



Kids in Parks

TRACK Trail Self-Guided Brochures List

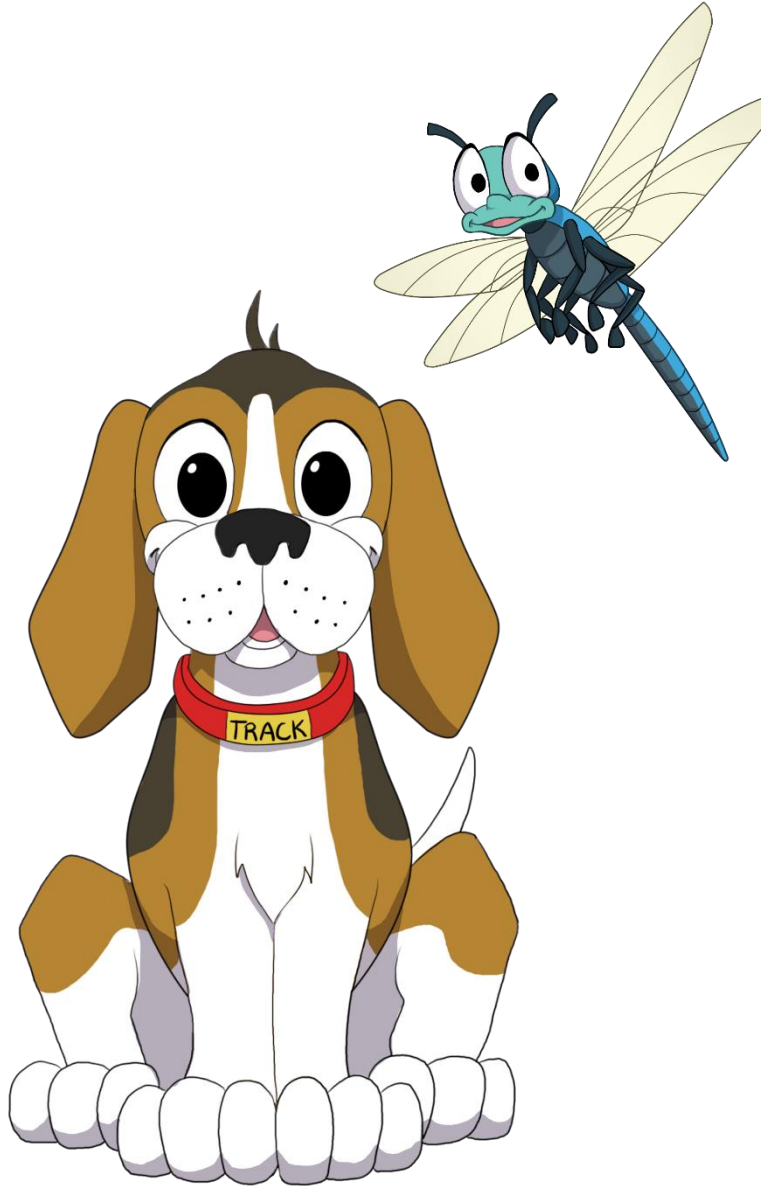


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Contact Us

Introduction

Working together with partners throughout the community, the mission of Kids in Parks is to promote children's health and the health of our parks by increasing physical activity and engaging families in outdoor adventures that foster a meaningful connection to the natural and cultural world.

Partners in our TRACK Trails program receive a trailhead kiosk and four self-guided nature adventure brochures, as well as integration into our website at

www.kidsinparks.com.



Our nature adventure brochures are 8.5x14" in a tri-fold format. The back middle panel (pictured right) is the same on each brochure, and directs kids to visit our website to register for prizes and find other TRACK Trails near them.

Standard Brochures

These brochures are applicable to almost any trail and can be used year-round.

Some of the brochures have multiple versions available so that you can choose the version that best fits your trail. These include:

- Nature's Hide & Seek
- Animal Athletes
- Nature's Relationships

We are always developing new standard brochures. Contact us if we don't have a brochure topic that you think could be a good addition to our collection.



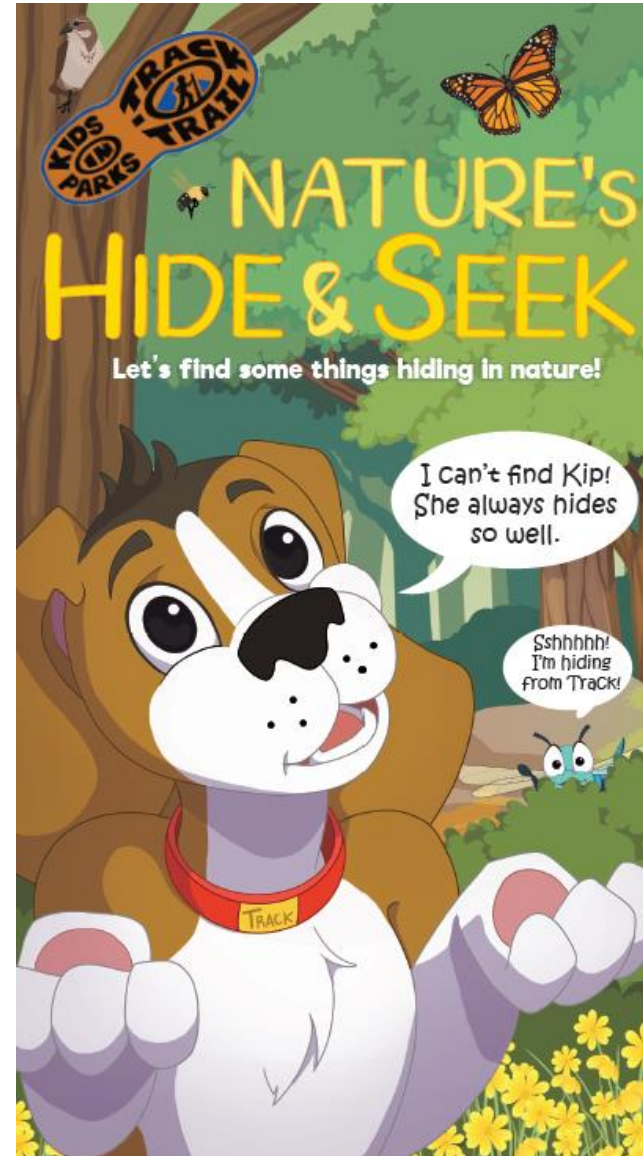
Nature's Hide & Seek

Nature's Hide & Seek is a standard brochure issued to every TRACK Trail. It is the most universal and frequently-used brochure.

The Nature's Hide & Seek brochure is designed so that kids of all ages can walk along the trail and discover common things that are often overlooked in nature. Some of them are hard to find, others are easy.

This brochure is most appropriate for children 4 to 7 years of age.

A bilingual Spanish/English version is available in a different design.



Cover



Outside Panel

Nature's Hide & Seek

Inside Panels



sniff
sniff

Many things in nature go unseen. Their size, color, and location can make them hard to find. On your hike today, seek out these things hiding in nature.



Remember that all things in nature have a special place. Be sure to leave them here, so others can find them too!



● Bird



● Spider



● Sapling
(young tree)



● Lichen



● Wildflower



● Water



● Feather



● Pollinator



● Animal Tracks



● Rough Bark



● Rock with 2 colors



● Something Human-made

Animal Athletes

The Animal Athletes adventure challenges kids to exercise with the animals.

This brochure gives kids eight different animal exercises they can do along the trail. From hummingbird hand-swings to lizard pushups, kids are sure to have fun getting in shape with the animals during their outdoor adventures.

This brochure is most appropriate for children ages 5 - 12.

A bilingual Spanish/English version is available in a different design.



Cover



Outside Panel

Animal Athletes

Inside Panels

■ Hummingbird Hand-swings

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

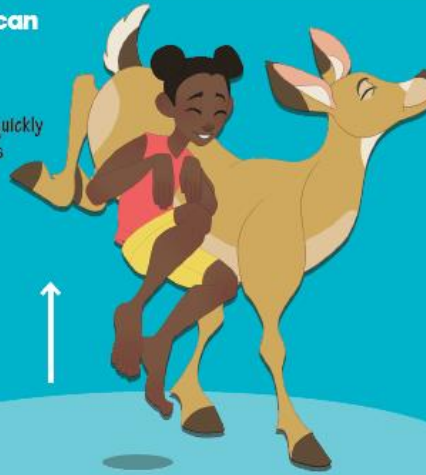
Hummingbirds flap their wings over 50 times per second, or 1500 times every 30 seconds.



■ 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.

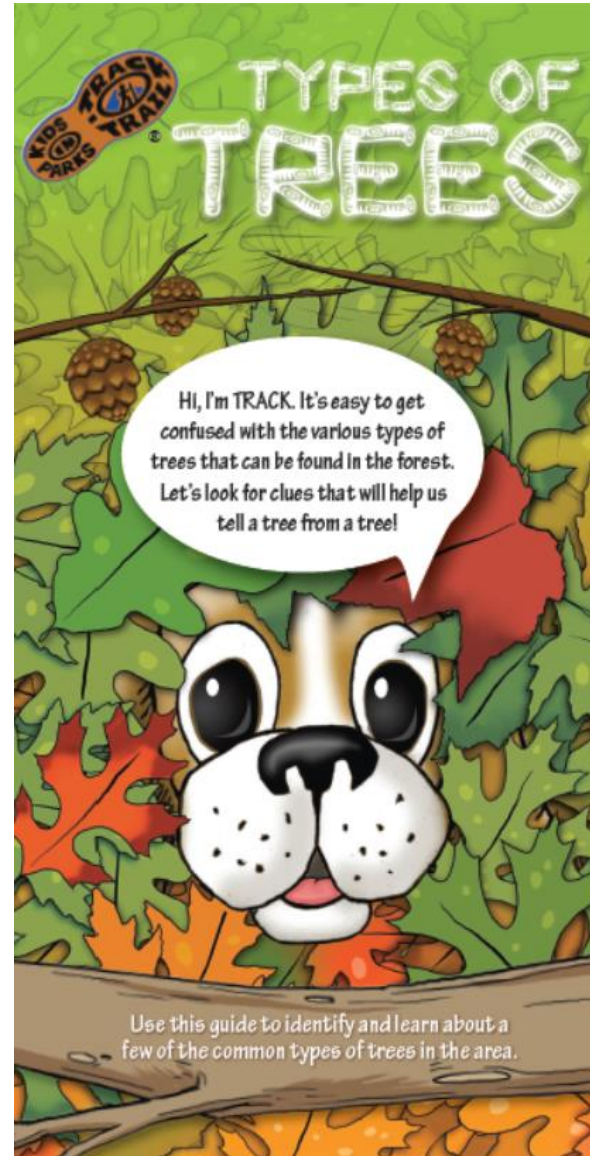


Types of Trees

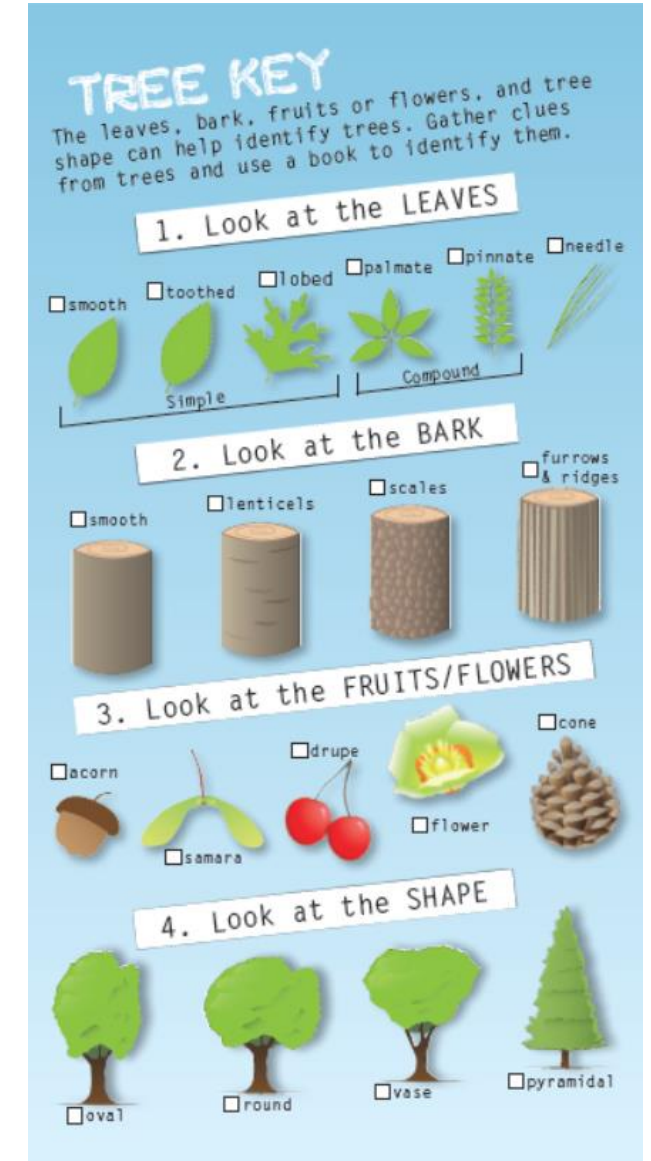
In the Types of Trees brochures, kids can learn how to identify trees by studying the different features of a tree.

This brochure illustrates what kids should look for in order to identify a tree, and explores three families of common trees to show how some trees are alike and how they are different.

This brochure is most appropriate for children ages 5 - 12.



Cover



Outside Panel

Types of Trees

Inside Panels

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

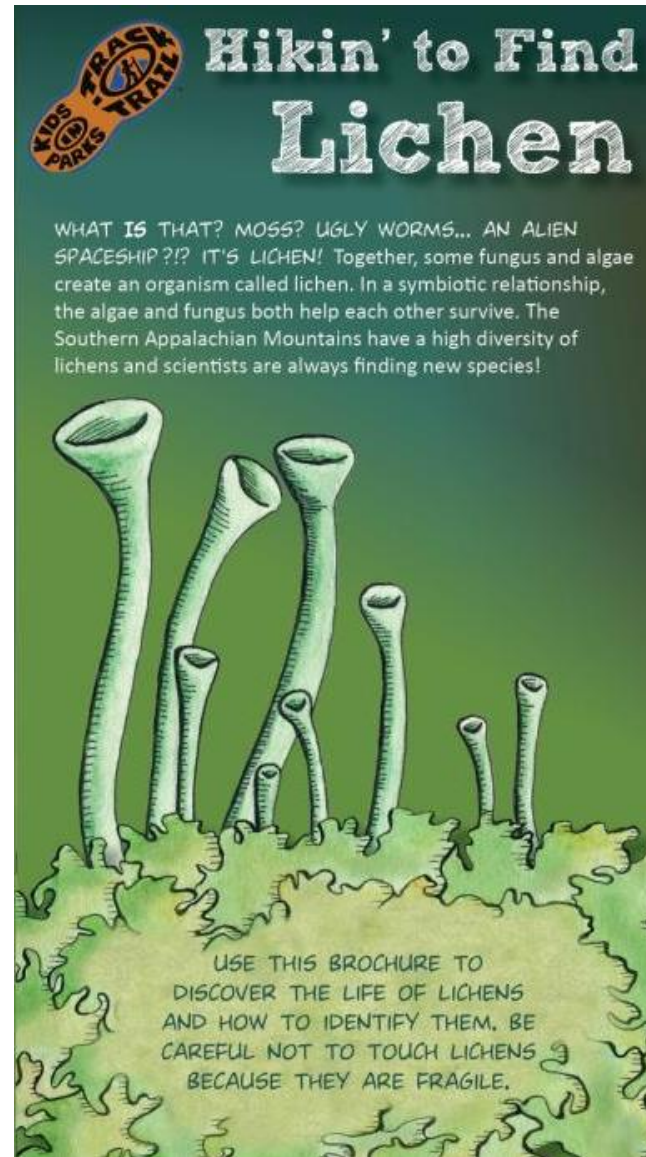


Hikin' to Find Lichen

This brochure-led adventure takes kids deep into the mysterious world of lichen.

Kids will discover the three different forms lichen can take, and some of the features that make the lichen lifestyle unique. Kids will also read the Lichen story about Alice Algae and Freddy Fungi to help them remember how lichens work.

This brochure is most appropriate for children ages 5 - 12.



Cover



Outside Panel

Hikin' to Find Lichen

Inside Panels

Lichen, it's a Lifestyle

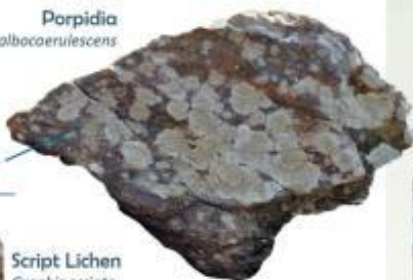
Although lichens are diverse, lichens can be found in three major forms. Check the box next to each lichen form you find on your hike.

