 Art Association of Ridge Spring
Ready to explore the history of the town? Let's start at the Art Association of Ridge Spring! Originally one of the Ridge Spring Elementary schoolhouses, the building now supports and showcases local artists. How many pieces of art can you find around town today?

2 Ridge Spring Baptist Church
Initially known as "The Ridge" since the land is situated on a fall line, the town changed its name to "Ridge Spring" because of a beautiful natural spring behind the church where baptisms were once held. Can you find the spring on the property?

3 Ridge Spring Water Tank
In the late 1800's, trains traveling between Columbia and Augusta relied on a huge water tank here by the tracks to resupply. A pond behind Asbill Street supplied water and was transferred by a gas-powered pump. A replica now stands to commemorate this halfway point and the origins of Ridge Spring.

4 618 Main Street
This iconic building has served many purposes, but in the early 1900's, it first was the Farmers and Merchants Bank. Rena Jones Watson became the president of the bank in 1925 and is presumed the first female bank president in South Carolina.

5 The Nut House
The Nut House is where the Yon Family Farm sells pecans and homemade pecan candies, which are world renowned for being delicious! The building was actually a service station in the past, with gas pumps and a mechanic garage. Stop in and show your brochure to receive a free sample in return!

6 100 Town Square
Did you know this location was where the original town hall stood? If you could glimpse into the past, you'd see a bustling town square full of horse-drawn carriages. Large trees provided shade for those in the square and hitching posts and watering troughs were used by the animals. Can you imagine this place before the roads were paved?

7 The Mosaic Tractor
This art installation, by local artist Barbara Yon, consists of a tractor and countless mosaic pieces. It celebrates the town's roots in agriculture, and residents of all ages contributed to it. In 2004, the sculpture was dedicated to the farmers of the region.

8 Harvest Caboose
Every fall, this train caboose comes alive during the Harvest Festival! This event honors the agricultural heritage of the town with food, dancing, music, and much more.

START

E. Main St.

Oak St.

Green St.

Railroad St.

STOP

Make sure to look both ways before crossing the road!

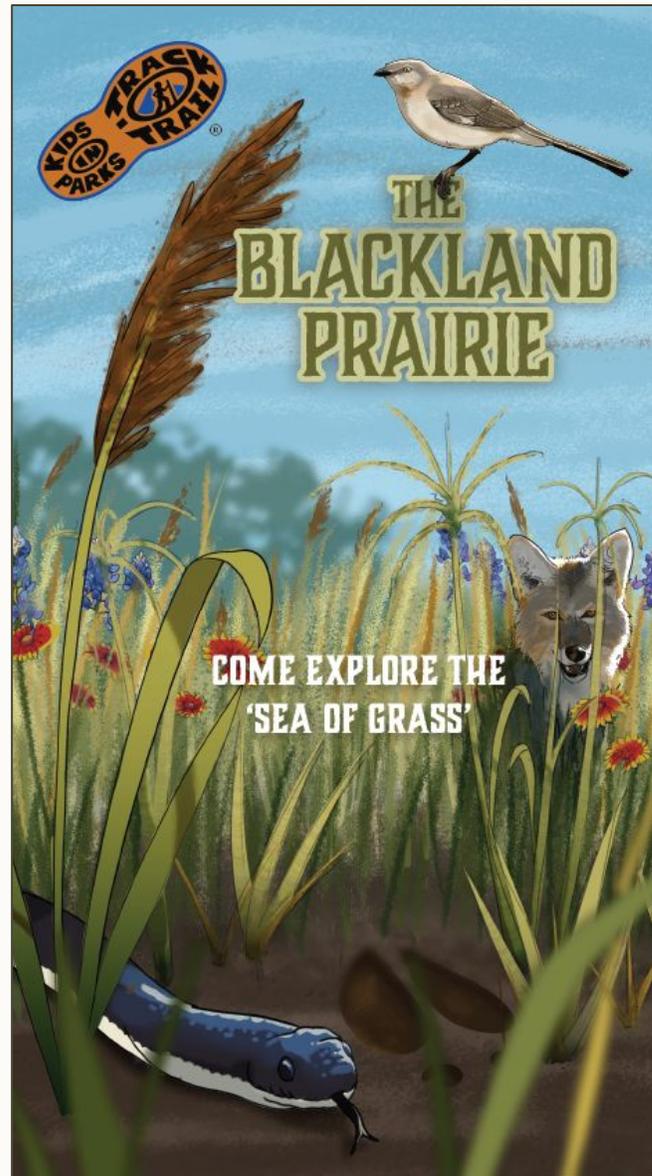
The Blackland Prairie

“[The Blackland Prairie](#)” adventure tells the story of this fertile land strip, deemed the ‘sea of grass’ by early Texas settlers.