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

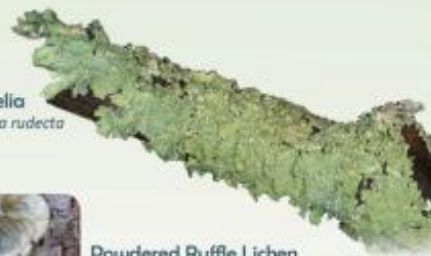
Lichens get their food from light, air and rain so they are easily damaged by pollutants in the air. Scientists study lichens to learn about air pollution. The healthier the air, the more species of lichen there will be. 1) On your hike, count how many different lichens you can find. 2) Based on your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



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

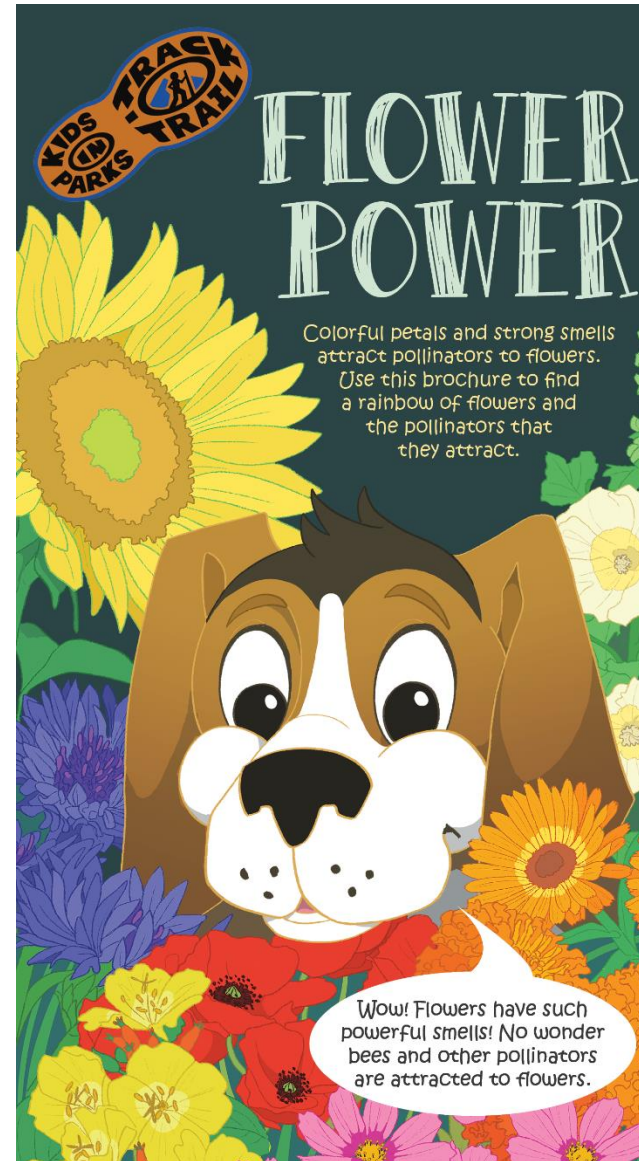
Most questions about basic lichen biology remain unknown. The real mystery begins when lichens are studied under a microscope. Will you be the next scientist to make a lichen discovery?

Flower Power

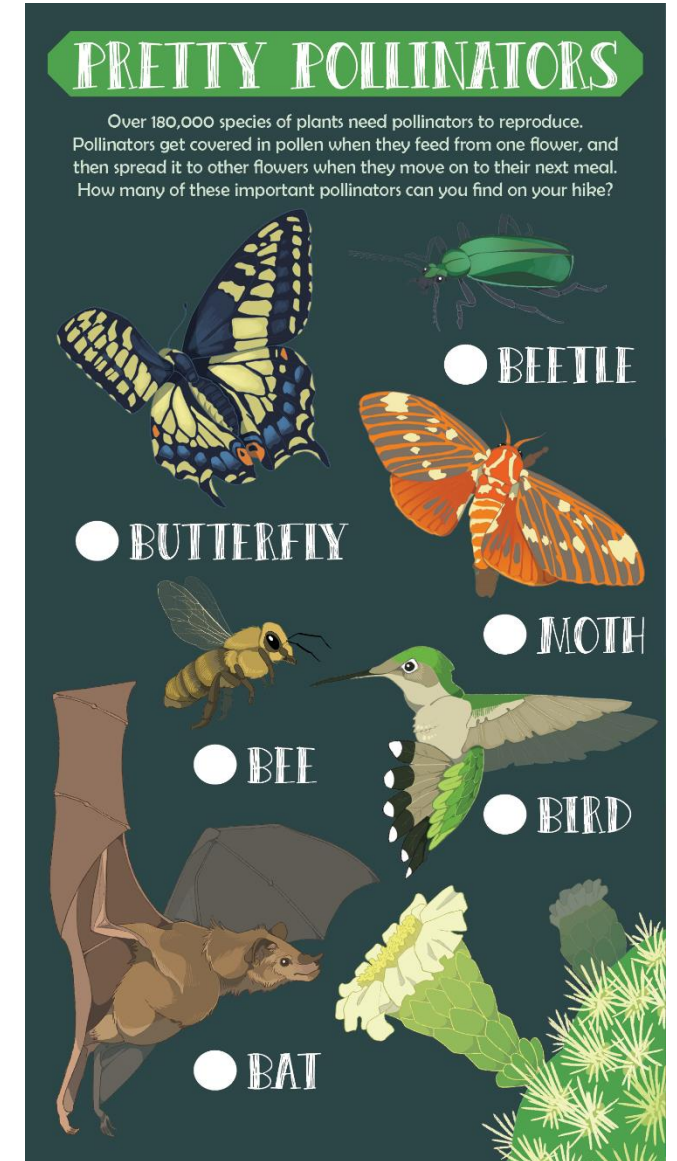
Our Flower Power adventure shows kids that flowers have the power to grow on a variety of plants, attract pollinators, and become fruit.

This brochure also provides a diagram that illustrates flower parts and their functions.

This brochure is appropriate for children ages 4 - 10



Cover



Outside Panel

Flower Power

Inside Panels

FINDING FLOWERS

As you hike, keep an eye out for flowers along the trail. Look for a flower for each of the colors below and check the circle beside the color name. You can also circle how big or small the flower is.

Attracts bees.

● BLUE



Attracts bees, butterflies, moths & hummingbirds.

● VIOLET



Attracts butterflies, moths & hummingbirds.

● PINK



Attracts butterflies & hummingbirds.

● RED



Attracts butterflies & hummingbirds.

● ORANGE



Attracts bees, butterflies & hummingbirds.

● YELLOW



Attracts bees, beetles, moths & bats.

● WHITE



NATURE'S

COLOR

PALETTE

The flowers pictured are all ones you can plant at home to attract pollinators to your yard!

Imagine a world without flowers. It's a little dull, right? Not only are flowers pleasant to look at, but flowers are a very important part of nature. They provide food to insects, animals and humans, help us create medicines, and most importantly, flowers aid in plant reproduction by attracting pollinators.

Eye-catching colors on an otherwise plain, green-leaved plant entice insects, birds and even some bats to dip down steal its nectar. When they do, they are inadvertently pollinating the plants, allowing the plant to produce fruit and seeds. Flowers even develop colors and fragrance that attract certain pollinators.

Lavender

Hollyhock

Sunflower

Lobelia

Geranium

Calendula

Allysum

Poppy

Zinnia

Marigold

Primrose

Cosmos

Crocus

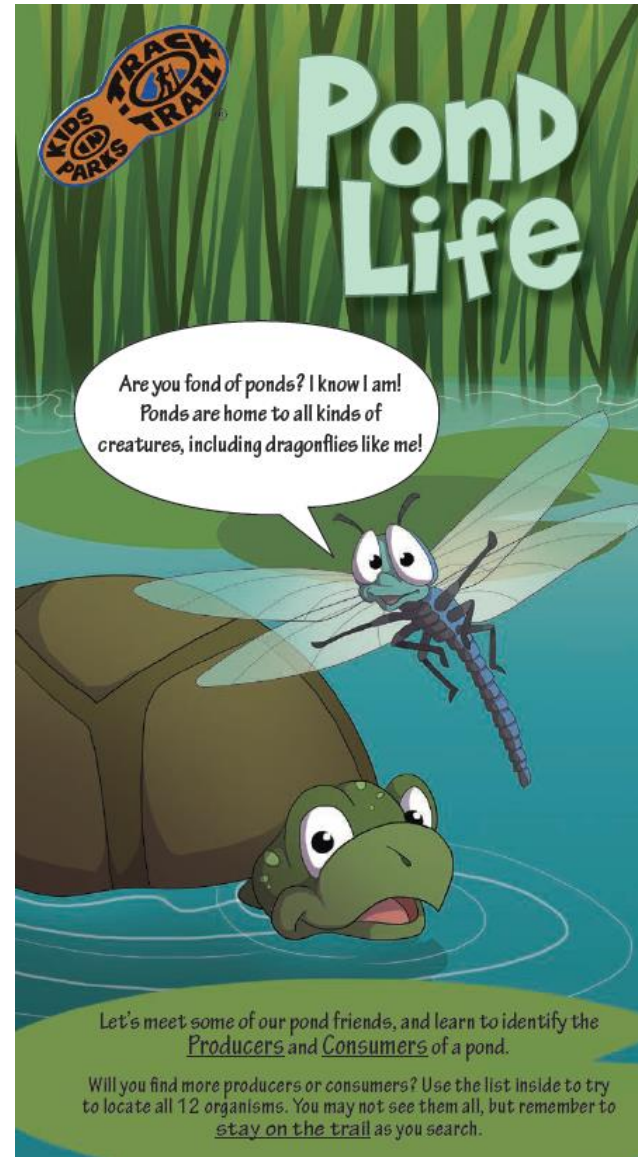
Cornflower

Pond Life

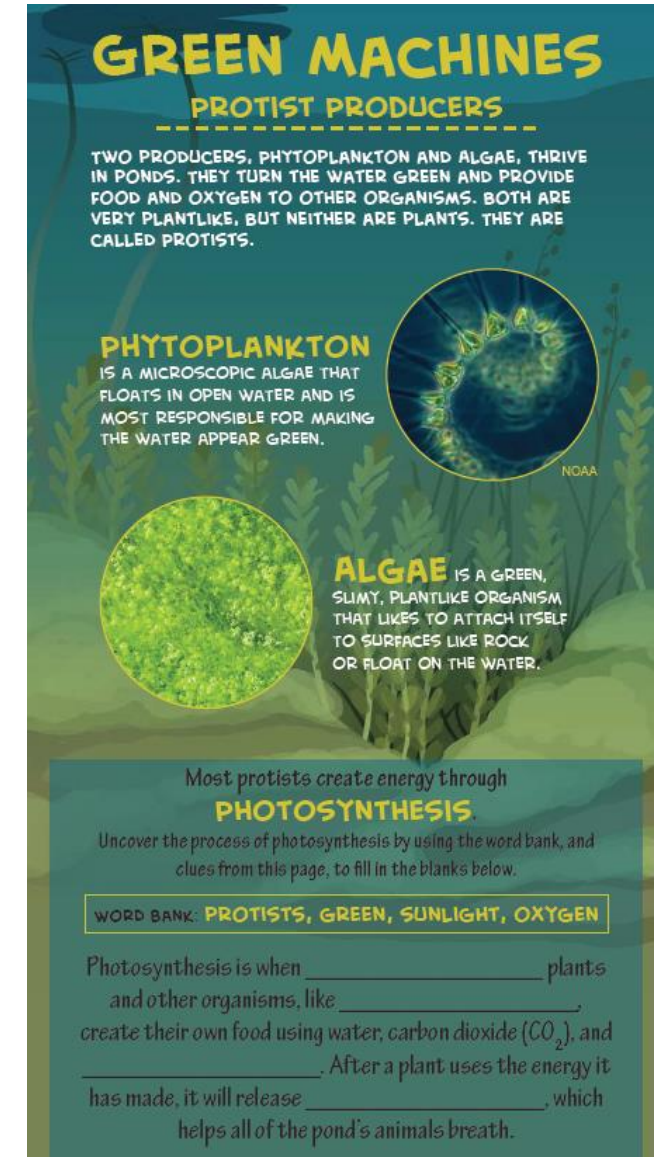
With the Pond Life brochure, kids will learn the difference between producer and consumer organisms, and how to identify where different plants, animals, or insects fit into the ecosystem of a pond.

This brochure's activities will have kids keeping an eye out for 12 common pond residents, as well as teach them how these plants and animals use the pond.

This brochure is appropriate for children ages 5 - 12



Cover



Outside Panel

Pond Life

Inside Panels

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?

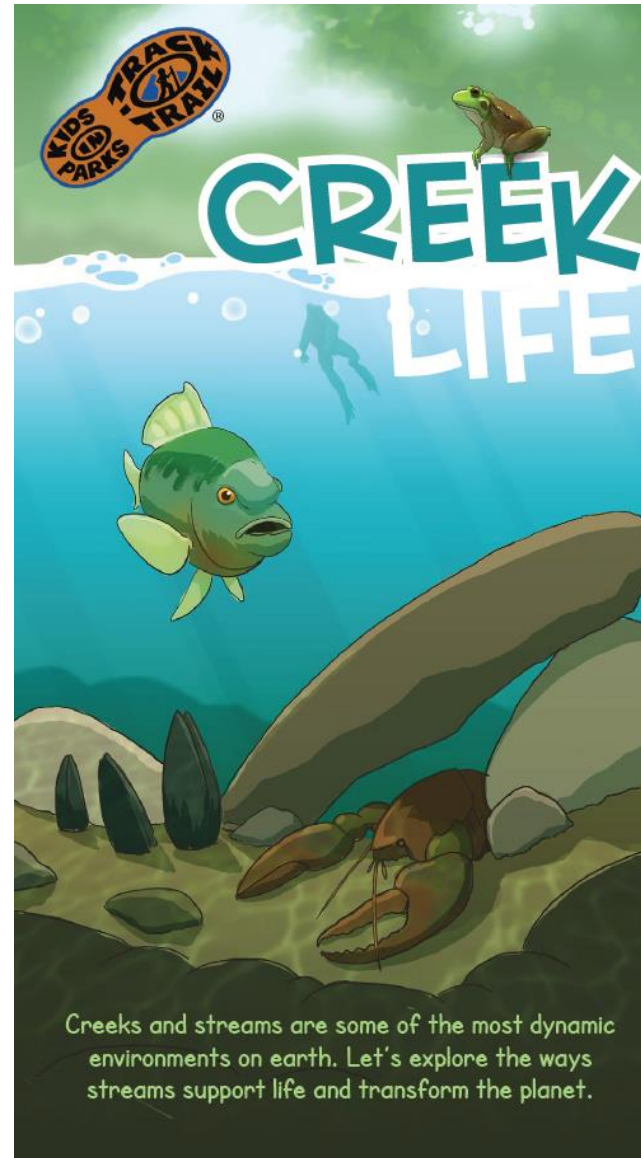
ACTIVE AMPHIBIANS AND REPTILES

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.

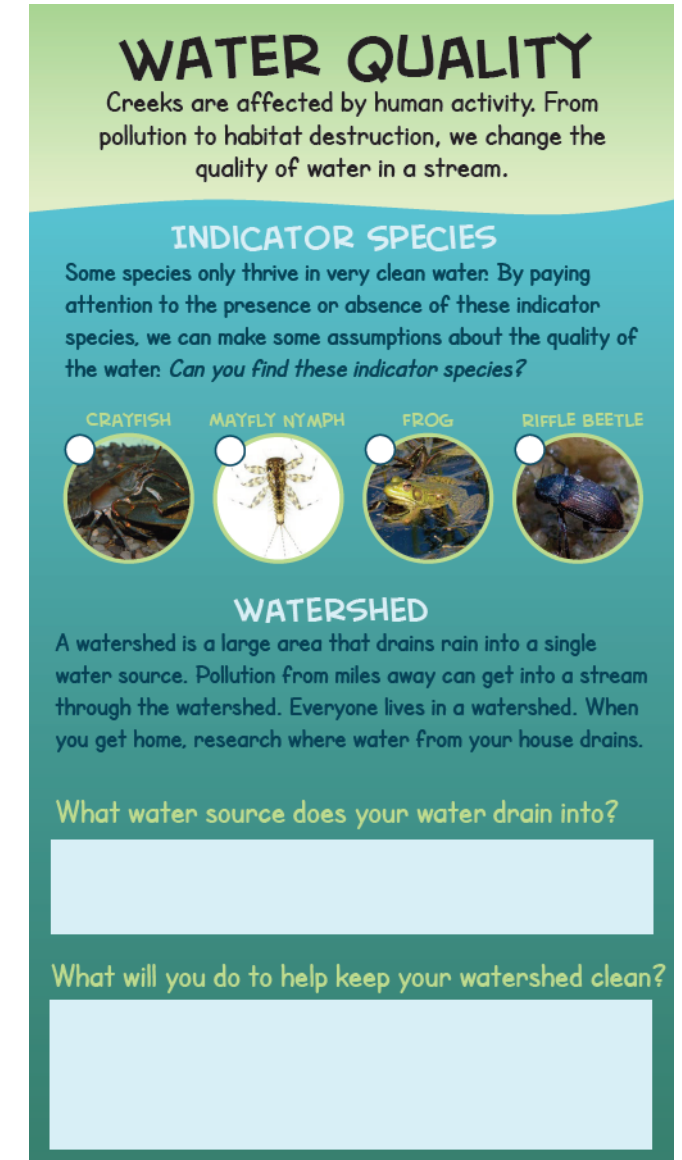
Creek Life

The Creek Life brochure teaches kids how streams shape ecosystems and how human activity can affect streams.

This brochure is appropriate for children ages 5 - 12



Cover



Outside Panel

Creek Life

Inside 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.

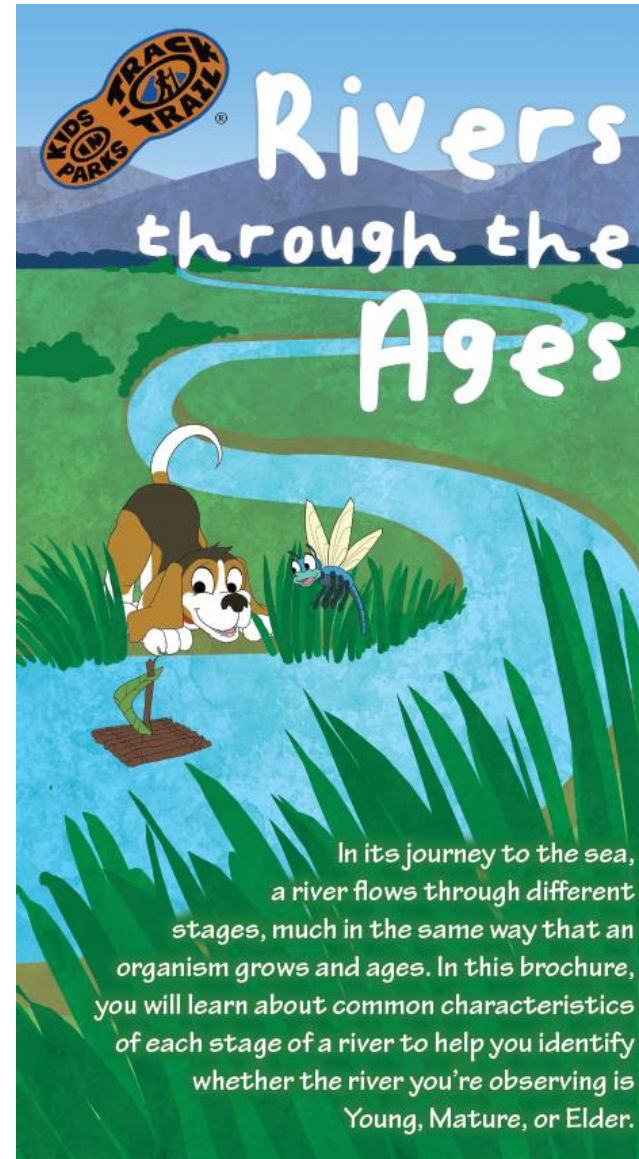
Look for clues that water is shaping the landscape.
Write down any evidence you find.



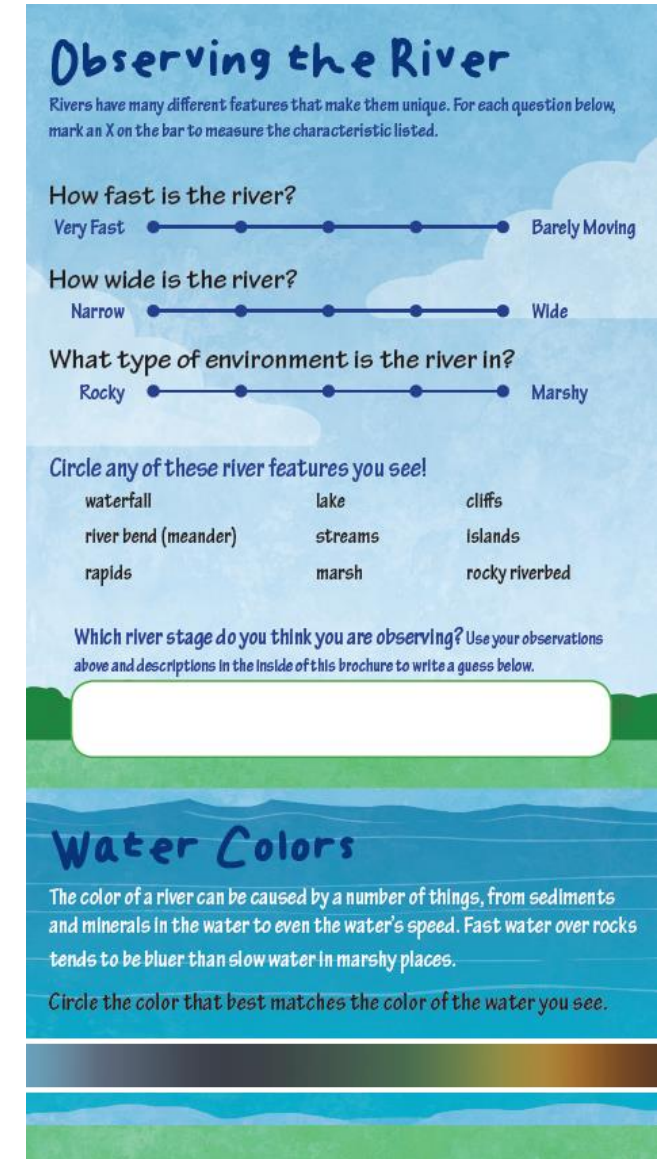
Rivers through the Ages

The Rivers through the Ages brochure illustrates the different stages (or ages) of a river, teaching kids how to recognize the differences between a “young” river, a “mature” river, and an “elder” river. Kids can also complete a search-and-find activity that leads them to look for common flora, fauna, and other features you might see around a river.

This brochure is most appropriate for children ages 5 - 12.



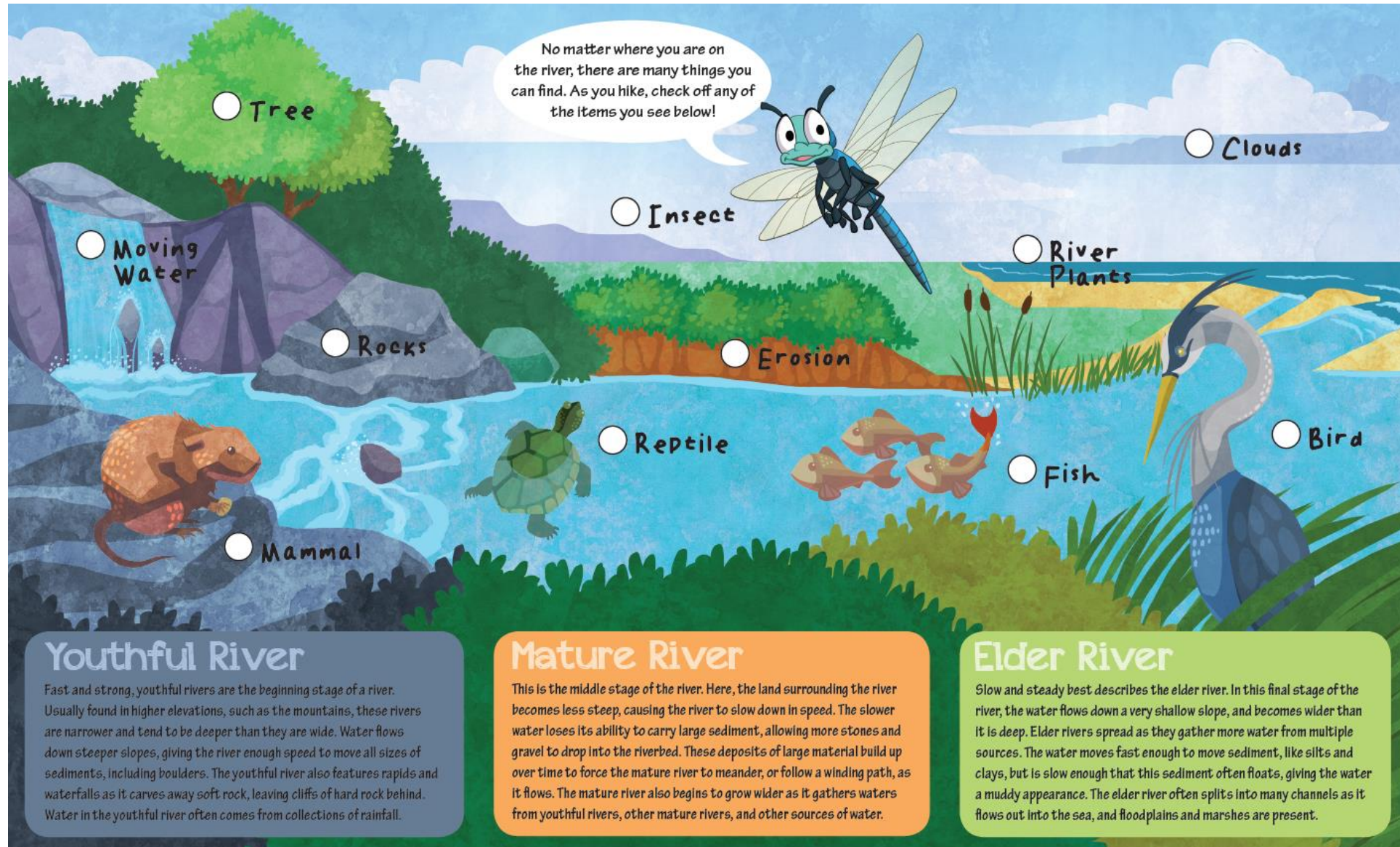
Cover



Outside Panel

Rivers through the Ages

Inside Panels



Waterfall Wonders

The Waterfall Wonders brochure shows kids some of the wonders that make waterfalls so magical. Kids will learn how to identify different types of waterfalls as well as how waterfalls form. This brochure encourages observation skills and also teaches about the wildlife that live around waterfalls.

This brochure is most appropriate for children ages 5 - 12.



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.

A large, empty rectangular box with a black border, intended for a child to draw a shape found in a waterfall and label it.

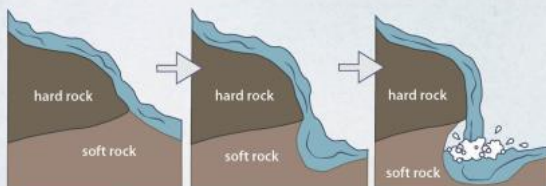
Outside Panel

Waterfall Wonders

Inside Panels

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.

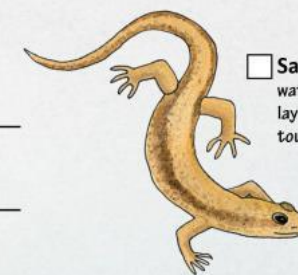


How does the waterfall sound...

	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.



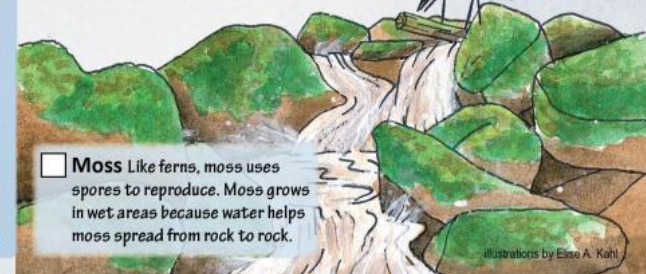
☐ **Fern**
Ferns are among the oldest types of plants on Earth and need moisture to reproduce. Instead of seeds, ferns use single cells called spores to reproduce.



☐ **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.

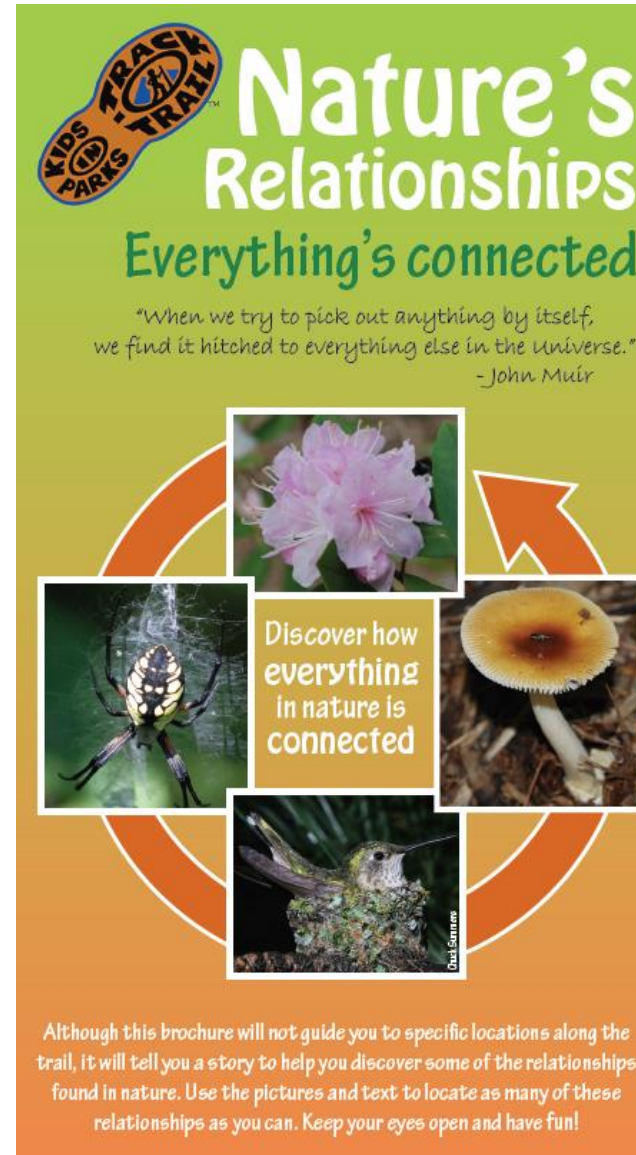
Illustrations by Elise A. Kahl

Nature's Relationships

In the Nature's Relationships brochure kids will discover how everything in nature is connected.

The brochure tells a story about a few of the relationships that can be found along the trail and how different things in nature work together.

This brochure is most appropriate for children 6-12 years old.



Cover



Outside Panel

Nature's Relationships

Inside Panels

Guiding Pollinators

Many flowers depend on relationships with pollinators to reproduce. A flower's size, shape, color and smell attracts unique pollinators. Some flowers, such as the flowers of rhododendrons, have nectar guides that are visible to insects through ultraviolet light. These guides act as road signs, directing pollinators to the flower's sweet nectar.



How many pollinators can you find?



How many types of flowers can you find?

Smell a wildflower.



Making Connections

We are an intricate part of nature's relationships. Our actions affect everything, from the bees that pollinate our flowers and food crops to the soil we walk on as we hike through the forest. During your hike today, take your time, stop to smell a flower and...

Feel the sun beaming through the trees.



Open... Canopy!

During strong wind storms or cold winter ice storms treetops often crash down to the forest floor. The damaged trees and plants crushed by fallen limbs are affected negatively, but other plants are helped by the holes in the canopy. These holes allow more sunlight to reach understory plants such as wildflowers.

Can you spot trees with storm damage?



Can you find a spider on its web?

Caught in the Web of Life

On their daily journeys to find nectar and food, many flying insects get caught in the web of life - the spider's web that is. Different spiders build different types of webs - spiral orb webs, sheet webs, tangle webs, and funnel webs are a few examples.



Can you spot a bird's nest in a tree?

Connecting Nature's Building Materials

Not only do many bird species eat spiders, some depend on spider webs to build their nests. Many species of hummingbird construct their nests by connecting spider webs and lichens. They use the sticky spider webs to weave materials together and to anchor their nests to the tree's branch. Spotting a hummingbird's nest in a tree is tricky since they're about the size of a golf ball.



Find a lichen growing on a stick or rock.

Get Connected

I Lichen You!

A lichen is an organism formed by a relationship between algae and fungus. The fungus protects the algae from adverse conditions, and in exchange the algae provides the fungus with food. This is an example of mutual symbiosis (when two different organisms help each other survive).



How many types of mushrooms can you find? (don't touch!)

A Healthy Home

Mountain forests are home to a variety of plants that require different amounts of nutrients, water and sunlight. Each plant finds its preferred home among the slopes, valleys, peaks and streamsides. Sometimes though, weather events can change the perfect forest home into a mess of stumps and logs.

Can you find a vista of the forest?



Can you find any mycelium?



Can you find a "Turkey Tail" fungi?



Fungi Feed Forests

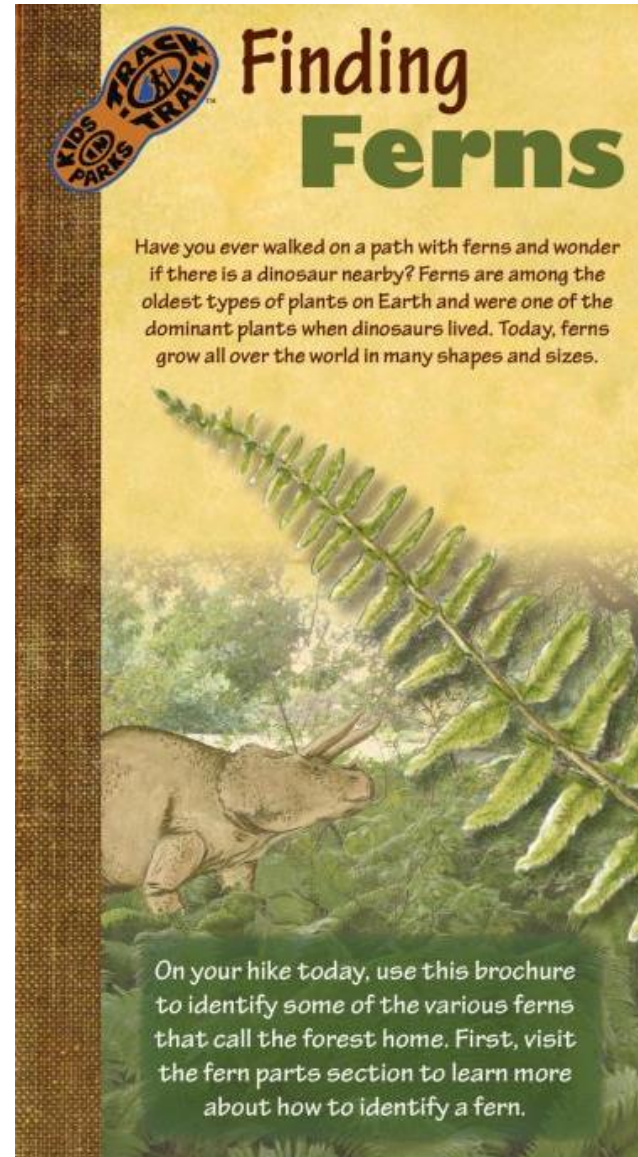
Fungi help break down and decompose everything in the forest, from dead trees and fallen logs to leaf litter. Fungi have large, underground networks of "roots" called mycelium that attach themselves to the roots of plants and trees. The plants provide water for the fungi, and the fungi help the plants gather nutrients. Fungi "fruits," or mushrooms, provide food for many insects and animals.