This brochure focuses on the special plants and animals dependent on this grassland habitat that runs through a small sliver of the state. The importance of fire management for prairie ecosystems is also provided for readers.

Age Suggestion: 6+ years old

Designed for the Big Bluestem Trail at Grand Park in Frisco, Texas



COVER



OUTER PANEL

The Blackland Prairie

INNER PANELS

THE BLACKLAND PRAIRIE ECOREGION

Stretching from the Red River to San Antonio, the Blackland Prairie is a long sliver of fertile ground described as a 'sea of grass' by European settlers. Along the tall grasses were the American bison that frequently moved in large herds to avoid predation from gray and red wolves. While on the run they would trample saplings, bury seeds in the soil and leave behind valuable manure. Other large animals like pronghorns, black bears and mountain lions once called this land their home beside the bison and wolves until humans started to settle out west.



AGRICULTURE & DEVELOPMENT

The Blackland Prairie features an easily farmed fertile black soil. These rich soils led to the boom of the cotton industry and several other crops in Texas from the 1800s to the 1930s but also destroyed 99% of the ecoregion. Many organizations, including governmental, are working to restore, conserve and preserve the ecoregion.



Delaware Library, Southern Methodist University

ANIMALS

Small creatures like the mocking bird, eastern fox squirrel, eastern cottontail, rat snake, white-tail deer, and coyotes are just a few of many that can be found. All the animals play an important part of helping the prairie thrive.

Can you find these animals (or their tracks) in the prairie today?

EASTERN FOX SQUIRREL



COYOTE



BLACK RAT SNAKE



WHITE TAIL DEER



NORTHERN MOCKINGBIRD

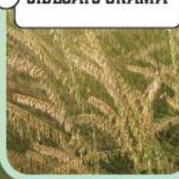


PLANTS

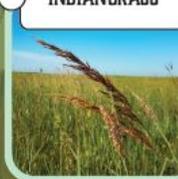
There are two types of plants that can be found in Blackland prairie: annuals and perennials. Annuals are plants that will grow for a single year and die. Annuals will have shorter roots as they won't need to worry about coming back at the end of their season. Perennials are plants that will keep coming back every year. Some perennials will have roots that can be over 10 feet deep in the ground. These plants will use the roots to grow back in the spring, after fires, or even after being eaten by bison.

Can you find these plants that make up the sea of grass?