Finding Ferns

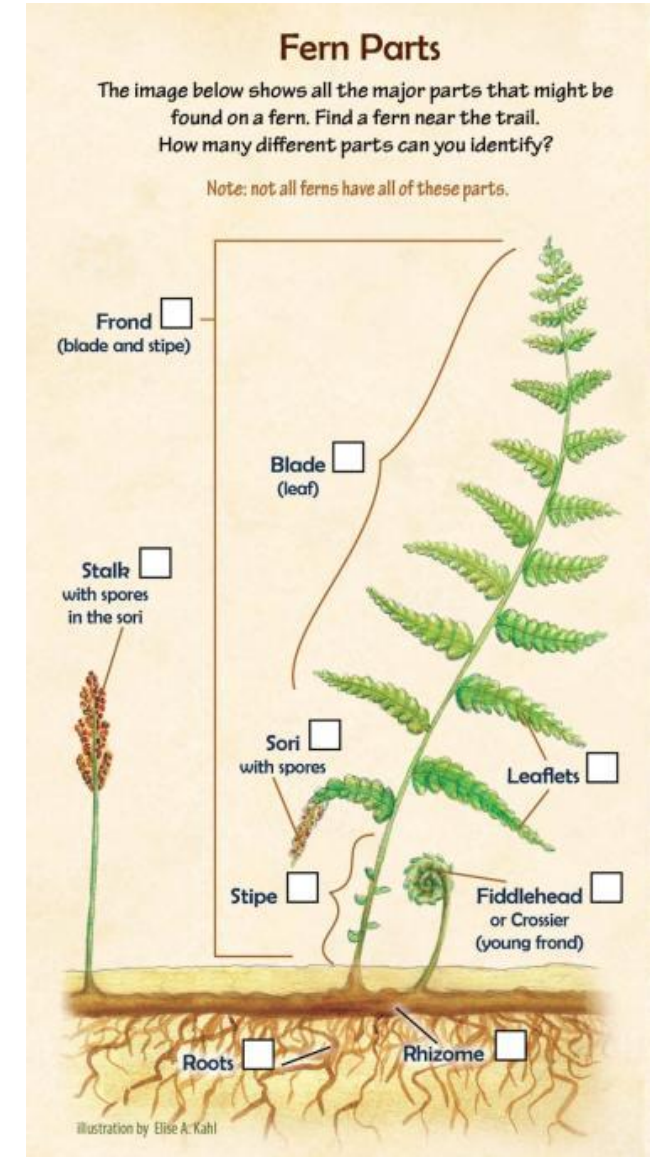
Our Finding Ferns brochure helps kids discover some of the common ferns along the trail.

The brochure also shows the different forms ferns can take and what different parts of a fern are called.

This brochure is most appropriate for children ages 6 - 12.



Cover



Outside Panel

Finding Ferns

Inside 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

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

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

Cinnamon Fern ☐
(*Osmunda cinnamomea*)

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



stalk with sori

Ht. 1-3' tall

subleaflets

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



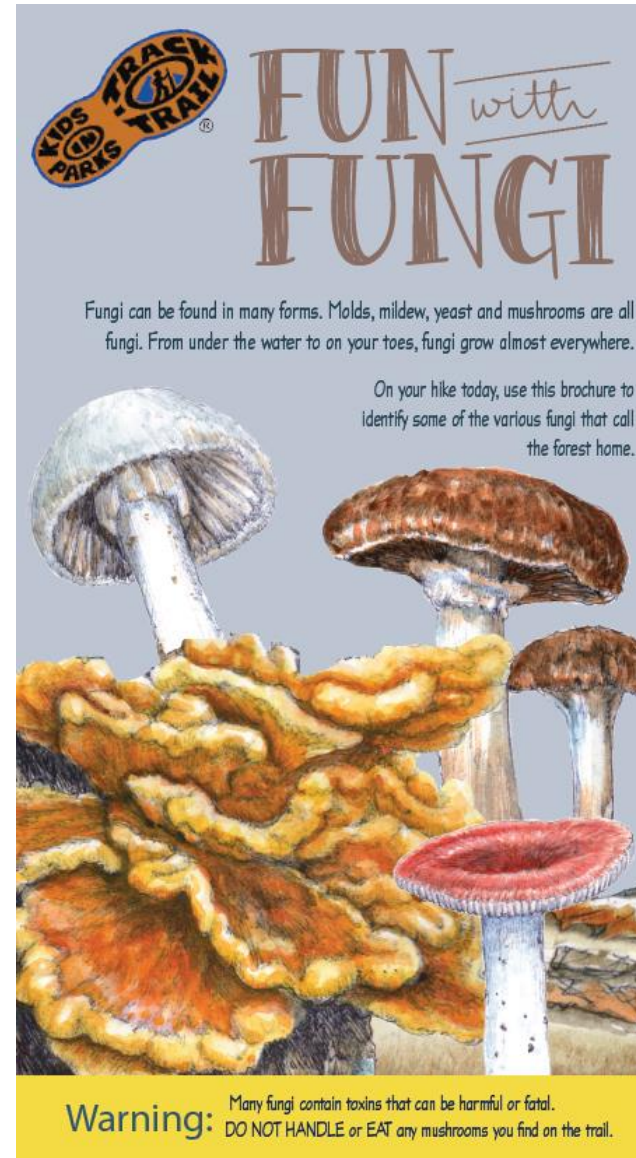
Illustrations by
David Williams, WingingItWorks

Fun with Fungi

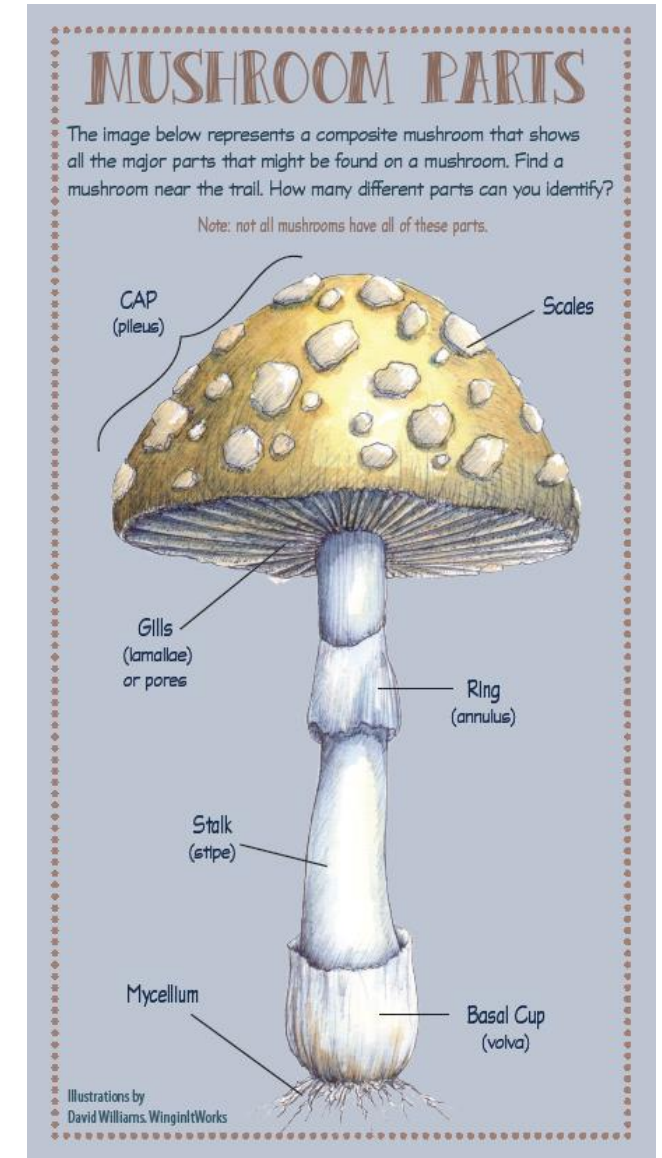
Our Fun with Fungi adventure introduces kids to the life of fungi and shows them how to identify some of the more common mushrooms in the woods.

Kids will also learn what different mushroom parts are called and the important role fungi play in the forest.

This brochure is most appropriate for children ages 6 - 12.



Cover



Outside Panel

Fun with Fungi

Inside 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.

AGARICS Gillied 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



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?

MUSHROOMS AND FUNGI

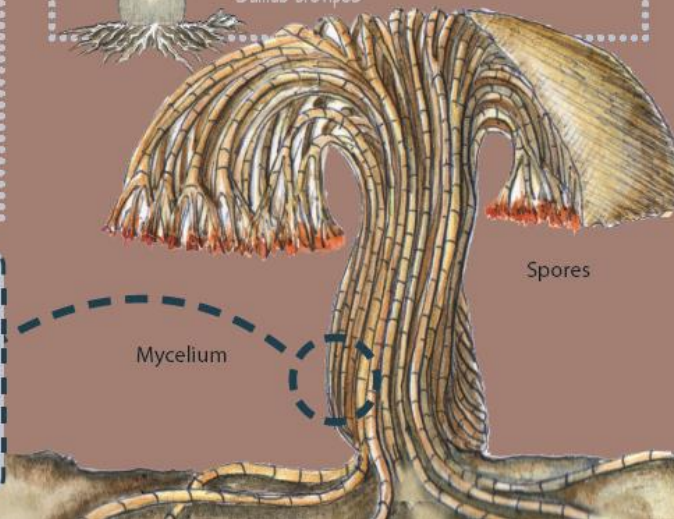
Check the circle next to each type of fungi you find on your hike.

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



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?

- Yellow Morel
Morchella virginiana



- Yellowfoot (funnel chanterelle)
Craterellus tubaeformis

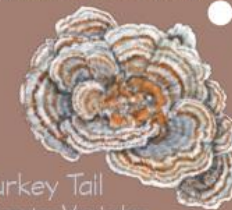


BRACKET FUNGI

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



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?

Bug Out

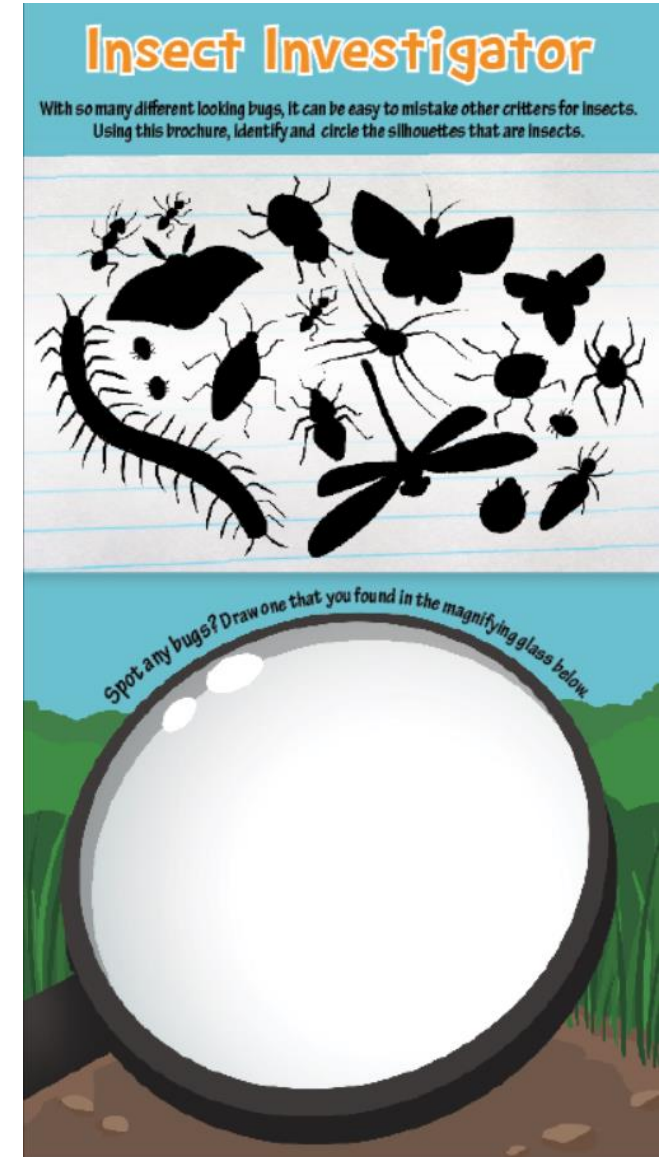
The "Bug Out" brochure is an investigation into the creepy crawlies of the forest.

This adventure will help kids learn how to tell the difference between insects, spiders and other arthropods... as well as identify some of the more common bugs along the trail.

This brochure is appropriate for children ages 4 - 10



Cover



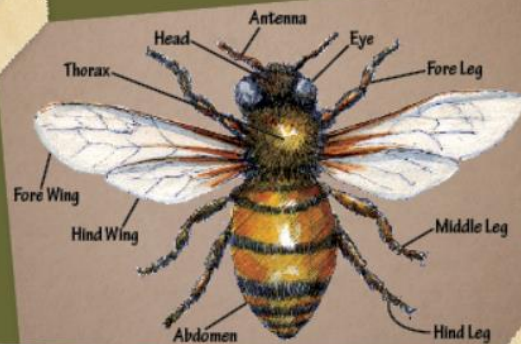
Outside Panel

Bug Out

Inside Panels

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 (roly-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

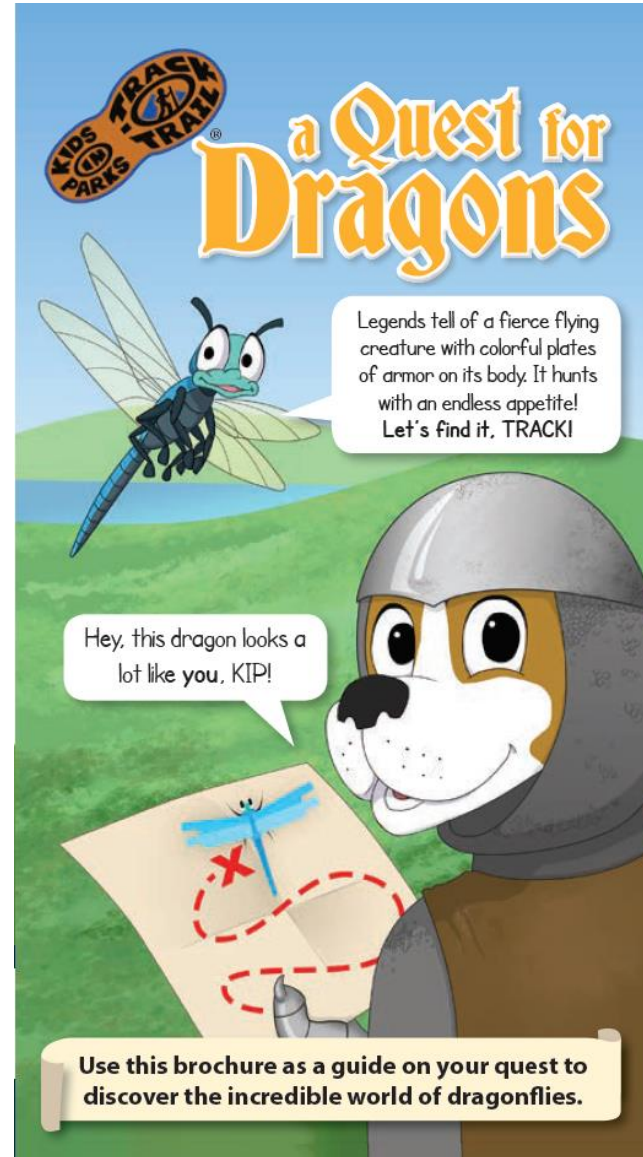


Cocoons

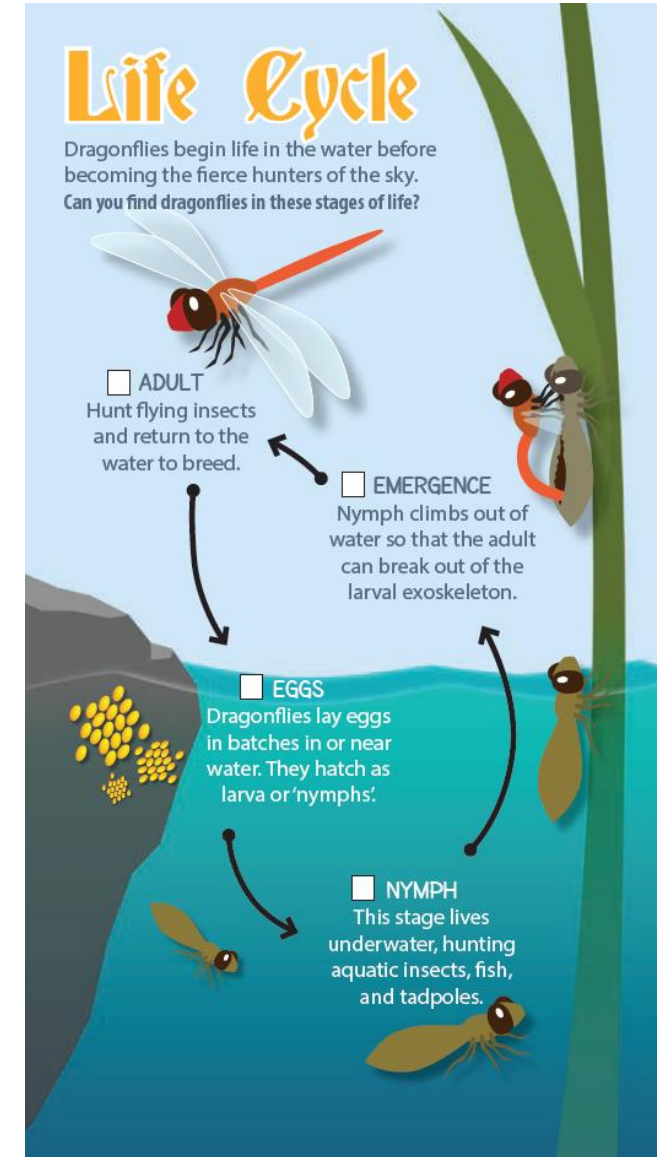
A Quest for Dragons

"A Quest for Dragons" is all about dragonflies! This brochure illustrates the life cycle of a dragonfly, a dragonfly's anatomy, as well as lists common species that can be found across most regions.