SIDEDATS GRAMA



INDIANGRASS



BLUEBONNET



SWITCHGRASS



BIG BLUESTEM



LITTLE BLUESTEM

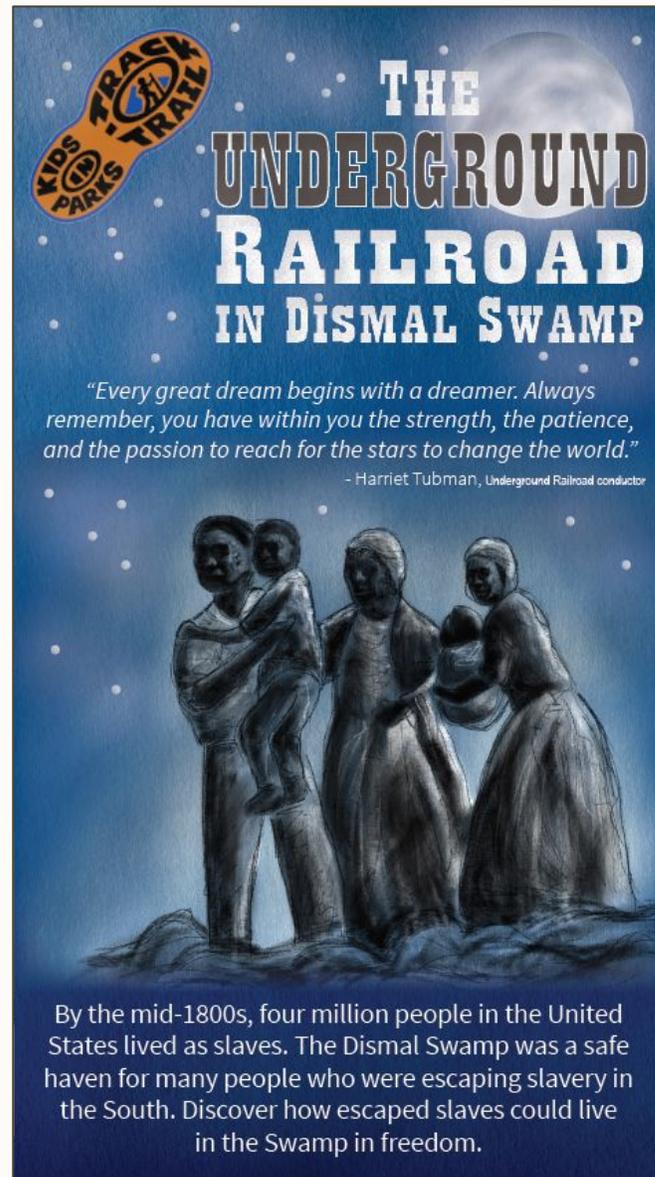


The Underground Railroad in Dismal Swamp

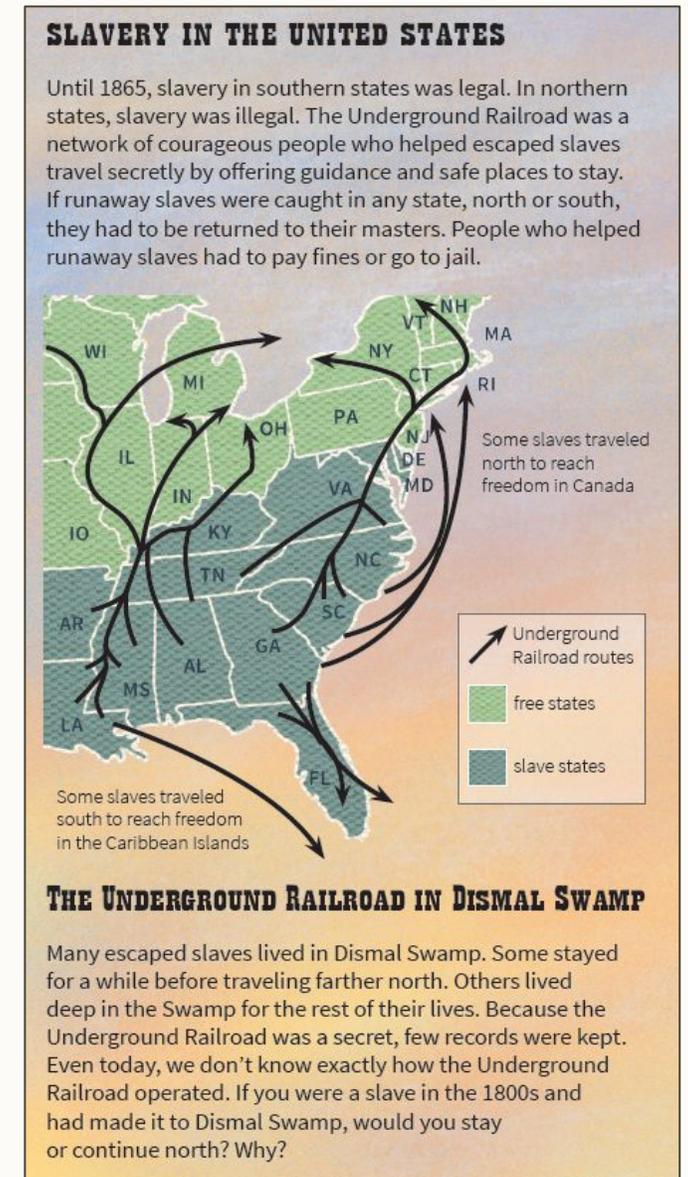
“[The Underground Railroad](#)” adventure sheds light on the Dismal Swamp as a safe haven and passageway for enslaved people in the 1800’s.

This brochure uncovers how enslaved individuals survived in the swamp – from how to walk discreetly in the woods to what animals and plants were safe to eat. Readers learn about the magnitude of the underground railroad in providing a new chance at life for thousands of people.

Age Suggestion: 7+ years old



COVER



OUTER PANEL

The Underground Railroad in Dismal Swamp

INNER PANELS

FINDING FREEDOM IN THE SWAMP

Many of the slaves that built the Dismal Swamp Canal became familiar with the Swamp. Some of them escaped into the wilderness. They formed communities called "maroon colonies". The maroons built shelters on areas of higher ground in the swamp. Dismal Swamp was probably home to the largest maroon colony in the United States. What do you think life was like in the Swamp?

PASSAGE ON THE UNDERGROUND RAILROAD

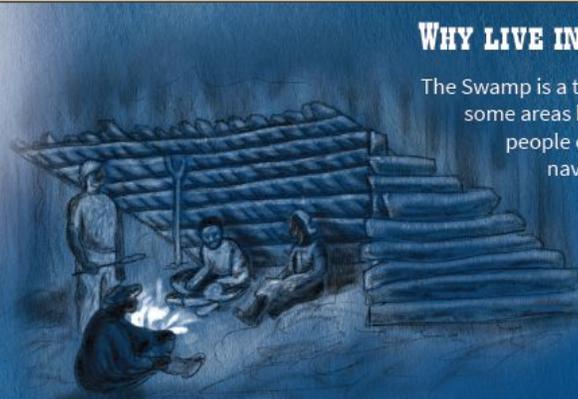
The journey to freedom was filled with uncertainty. Escaped slaves often traveled for days or weeks between Underground Railroad stations, and they were always in fear of being found. Slave catchers rode horses and used dogs to track escaped slaves. Most of escaped slaves' time was spent hiding. They had to survive on very little sleep or food.



How would you move undetected through the wilderness?

1. Be quiet by not talking.
2. Walk slowly and carefully to avoid snapping twigs or crunching leaves.
3. Stop every few steps and listen for others.
4. If you see a person or animal, or hear a noise, slowly crouch down.

(Because walking on the soil can be dangerous, please stay on the boardwalk.)



WHY LIVE IN THE SWAMP?

The Swamp is a tough place for humans to live. It is nearly impossible to travel in some areas because the peat soil can be up to 15 feet deep. This kept most people out, but escaped slaves who knew the Swamp were able to navigate through it. Be sure to see the exhibits in the visitor center to get an up-close look at the soil.

Slave catchers also avoided the Swamp because of its many myths. The legends of poisonous vapors, ghosts, balls of snakes, swamp creatures, and even an evil spirit called the Swamp Witch kept people from searching here. Tell a story that would scare people away from the Swamp.

Written & Illustrated by Elise A. Kohl

SURVIVING IN THE SWAMP

SHELTER

Bald cypress and Atlantic white cedar trees were used to build shelters in the swamp since they have wood that does not rot easily. Can you find these tree species?

Bald Cypress (*Taxodium distichum*)



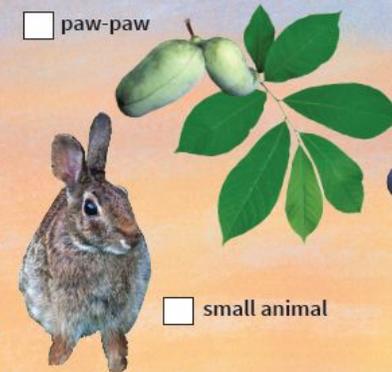
Atlantic White Cedar (*Chamaecyparis thyoides*)



FOOD & WATER

The maroon colonists ate small game and native fruits, such as paw-paws and grapes. Can you find some of the foods that they depended on for survival? *(Many plants have poisonous look-alikes. Please do not collect or eat any of the plants along the trail.)*

paw-paw



muscadine



small animal

LIFE LESSONS

The Underground Railroad is proof that through individual and collective acts of courage, injustices can be overcome. How are you courageous? How will you help others who are treated unfairly throughout your life?