This brochure is appropriate for children ages 6 - 12



Cover



Outside Panel

A Quest for Dragons

Inside 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'.

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?



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?



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.

Decomposers of the Dead

“Decomposer of the Dead” teaches kids the importance of decomposers and scavengers in an environment, the difference between the two, and what sorts of things they help breakdown.

This brochure is appropriate for children ages 7 - 12



Cover



Outside Panel

Decomposers of the Dead

Inside 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. **X** 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

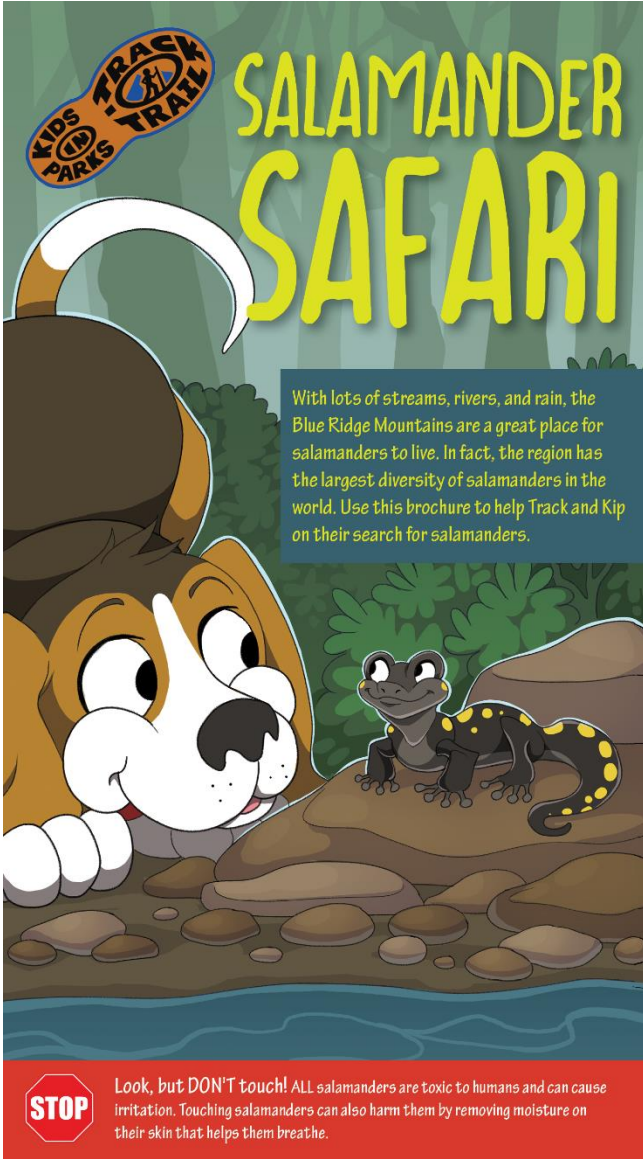
It can take over 100 years for fungi and bacteria to completely "eat" a fallen tree. As you hike the trail, count logs you find in different stages of decomposition.



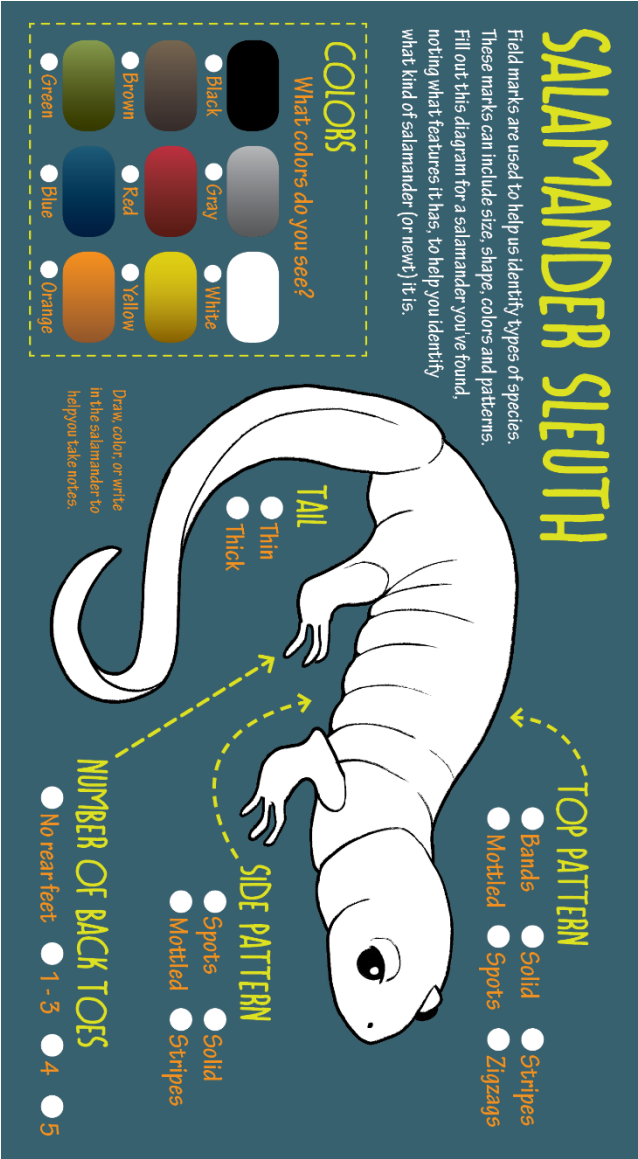
Salamander Safari

“Salamander Safari” is a great brochure for the Appalachian region, with species of salamanders endemic to the area. Kids learn about the unique life cycles of salamanders (and newts) and how to take field notes to identify a salamander they observed.

This brochure is appropriate for children ages 7 - 12



Cover



Outside Panel

Salamander Safari

Inside 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

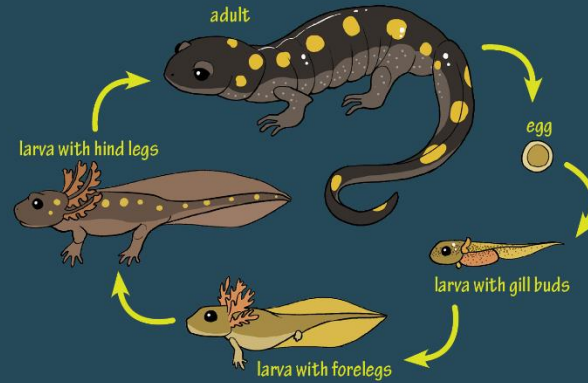
the world's third largest salamander lives in the Blue Ridge Mountains?

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?



e-Adventures

Kids in Parks has converted some of our most popular TRACK Trail brochures into e-Adventures that kids can do on a smart phone or tablet. Kids can complete these e-Adventures in their backyard, schoolyard, local park, on an official TRACK Trail, or anywhere in between. The following brochures have corresponding e-Adventures:

- Nature's Hide & Seek
- Animal Athletes
- Flower Power
- Bug Out
- Hikin' to Find Lichen
- Birds
- Nature's Relationships



Other e-Adventures can be found at kidsinparks.com. Opportunities to create e-Adventures for site-specific brochures also exist.

Customizable Brochures

These brochures have a standard template but can be customized for you site or region.

- Need for Trees
- Birds

We are always developing new customizable brochures. Contact us if we don't have a brochure topic that you think could be a good additional to our collection.



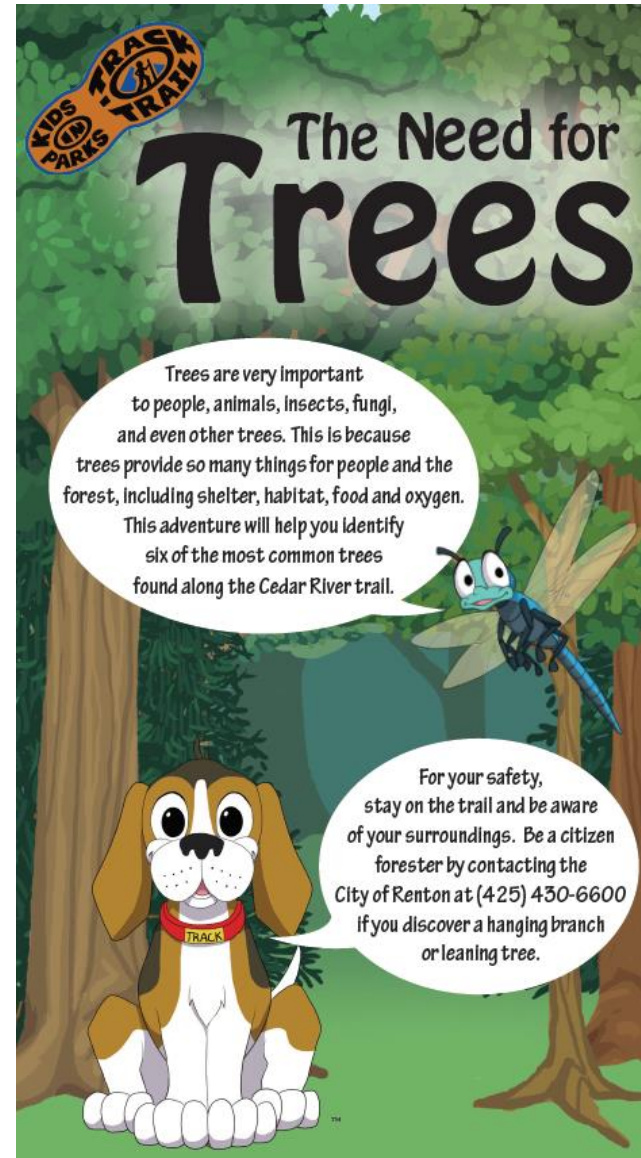
The Need for Trees

By following the picture and textual clues found in "The Need for Trees" brochure, kids will discover six of the more common trees found along the trail.

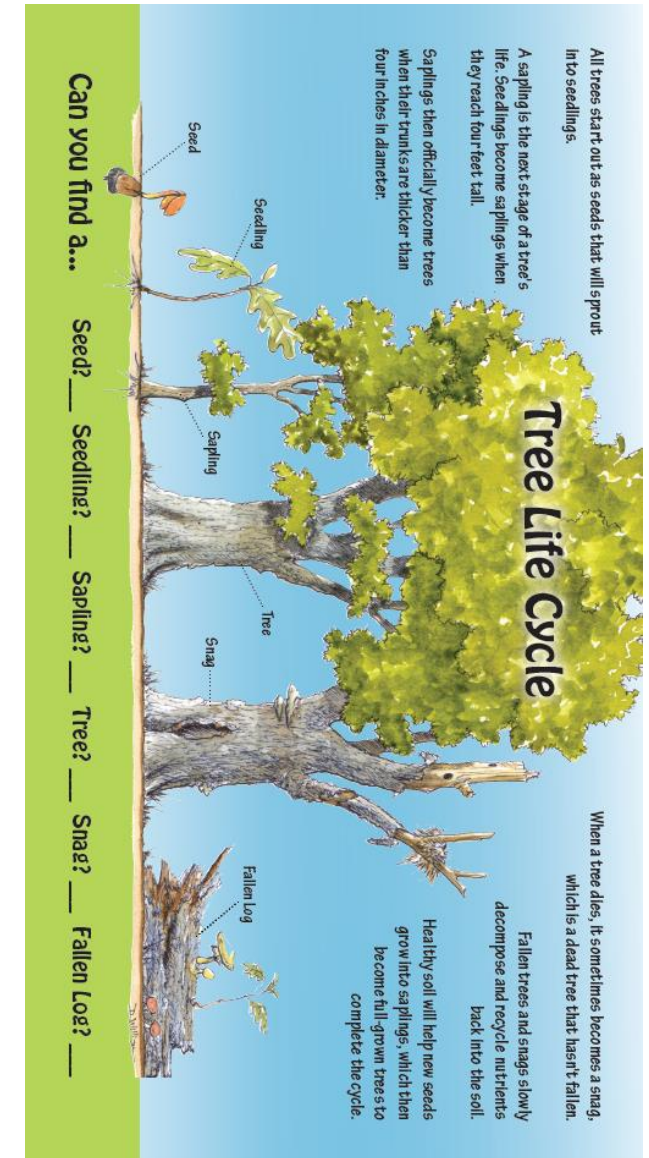
During their adventure, kids will learn about the need that people and other animals have for trees and about the roles trees play in the forest.

This brochure is most appropriate for children ages 6-10.

A list of trees that have been featured in this brochure (so far) is included. Choose 6 of these or let us know if your park prominently features a species not listed.



Cover



Outside Panel

The Need for Trees

Inside Panels

● Oregon Ash (*Fraxinus latifolia*)



The wood from the Oregon ash is used for many things, including furniture, flooring, boxes, and fuel. It can be recognized by its deeply ridged bark that creates diagonal patterns. It also has oblong leaves that are pinnately compound, with 5 to 7 leaflets growing opposite of each other except at the end. The Oregon ash also produces canoe-shaped samaras, or pouches, to carry its seeds.

● Douglas Fir (*Pseudotsuga menziesii*)



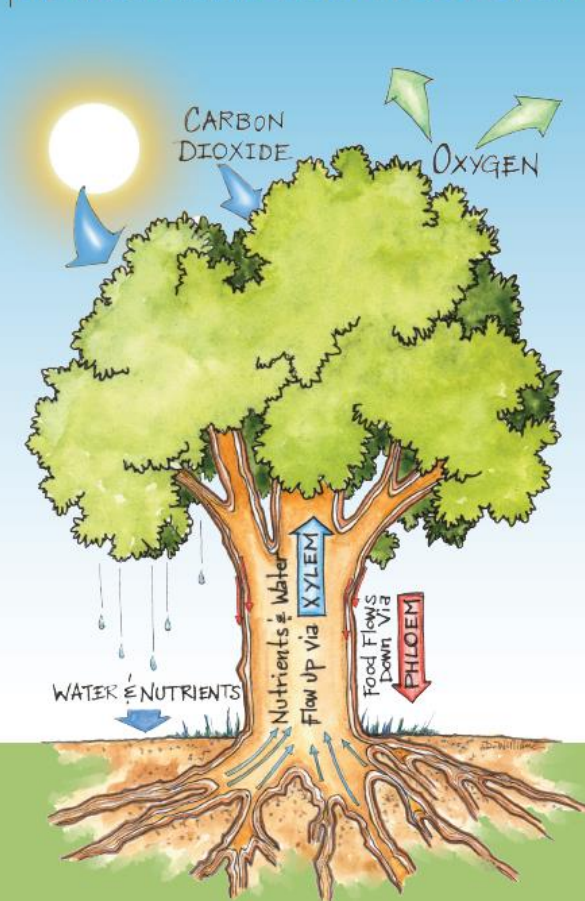
Douglas firs have a straight trunk, a spire-like crown, and are capable of growing to over 300 feet tall. The bark is gray to reddish brown with deep grooves that help defend the tree from forest fires, and one inch needles cover the spreading branches of this fir. Along the northwest coast, the Douglas fir is used extensively to build houses. It is also commonly used as a Christmas tree.

● Red Alder (*Alnus rubra*)



This medium-sized tree likes to grow in nutrient-rich areas like floodplains and stream banks. Its narrow trunk tapers into the rounded crown, and its bark is whitish gray with a red inner bark. The red alder's leaves are oval, pointed, and have toothed edges. The leaves are also bright green on top with a greyish underside. The bark of the red alder has been used to make dyes, and the wood is good for smoking meat.

The Need to Know: How Trees Grow



Plants and trees have the ability to make their own food in a process known as **photosynthesis**. They do this by sucking water and nutrients from the soil up through their xylem and into their leaves. The water and nutrients are combined with carbon dioxide and sunlight to make a sugary food called **glucose**. This food then travels down through the phloem to the rest of the tree, so it can grow.

Illustrations by David Williams, Wiggins' in Woods

● Bigleaf Maple (*Acer macrophyllum*)



The bigleaf maple leaves can grow between 6 to 12 inches wide and have five deep lobes with wavy, toothed edges. This tree is able to grow over 100 feet tall, and its crown has large, spreading limbs. The bark is gray with shallow grooves when it is older, and the bigleaf maple produces clusters of yellow-green flowers in the spring which later become samaras, or pouches, to carry its seeds. Bigleaf maple wood is used for making furniture and instruments.