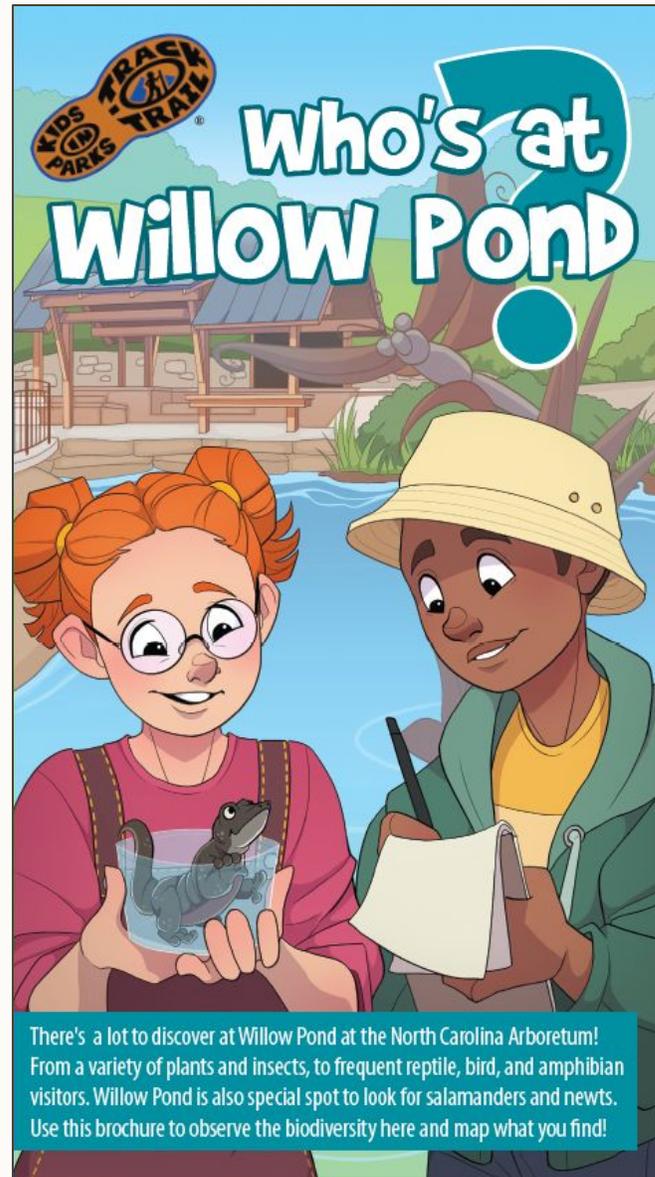
Who's at Willow Pond?

The "[Who's at Willow Pond](#)" adventure is dedicated to the aquatic life at the North Carolina Arboretum's Willow Pond.

This brochure maps out the diverse wildlife found living along and within Willow Pond. Kids can count up all the critters that depend on this water source for protection and nutrients.

Age Suggestion: 7+ years old

*Designed for the North Carolina Arboretum
In Asheville, North Carolina*



COVER

What Makes A Habitat?

A habitat is a place where an organism makes its home. Habitats are composed of water, food, shelter, and space. Availability of these things determines what can survive in the habitat. Use the activities below to observe the water, food, shelter, and space at Willow Pond.

water

Water is essential to all living things. The amount of water in a habitat determines what kinds of plants and animals can live there. Aside from the pond, write down another source of water for this habitat.

food

Food is also important to a healthy habitat and determines how much wildlife it can support. Find an animal and draw it in the first box to start a food chain. Next, draw what they eat in the second box and so on. If your animal eats plants, think about where plants get their energy from (hint: it's up in the sky).

shelter

Shelters are places that organisms need for protection from weather or predators. A healthy habitat will have a variety of shelter types to fit the needs of the animals that live there. Look and see if you can spot these shelters below.

- Rock
- Tree
- Nest
- Tree Hollow
- Log
- Shrub
- Hive
- Ant Hill
- Grass
- Brush Pile
- Web
- Burrow

space

The amount of space an organism needs depends on the species. Observe the animals and plants you see at the pond. Are they larger or smaller than a loaf of bread? Does this habitat support more small creatures than big creatures?

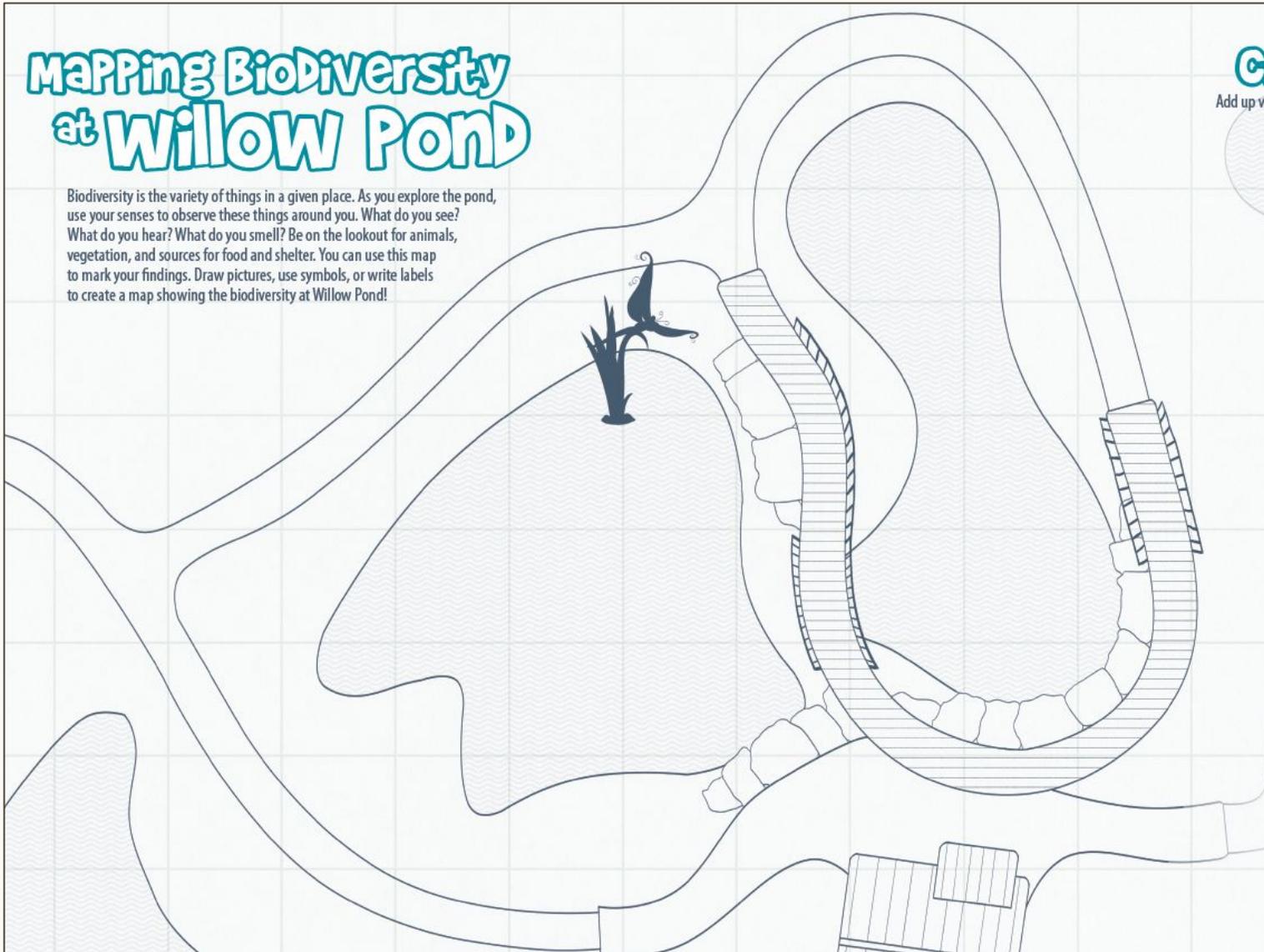
OUTER PANEL

Who's at Willow Pond?

INNER PANELS

Mapping Biodiversity at Willow Pond

Biodiversity is the variety of things in a given place. As you explore the pond, use your senses to observe these things around you. What do you see? What do you hear? What do you smell? Be on the lookout for animals, vegetation, and sources for food and shelter. You can use this map to mark your findings. Draw pictures, use symbols, or write labels to create a map showing the biodiversity at Willow Pond!