● Black Cottonwood (*Populus trichocarpa*)



Cottonwoods are best known for their fuzzy fruits, which drift from the trees in the spring and early summer to give the appearance of a light snowfall. This tree also has dark-colored bark, hence its name "black cottonwood." During the spring and summer, the light green leaves of these tall trees can indicate sources of water in drier places. Resin from the black cottonwood is used in medicine and perfume.

● Sitka Willow (*Salix sitchensis*)



The Sitka willow is a multi-stemmed tree that can grow up to around 25 feet tall, with smooth, grey or brown bark. This willow can be readily recognized by its leaves, which are oblong and lance-shaped. But what makes the Sitka willow leaves unique are hairs on the undersides of the leaves that reflect light, giving them a silvery appearance. These trees are great for preventing erosion on stream banks.

The Need for Trees List

Please note - this list is always growing. Let us know if there's a tree you'd like to feature but do not see listed.

- American Beech
- American Holly
- American Linden
- American Sycamore
- Arroyo Willow
- Bald Cypress
- Bitternut Hickory
- Black Cherry
- Black Locust
- Black Tupelo
- Black Walnut
- Bur Oak
- California Pepper
- Canary Island Pine
- Cherry Birch
- Chestnut Oak
- Coastal Live Oak
- Common Alder
- Cottonwood
- Eastern Hemlock
- Eastern Red Cedar
- Flowering Dogwood
- Fremont Cottonwood
- Green Ash
- Hackberry
- Loblolly Bay
- Loblolly Pine
- Longleaf Pine
- Northern Red Oak
- Paper Birch
- Pawpaw
- Pignut Hickory
- Pitch Pine
- Plains Cottonwood
- Pond Cypress
- Ponderosa Pine
- Red Maple
- Red Spruce
- Redbay
- Redbud
- Rhododendron
- River Birch
- Sassafras
- Shagbark Hickory
- Silver Maple
- Sourwood
- Southern Red Oak
- Striped Maple
- Sugar Maple
- Sweetbay Laurel
- Sweetbay Magnolia
- Sweetgum
- Tulip Poplar
- Virginia Pine
- Water Oak
- Water Tupelo
- Western Sycamore
- White Oak
- White Pine
- Willow
- Yellow Birch

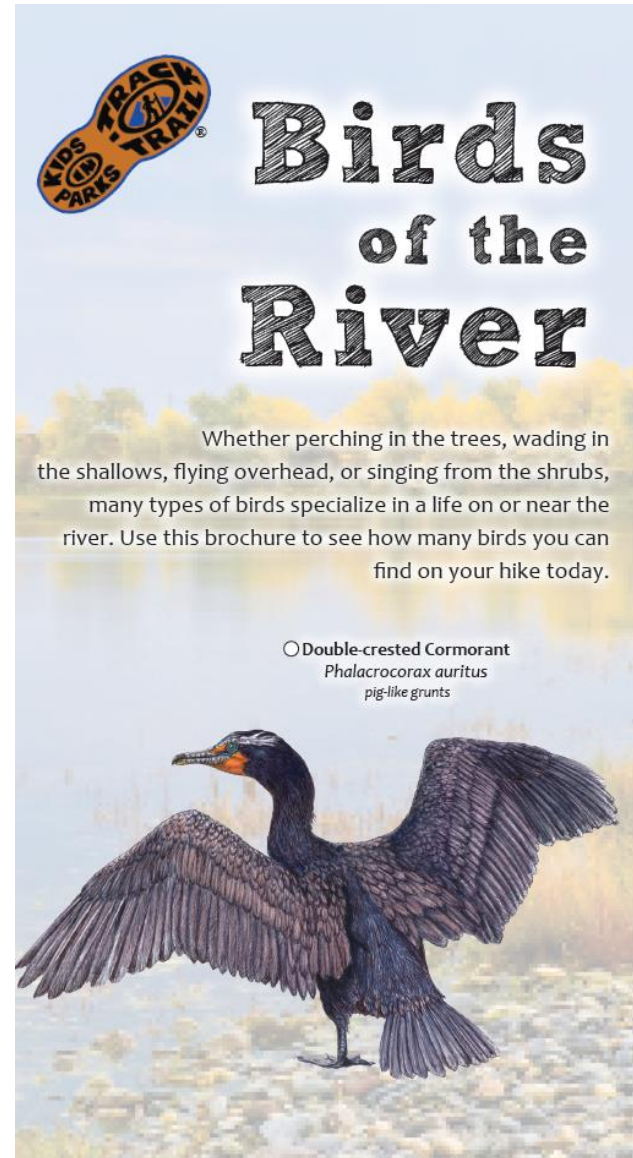
Birds of the [Region or Location]

The Birds of [Location or Region] brochure shows kids how to identify birds along the trail.

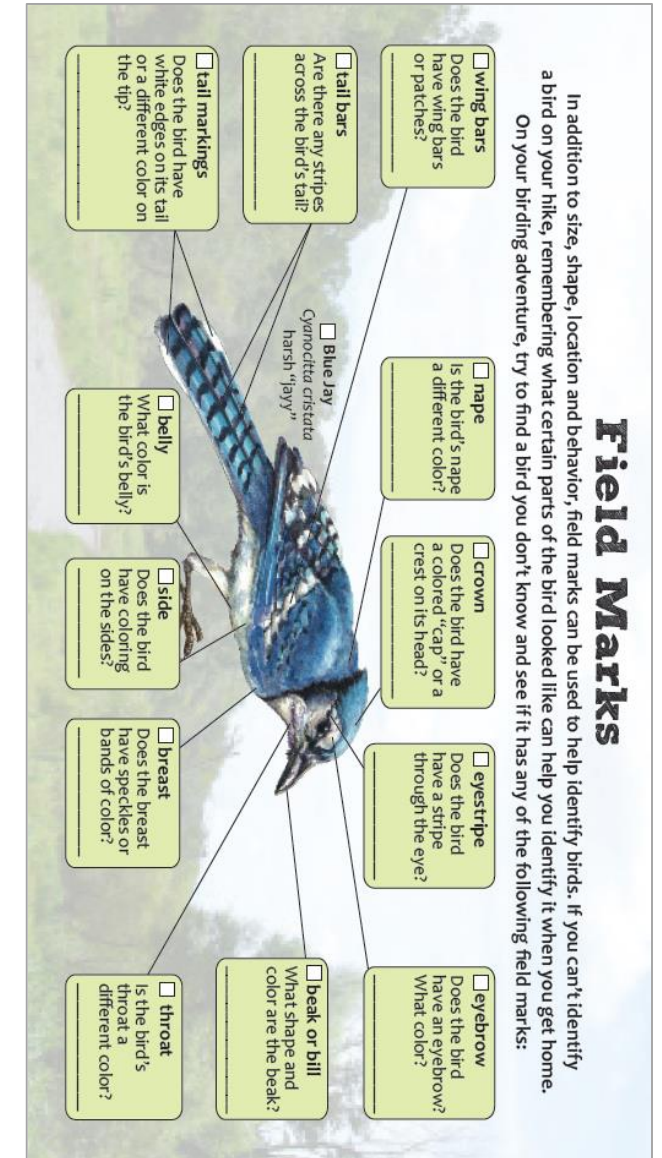
The brochure contains illustrations of some of the more common woodland birds and information on how to identify them through various clues. This brochure is most appropriate for children ages 6 - 10.

Originally a set of standard brochures for N.C., the standard brochures are "Birds of the Blue Ridge Mountains", "Birds of the Piedmont," and "Birds of the Coast."

Due to popularity, this brochure is now customizable and a list of available birds is provided.



Cover



Outside Panel

Birds of the [Region or Location]

Inside Panels

What kind of bird is that?

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

Next, observe its appearance. Is it big like a crow, or small like a sparrow? Does it have pointy wings, or a long tail? What color is it? And what sort of markings does it have?

These things can help you identify the birds you are looking at!

Check off the birds you find on your hike today!

○ Great Blue Heron
Ardea herodias
squawking "roh-roh-roh"
or rapid "frawnk" squawk

○ American Cliff Swallow
Petrochelidon pyrrhonota
varied "pidaro pidaro pidaro"

○ Canada Goose
Branta canadensis
loud honks, barks, and cackles

○ American Crow
Corvus brachyrhynchos
"caw, caw, caw"

○ American Bald Eagle
Haliaeetus leucocephalus
high-pitched whistling or piping notes

○ Turkey Vulture
Cathartes aura
low, throaty hissing

○ Red-tailed Hawk
Buteo jamaicensis
hoarse, screaming "kee-eeee-arr"

○ Northern Parula
Setophaga americana
rising, buzzy trill

○ Cedar Waxwing
Bombycilla cedrorum
high-pitched, trilled "bzeee"

○ Baltimore Oriole
Icterus galbula
series of short notes;
flute-like sound

○ American Goldfinch
Spinus tristis
"po-ta-to-chip"

○ Rock Dove (Pigeon)
Columba livia
throaty "coos"

○ Northern Cardinal
Cardinalis cardinalis
"cheer, cheer, cheer"

Illustrations by David Williams
Wingin' It Works

Birds List

Please note - our list of available birds is always growing. Let us know if there's a bird you'd like to feature but do not see listed.

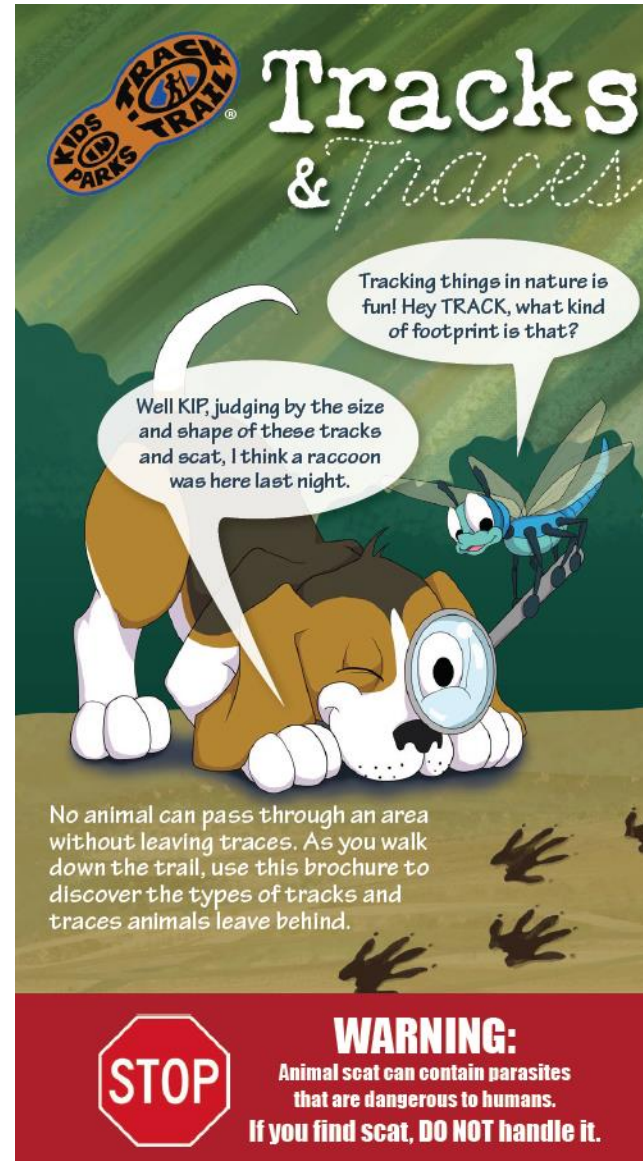
- American Woodpecker
- American Cliff Swallow
- American Coot
- American Crow
- American Goldfinch
- American Kestrel
- American Robin
- American Tree Sparrow
- American White Pelican
- Anna's Hummingbird
- Bald Eagle
- Baltimore Oriole
- Barn Swallow
- Belted Kingfisher
- Black and White Warbler
- Black Phoebe
- Black Vulture
- Black-capped Chickadee
- Black-crowned Night Heron
- Black-headed Grosbeak
- Blue Jay
- Blue-winged Teal
- Brown Thrasher
- Brown-headed Nuthatch
- California Gnatcatcher
- California Quail
- Canada Goose
- Canyon Wren
- Carolina Chickadee
- Carolina Wren
- Cattle Egret
- Cedar Waxwing
- Cooper's Hawk
- Dark-eyed (White-winged) Junco
- Double-crested Cormorant
- Downy Woodpecker
- Eastern Bluebird
- Eastern Kingbird
- Eastern Phoebe
- Eastern Towhee
- Gadwall
- Gray Catbird
- Great Blue Heron
- Great Horned Owl
- Great-tailed Grackle
- Green Heron
- Hairy Woodpecker
- House Finch
- House Sparrow
- Killdeer
- Laughing Gull
- Light-footed Clapper Rail
- Long-billed Curlew
- Mallard
- Marsh Wren
- Mountain Bluebird
- Mourning Dove
- Nashville Warbler
- Northern Cardinal
- Northern Flicker
- Northern Mockingbird
- Northern Parula
- Orchard Oriole
- Osprey
- Ovenbird
- Pied-billed Grebe
- Pileated Woodpecker
- Purple Martin
- Red-bellied Woodpecker
- Red-cockaded Woodpecker
- Red-headed Woodpecker
- Red-naped Sapsucker
- Red-tailed Hawk
- Red-winged Blackbird
- Ring-necked Pheasant
- Roadrunner
- Rock Dove
- Rose-breasted Grosbeak
- Ruby-throated Hummingbird
- Scarlet Tanager
- Sharp-shinned Hawk
- Snowy Egret
- Spotted Towhee
- Tree Swallow
- Tufted Titmouse
- Turkey Vulture
- Western Bluebird
- Western Kingbird
- Western Meadowlark
- Western Scrub Jay
- Western Tanager
- White-breasted Nuthatch
- White-tailed Kite
- Wild Turkey
- Wood Duck
- Wood Thrush
- Yellow Warbler
- Yellow-rumped Warbler

Tracks & Traces

Every animal leaves "tracks and traces" of its presence when they pass through an area. From footprints, to scat (poop), to other traces like food scraps, animals leave clues of their presence everywhere.

The "Tracks & Traces" brochure was designed to help kids identify the various tracks and traces animals leave behind.

This brochure is appropriate for ages 4 - 10.



Cover



Outside Panel

Tracks & Traces

Inside Panels

Raccoon

Raccoon tracks have five toes on their front and rear paws and resemble miniature human-baby hand prints.



Track (Left/Front)



Scat



Because raccoons are **omnivores** (they eat both plants and animals), their scat can vary in size, shape and color. As a rule of thumb, if you can't identify the scat, treat it as raccoon scat and **DO NOT** disturb it.

Wild Turkey

Can you count to three? Wild turkeys can. As male turkeys strut around, they often drag their wing tips on the ground leaving scrapes. Scrapes are also found where turkeys search for food.



Track



Scat



Scrape

Wild turkey scat is usually large and tubular with a slight curve on one end. Because their diets vary throughout the year depending on what foods are available, their scats vary in appearance and sometimes look like formless blobs.

Bobcat

Cat tracks have four toes on both the front and back feet. Because cats have **retractable claws** (claws that draw back in to their paws), claw marks are usually not present in bobcat tracks.



Track (Left/Front)



Scat



Markings

Containing the hair and bones from their prey, bobcat scat is segmented and round on the ends. Although bobcats have retractable claws which helps keep them sharp, they sometimes sharpen their claws by scratching the trunk of a tree.

White-Tailed Deer

Deer tracks are usually the easiest to find because their hard hooves leave better impressions than the soft paws of other animals.



Track



Scat



Bed

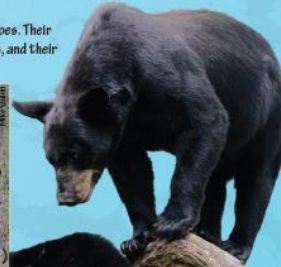
Found in clusters, a deer scat pellet has a dimple on one end and a point on the opposite end. A **deer bed** is a place where a deer likes to rest; look for an oval depression in the ground where leaves or grass are matted down.

Black Bear

Bears tracks have large palm prints with five toes. Their tracks are sometimes capped with claw marks, and their hind-leg tracks leave heel impressions.



Track (Left/Hind)



Scat



Shredded Log

Like raccoons, bears are omnivores. Their scat varies in appearance depending on the time of year and what they have eaten - grasses in the spring, berries in the summer and insects from rotten logs in the fall.

Red Fox

Fox tracks are approximately 2 inches long, capped with claw marks. Their outer toes are completely behind the inner toes, unlike dog tracks.



Track



Scat



Den

Foxes are **opportunistic eaters**, meaning they'll eat almost anything, so their scat can contain bones, fur, seeds, and more. In general fox scat is long, with a rope-like twist and pointed ends.

Site-specific Brochures

The following brochures are examples of custom brochures that have been designed for specific sites or regions. We have designed numerous site-specific brochures over the years covering topics from natural science to history.

Please contact us if you are interested in designing a brochure that is specific to your site, or if you want a brochure that can be used across a specific region.