Critter Count

Add up what you find for each critter below. You can use this list for ideas of what to look for and use the corresponding letters as labels on the map.

salamanders & newts	<input type="text"/>	N
frogs & toads	<input type="text"/>	F
snakes	<input type="text"/>	S
turtles	<input type="text"/>	T
aquatic insects	<input type="text"/>	I
herons	<input type="text"/>	H
raccoons	<input type="text"/>	R
pollinators	<input type="text"/>	P
other birds	<input type="text"/>	B
other mammals	<input type="text"/>	M

e-Adventures

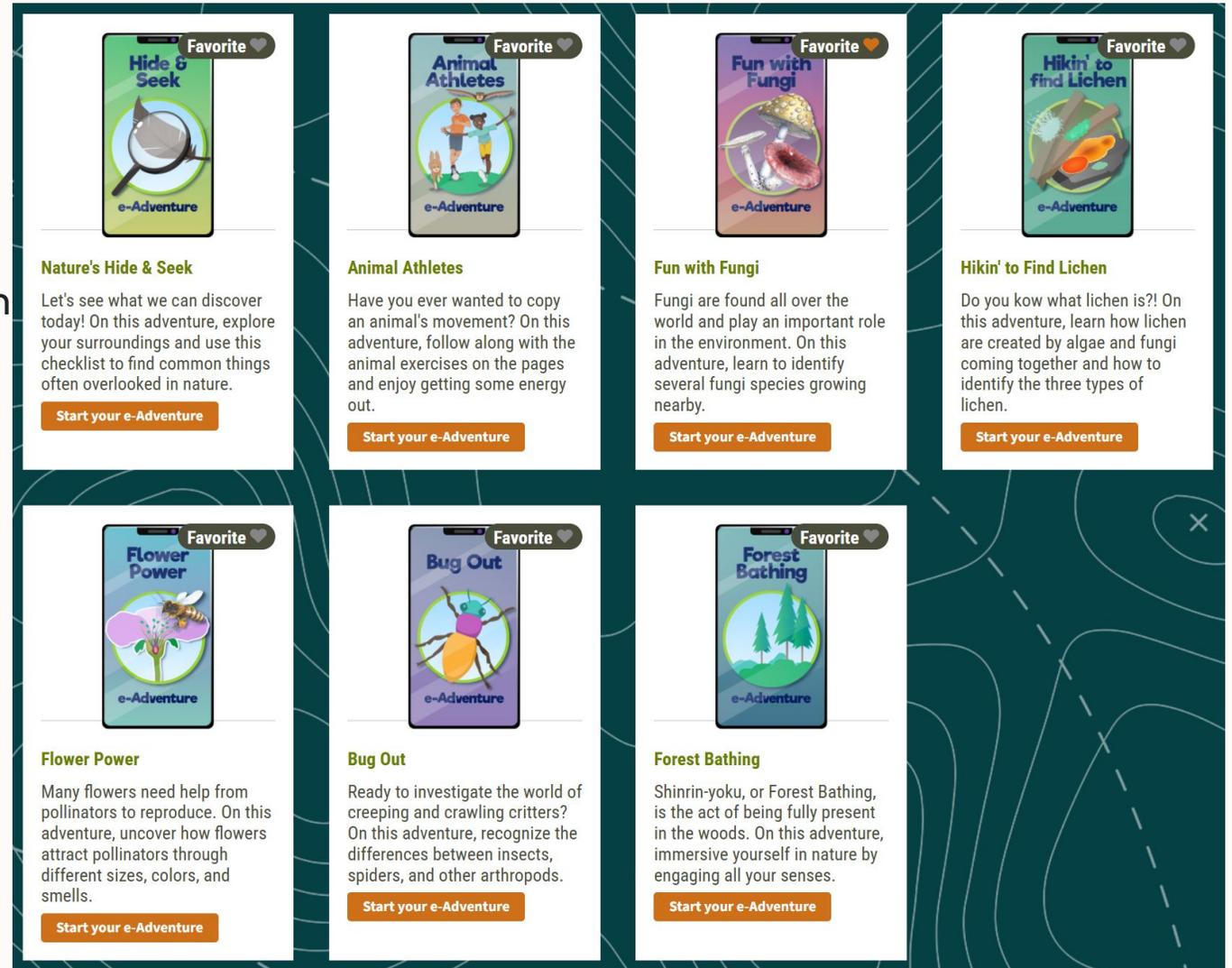
In addition to physical materials for TRACK Trails, Kids in Parks also converts popular brochures into [e-Adventures](#) that kids can enjoy on a smartphone or tablet. Families have the option to complete an e-Adventure in their backyard, a nearby park, an official TRACK Trail, or anywhere in between!

Some popular e-Adventures include:

- Nature's Hide & Seek
- Community Creature Count
- Forest Bathing

Find all e-Adventure on kidsinparks.com, and let us know if you have any suggestions for other mobile adventures!

NOTE: All Kids in Parks materials, including digital art, are designed in house by our staff





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Appendix: Bird Art

All of our Kids in Parks materials are drawn digitally or by hand, including bird art. We are constantly adding to this list of available art, so let us know if you have a species in mind not listed below.

Acorn Woodpecker
American Avocet
American Cliff Swallow
American Coot
American Crow
American Goldfinch
American Kestrel
American Robin
American Tree Sparrow
American White Pelican
American Woodpecker
Anna's Hummingbird
Bald Eagle
Baltimore Oriole
Barn Swallow
Barred Owl
Belted Kingfisher
Black & White Warbler
Black Phoebe
Black Vulture
Black-billed Magpie
Black-capped Chickadee
Black-chinned Hummingbird
Black-crowned Night Heron
Black-headed Grosbeak
Blue Jay
Blue-winged Teal
Blue-gray Gnatcatcher
Brown Thrasher
Brown Pelican

Brown-headed Cowbird
Brown-headed Nuthatch
Brown-backed Chickadee
Bullock's Oriole
California Gnatcatcher
California Quail
Canada Goose
Canada Jay
Canyon Wren
Carolina Chickadee
Carolina Wren
Cattle Egret
Cedar Waxwing
Chipping Sparrow
Cliff Swallow
Common Gallinule
Common Loon
Cooper's Hawk
Dark-eyed Junco
Double-crested Cormorant
Downy Woodpecker
Eared Grebe
Eastern Bluebird
Eastern Kingbird
Eastern Meadowlark
Eastern Phoebe
Eastern Towhee
Fish Crow
Gadwall
Gray Catbird

Great Blue Heron
Great Egret
Great Horned Owl
Great-tailed Grackle
Green Heron
Hairy Woodpecker
House Finch
House Sparrow
Killdeer
Laughing Gull
Light-footed Clapper Rail
Little Blue Heron
Long-billed Curlew
Mallard
Marsh Wren
Mountain Bluebird
Mourning Dove
Nashville Warbler
Northern Cardinal
Northern Flicker
Northern Mockingbird
Northern Parula
Orchard Oriole
Osprey
Ovenbird
Painted Bunting
Pied-billed Grebe
Pileated Woodpecker
Pine Warbler
Prothonotary Warbler

Purple Martin
Red-bellied Woodpecker
Red-breasted Nuthatch
Red-cockaded Woodpecker
Red-headed Woodpecker
Red-naped Sapsucker
Red-shouldered Hawk
Red-tailed Hawk
Red-winged Blackbird
Ring-billed Gull
Ring-necked Pheasant
Roadrunner
Rock Dove
Rose-breasted Grosbeak
Ruby-throated Hummingbird
Rufous Hummingbird
Sandhill Crane
Scarlet Tanager
Sharp-shinned Hawk
Snowy Egret
Song Sparrow
Spotted Sandpiper
Spotted Towhee
Steller's Jay
Summer Tanager
Tree Swallow
Tricolored Heron
Tufted Titmouse
Turkey Vulture
Violet-green Sparrow

Western Bluebird
Western Kingbird
Western Meadowlark
Western Northern Flicker
Western Scrub Jay
Western Tanager
White-breasted Nuthatch
White Ibis
White-tailed Kite
Wild Turkey
Wood Duck
Wood Stork
Wood Thrush
Yellow Warbler
Yellow-headed Blackbird
Yellow-rumped Warbler