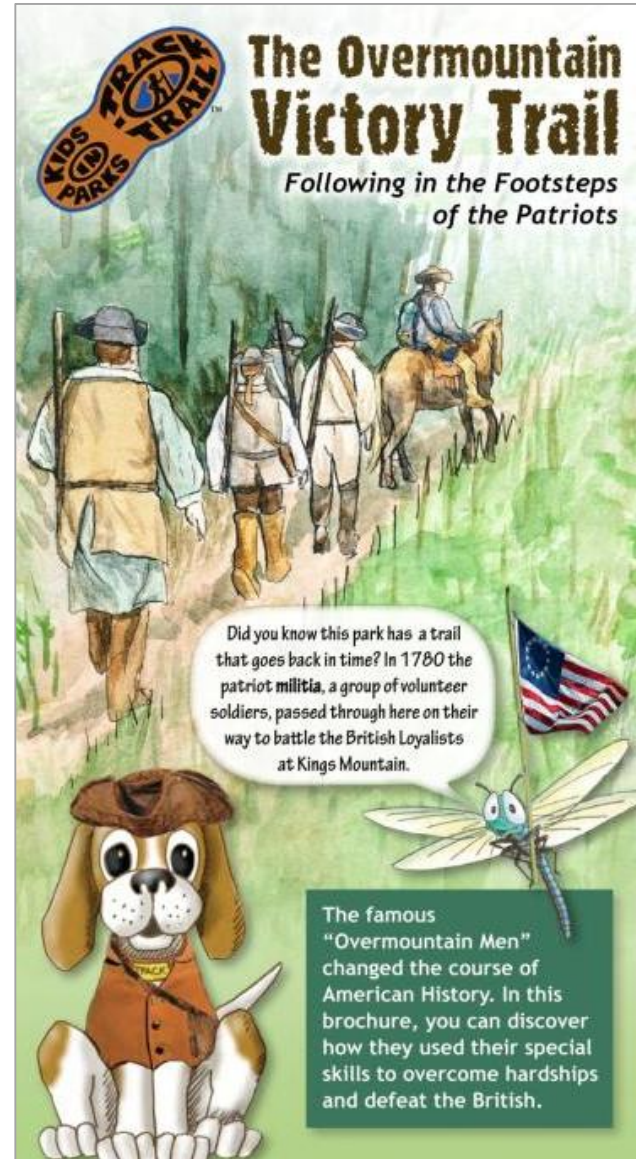


Overmountain Victory Trail

The Overmountain Victory Trail adventure introduces children to the Overmountain Victory Trail and describes how the Overmountain Men used their wilderness and hunting skills to defeat the British Loyalists at Kings Mountain.

This brochure can be used in any park that has a portion of the Overmountain Victory Trail running through it.

It is most appropriate for ages 6 - 12

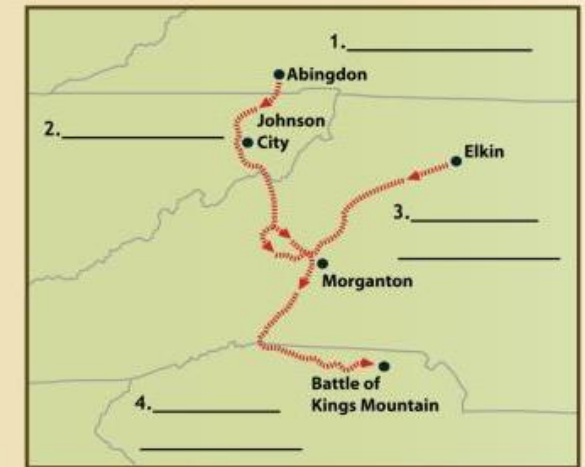


Cover

Our History, Our Trail

The path you are on is part of the Overmountain Victory National Historic Trail. It was created by the United States Congress in 1980 and is 330 miles long, honoring an important event during our War for Independence. The Trail is administered by the National Park Service, with many partners along the route.

*Can you label the 4 states on the map that the Overmountain Victory Trail passes through?
Where are you on the map?*



*Have you been to any other
National Trails or National Parks?*

To find out more more about the Overmountain Victory Trail, other National Trails and your National Parks, visit:



www.nps.gov/ovvi
www.pnts.org
www.ovta.org



Outside Panel

Overmountain Victory Trail

Inside Panels

Surviving Life in the Wilderness

The Overmountain Men's trek to and from Kings Mountain took weeks. See if you can find some of the following items that they needed daily to survive the journey:



Battling with an 18th-century Weapon

In addition to battling the British Loyalists, the patriot militia had to "battle" with their guns to make them work properly. The long, heavy guns used during the American Revolution were called muzzle-loaders because the bullets were loaded through the "muzzle," or front of the gun. Soldiers on both sides could only fire about 3 rounds per minute. The Overmountain Men hid behind trees for safety while they reloaded their weapons.

Imagine if you had to follow these steps every time you were faced with an enemy:



1. Pour gunpowder in the pan and down the muzzle.



2. Load the wad and ball through the muzzle.



3. Push the ball down with the ramrod.



4. Pull the hammer to fully-cocked position.



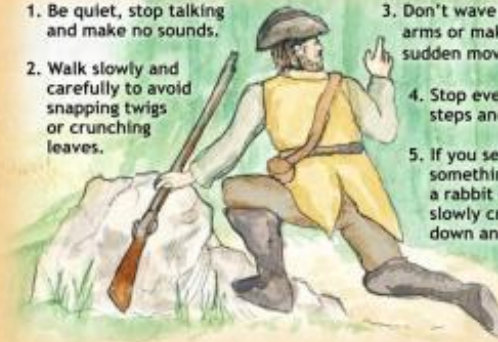
5. Take aim and fire!

From Hunters to Soldiers

The Overmountain Men were made up of farmers and hunters, who did not march in rows and fight out in open fields like the British expected. Instead, they adopted Native American methods of hunting and fighting in the woods. One of these methods was being stealthy (quiet) so that the enemy didn't know you were there.

Try walking like an Overmountain Man:

1. Be quiet, stop talking and make no sounds.
2. Walk slowly and carefully to avoid snapping twigs or crunching leaves.
3. Don't wave your arms or make any sudden movements.
4. Stop every few steps and listen.
5. If you see something (like a rabbit or bird) slowly crouch down and stop.



Now, take turns having one person in your group close their eyes, and see if you can sneak up on each other without being heard.

If you follow these steps you'll be moving through the woods just like the patriot militia did when they were sneaking up on Patrick Ferguson and the British Loyalists at Kings Mountain. These techniques can also help you see more wildlife and hear more sounds while enjoying nature!

Farm, Field & Forest

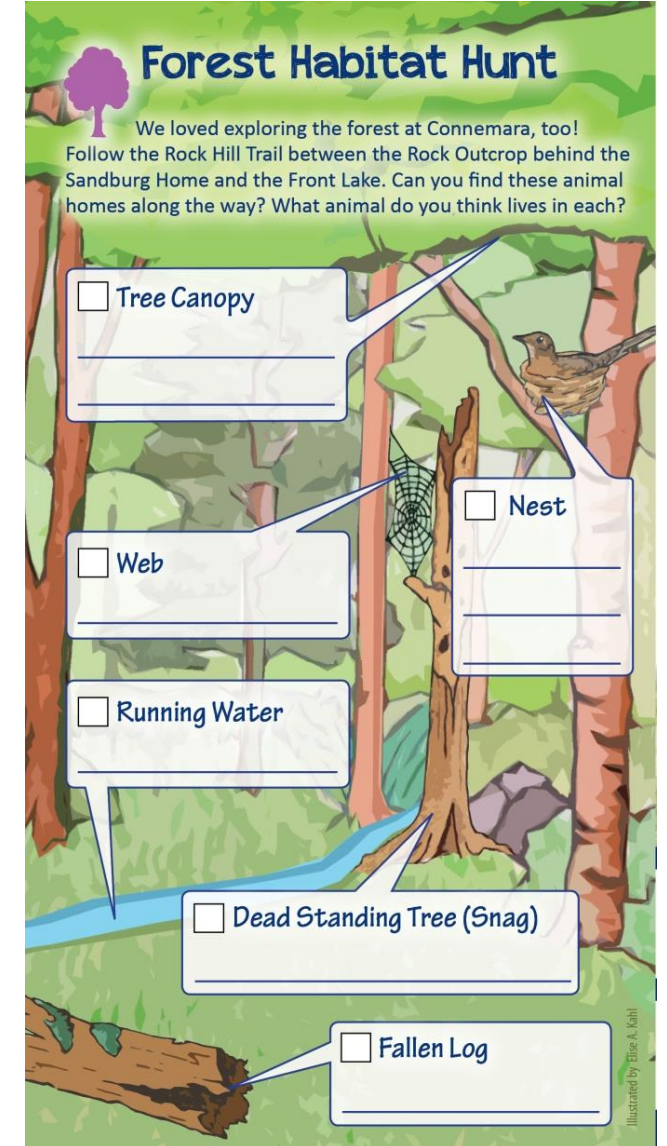
Designed for the Carl Sandberg Home National Historic Site

Carl Sandburg's grandchildren, Paula and John Carl lived at Connemara when they were kids. Follow them as they explore the homes and hiding places of some of their outdoor friends. They'll show you how their family used the land to create new habitats to support plant and animal life.

This brochure is appropriate for children ages 6 - 12



Cover



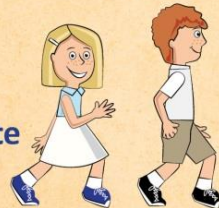
Outside Panel

Farm, Field, & Forest

Inside Panels

Follow our footsteps through Farm, Field & Forest at Carl Sandburg Home National Historic Site

Let's discover together the variety of plants and animals that call this place home. We'll show you how our family used the land to create new habitats to support plant and animal life.





☐ **Margaret's Garden**



Aunt Margaret planted this flower garden to grow beautiful flowers. But flowers aren't just pretty, their nectar and pollen attract birds and bugs that we call pollinators. Pollinators carry pollen from flower to flower which is essential for helping flowers grow into fruit. Can you see some of these pollinators at work?

☐ Butterfly

☐ Bee

☐ Bird

☐ Beetle



Ruby-Throated Hummingbird



☐ **Rock Outcrop**

We often found our Grandfather Carl Sandburg sitting on the rock reading or writing poetry and stories. This flat rock, or granite outcrop, is home to a rare community of plants. Can you find the small plants that live here?

☐ Moss

☐ Saxifrage

☐ Lichen




Michaux's Saxifrage
Reindeer Lichen



☐ **Front Lake Bridge**



We would often visit the Front Lake to watch the fish swimming. See if you can find these animals that call the Front Lake their home.

☐ Fish

☐ Snake

☐ Turtle


 Northern Watersnake


 Common Snapping Turtle



☐ **Vegetable Garden**

We used this patch of land to provide food for our family. We planted a large garden full of tomatoes, corn, beans, pumpkins and more. Can you find a few things that help a garden habitat grow?

☐ Soil
 ☐ Water
 ☐ Sunlight






☐ **Barnyard**

Our Grandmother, Paula, raised her award-winning dairy goat herd along with other animals in these pastures and barnyard. Can you find these three different breeds of goats?





☐ Toggenburg
 ☐ Saanens
 ☐ Nubian




☐ **Pasture**

When we were growing up at Connemara this pasture was home to our horses Storm and Remember. Today the pasture is a home for different grasses, flowers and insects. Can you spot the different plants that share this grassy home?

☐ Grasses

☐ Milkweed


 Common Milkweed

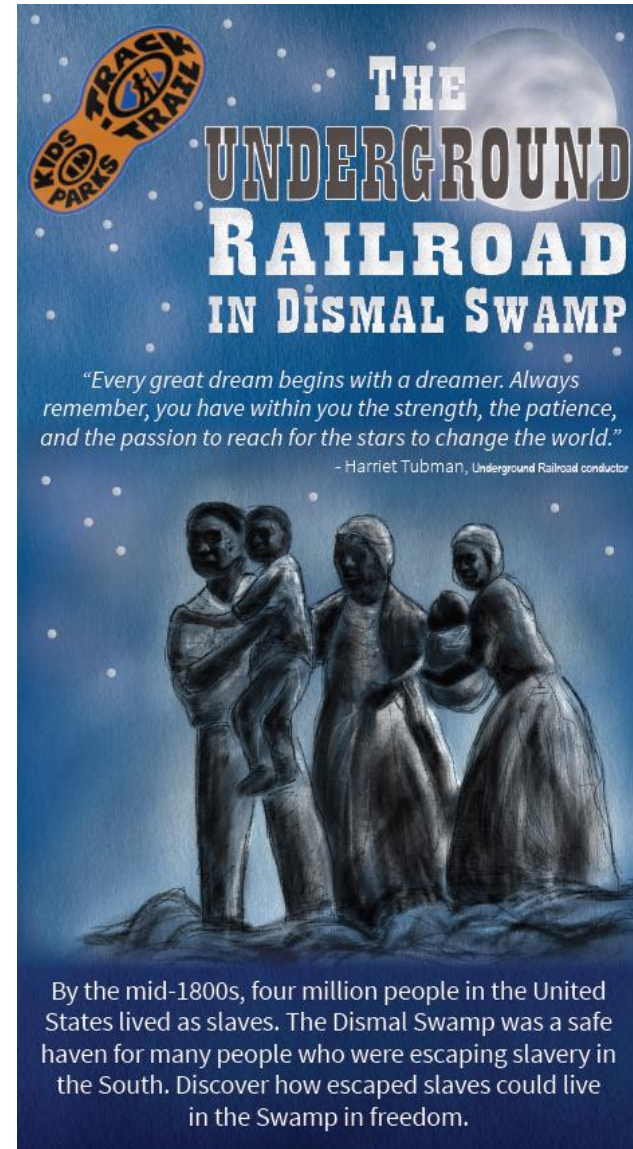
Milkweed is a home for monarch butterflies, providing food and shelter to help monarchs grow from eggs to caterpillars to butterflies.

The Underground Railroad in Dismal Swamp

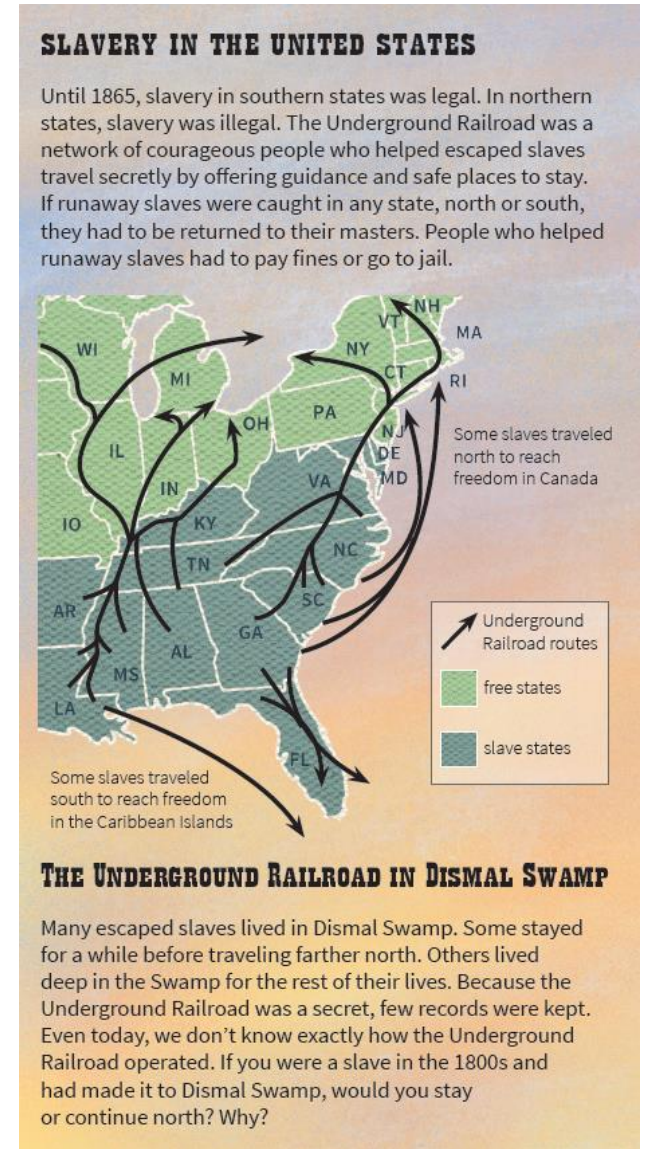
Designed for Dismal Swamp State Park in South Carolina

By the mid-1800s, four million people in the United States lived as slaves. The Dismal Swamp was a safe haven for many people who were escaping slavery in the South. Discover how escaped slaves could live in the Swamp in freedom

This brochure is appropriate for children ages 6 - 12



Cover



Outside Panel

The Underground Railroad in Dismal Swamp

Inside 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. Kahn

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

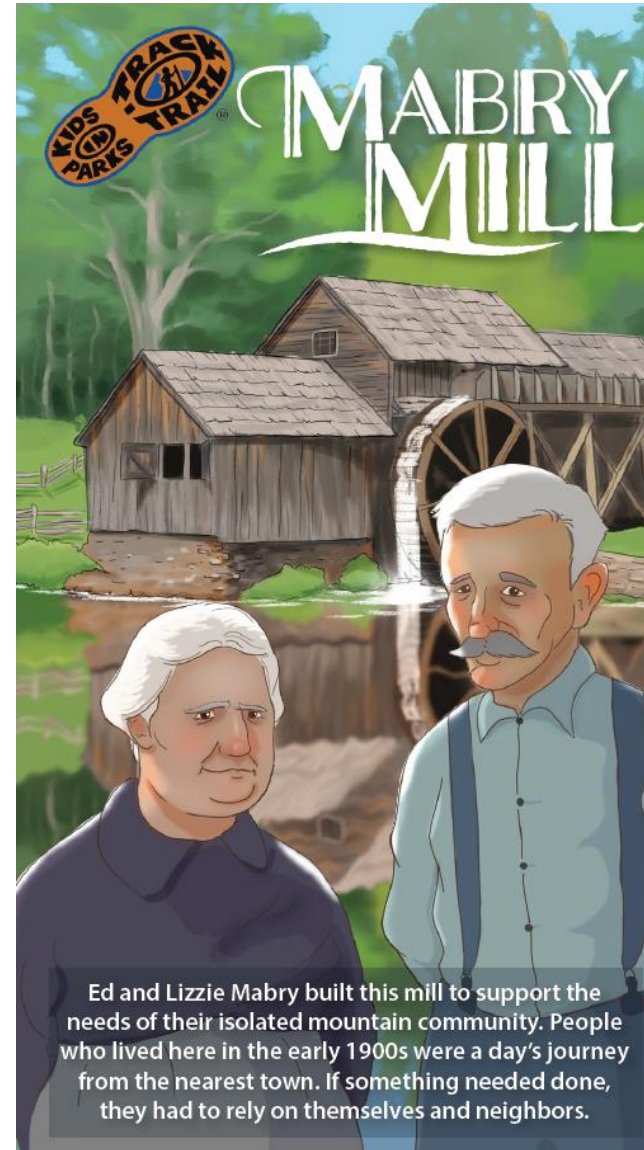
The Underground Railroad is proof that through individual and collective acts of courage, injustices can be overcome. How are you courageous? How will you help others who are treated unfairly throughout your life?

Mabry Mill

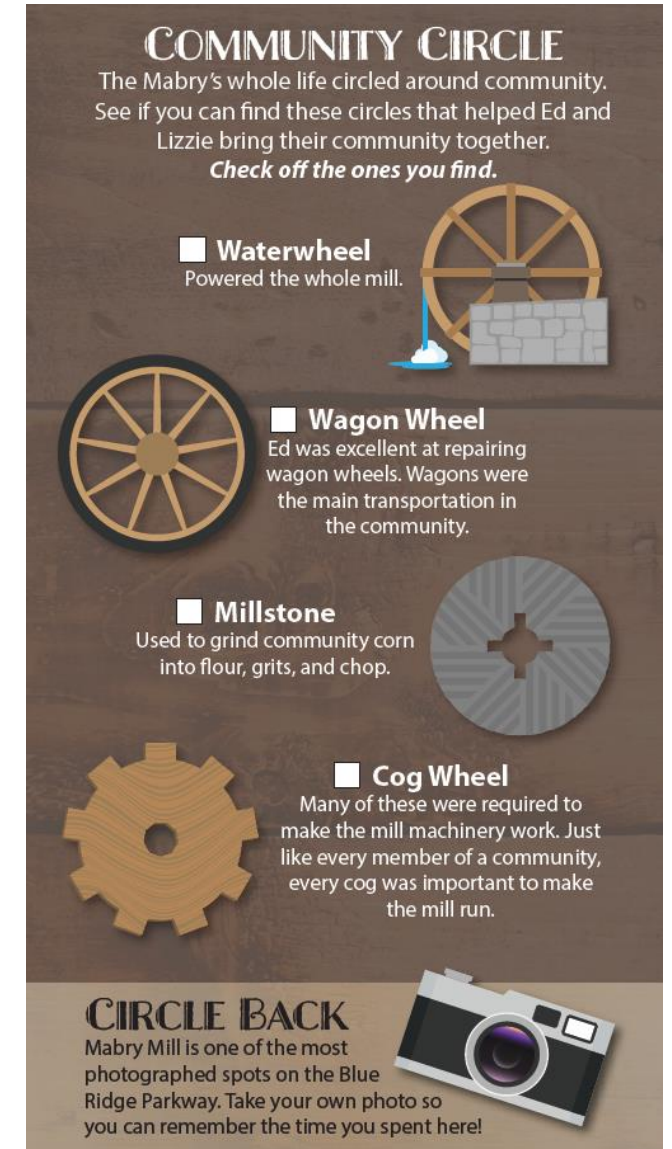
Designed for Mabry Mill at Milepost 176.2 on the Blue Ridge Parkway

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. Use this brochure to see how the Mabrys and their mill helped support their community.

This brochure is appropriate the for children ages 8 - 12



Cover



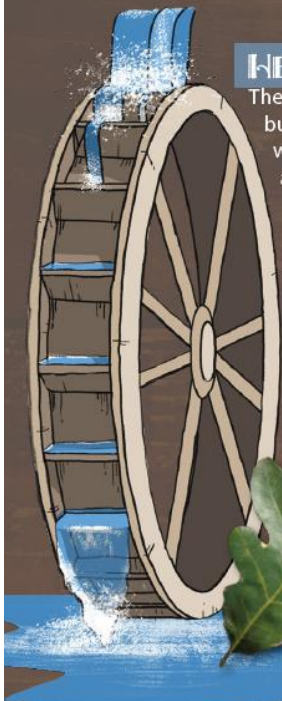
Outside Panel

Mabry Mill

Inside 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

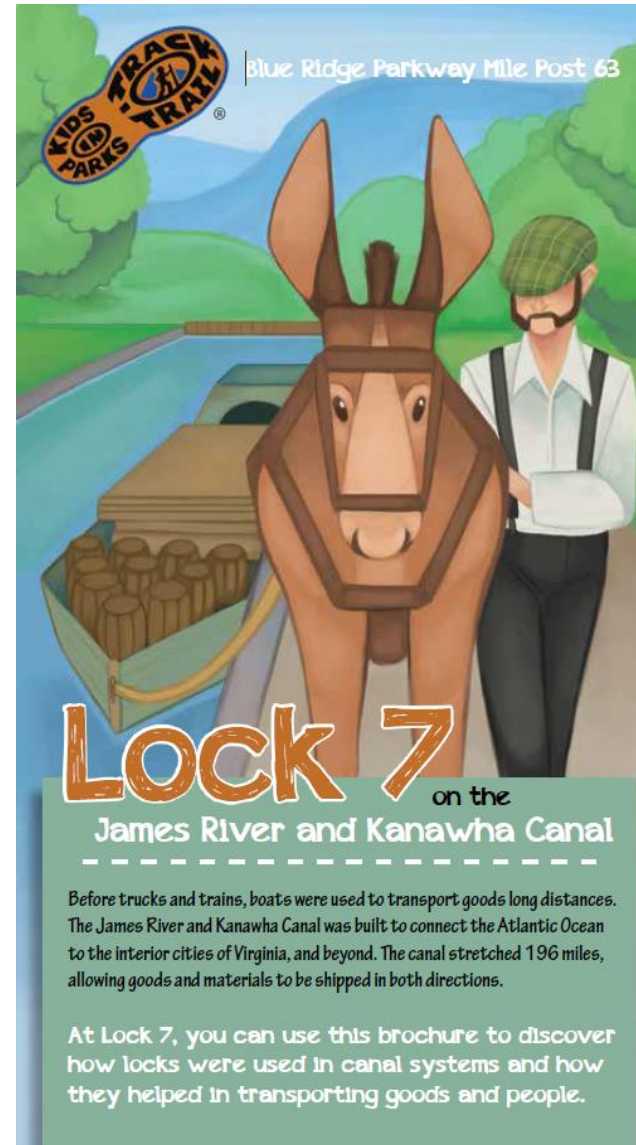
Mabry Mill brings together millions of people from around the world. You may hear different accents or languages and see different styles of clothing. Look at license plates in the parking lot. Which states and countries can you find?

Lock 7 on the James River and Kanawha Canal

Designed for James River Visitor Center at Milepost 63.7 on the
Blue Ridge Parkway

Before trucks and trains, boats were used to transport goods long distances. At Lock 7, you can use this brochure to discover how locks were used in canal systems and how they helped in transporting goods and people by water.

This brochure is appropriate the for children
ages 7 - 12



Cover

Many Modes of Travel Transportation Scavenger Hunt

People continuously develop new modes of transportation, where each generation improves upon the technology of the previous. For example, the James River and Kanawha Canal was left unfinished because railways became more efficient.

Look around you for the different ways we make travel easier, whether its a vehicle or a structure for vehicles. For each category below, write down the things you see.

by Foot

by Road

by Water

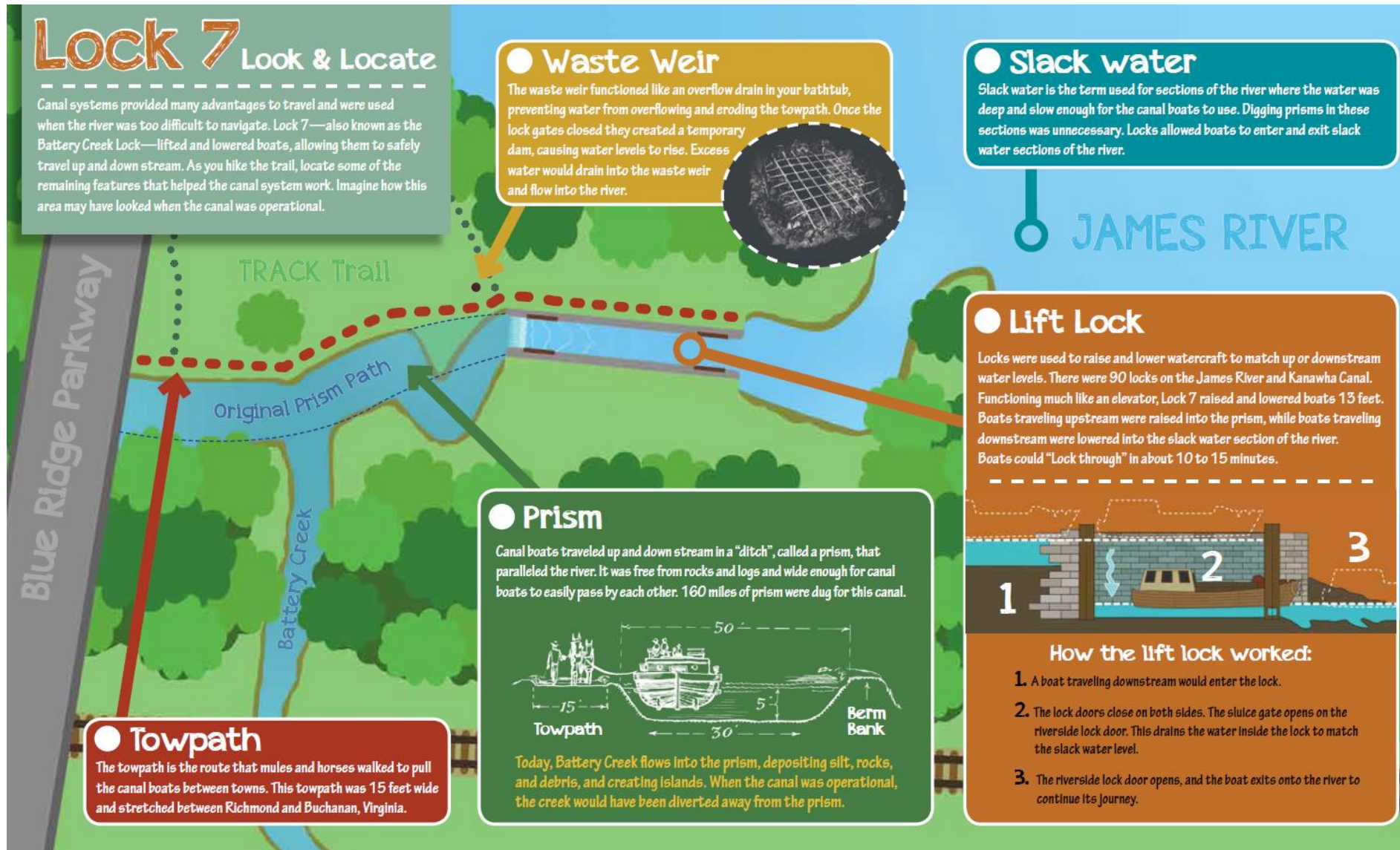
by Rail

by Air

Outside Panel

Lock 7 on the James River and Kanawha Canal

Inside Panels

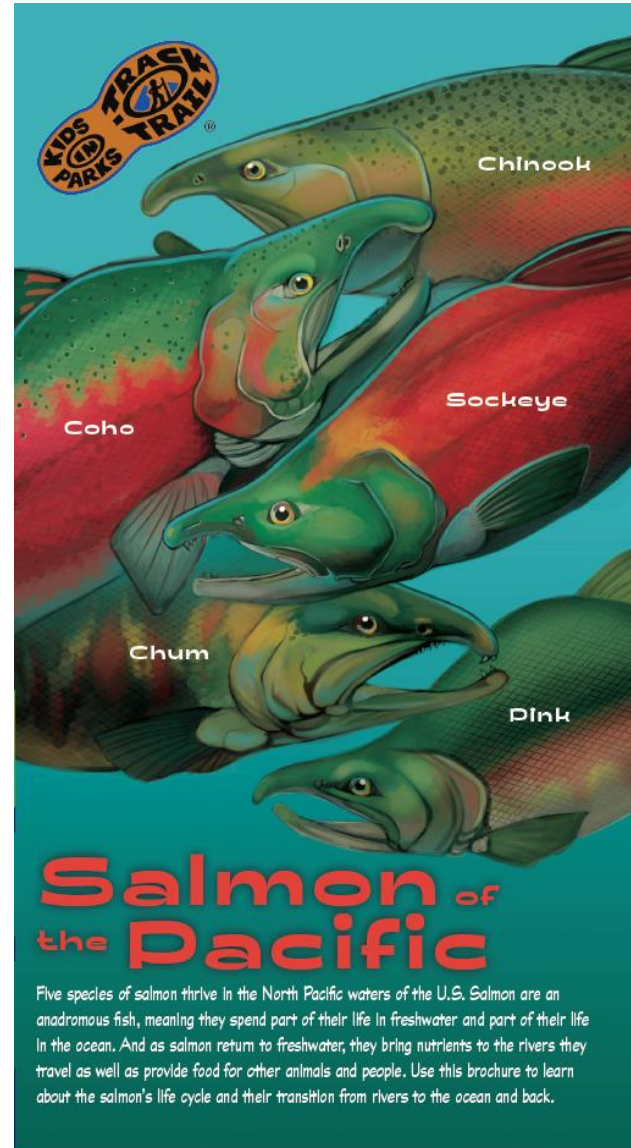


Salmon of the Pacific

Designed for Renton, WA

The Salmon of the Pacific illustrates the life cycle of a salmon and how salmon are important to the ecosystem and people.

This brochure is appropriate for children ages 6 - 12



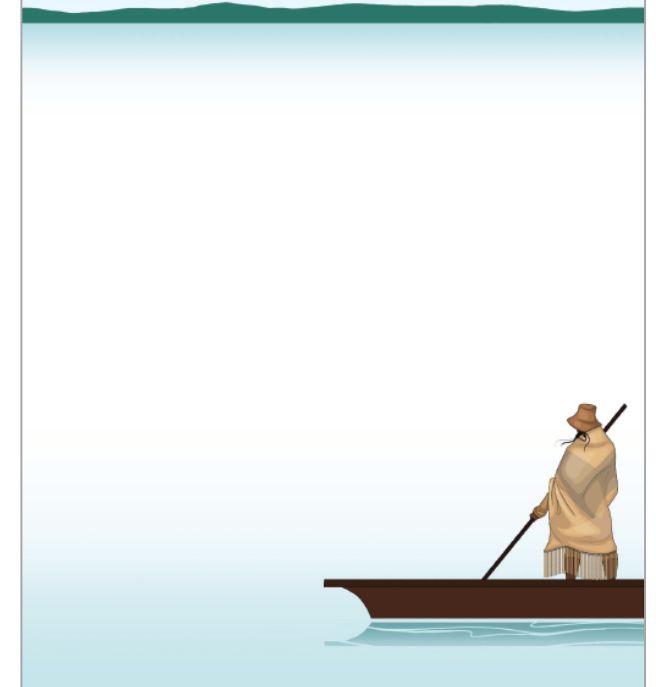
Cover

The Salmon People

Native Nations of the Pacific Northwest define themselves as the Salmon People. They regard salmon as a very important gift of food from the Creator, and during special ceremonies each year, they honor the salmon's sacrifice. These ceremonies are different from place to place, but people ritually prepare and eat the first salmon caught in the spring. Then they return the fish bones to the water in a formal act of thankfulness.

Salmon is not only a foundation of the diets of native peoples, it is also linked to their cultures, communities, and identities. For ages, shovel-nose canoes, which are flat-bottomed and made of a single tree, were used in fishing for salmon in the rivers. Today, there is a growing trend among the Native Nations of the Pacific Northwest to restore the use of shovel-nose canoes.

As you hike today, what types of boats do you see on the water? Draw a picture below of what you see, and think about the different reasons we use boats today.



Outside Panel

Salmon of the Pacific

Inside Panels

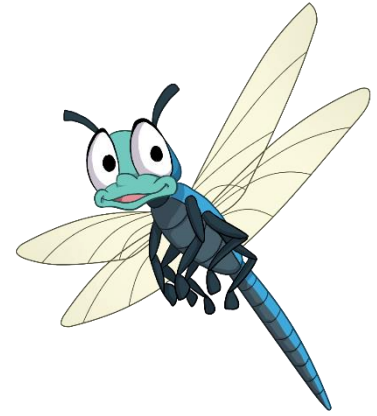


Developing other Brochures and Materials

We are constantly developing new brochures to add to our collection of general brochures. Most of our brochures have been developed out of a site's needs for specific content (i.e. geology, aquatic invertebrates, etc...).

We would be more than happy to assist in the development of new brochures that would be applicable to various locations. Site specific brochure development is also available at an additional fee.

Please feel free to let us know if your site has specific brochure needs that our current list of brochures does not meet.





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