



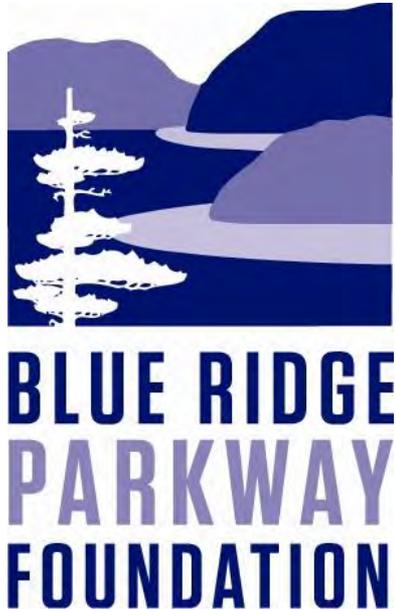


Kids in Parks



A national network of trails designed to get kids and families active outdoors for both their health and the health of our parks.

Founding Partners



An independent licensee of the Blue Cross and Blue Shield Association

In 2008, the Blue Ridge Parkway Foundation, Blue Ridge Parkway (NPS), Blue Cross and Blue Shield of North Carolina Foundation partnered to form the Kids in Parks program.

Kids in Parks – TRACK Trails



Kids in Parks provides a network of self-guided, brochure-led hiking trails designed for kids and their families called TRACK Trails.

Self-Guided Adventures



Each TRACK Trail trailhead has 4 different self-guided, brochure-led adventures. Brochures are used because they're cost effective per visitor contact, available 24 hours per day, provide take-home value, and are the most preferred and used form of visitor information.

Network of Trail Opportunities

The screenshot shows the homepage of Kids In Parks. At the top, there is a navigation bar with links for 'About', 'Contact', 'Help', and 'LOG IN'. Below the navigation bar is a main banner with the text 'Have Fun Outdoors and Win Prizes' and a 'SIGN UP FOR FREE' button. A central graphic illustrates a three-step process: 1. SIGN UP & FIND an adventure, 2. GO for an adventure, and 3. TRACK your adventure and GET prizes. Below this is a search bar for finding adventures, with a dropdown menu showing categories like Hiking, Disc Golf, Canoeing, etc. There is also a 'BLOG' section and an 'ON FACEBOOK' section. At the bottom, there is a footer with contact information and social media links.

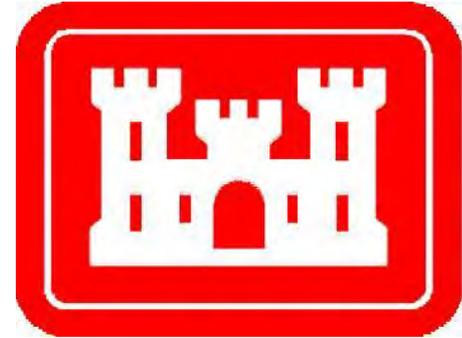
www.KidsInParks.com

This screenshot shows a specific page on the Kids In Parks website titled 'Adventures in North Carolina'. It features a search bar with the text 'ex. Trails near Asheville, NC' and a 'SEARCH' button. Below the search bar is a map of North Carolina with numerous red location pins indicating trail sites. To the right of the map is a list of 'Adventure Type' (Hiking, Disc Golf, Canoeing), 'Features' (any_feature, Water Feature, Vista Point, Peak), and 'Recreational Features' (Picnic Tables, Birding, Fishing, etc.). Below the map, there are two featured trail entries: 'Blue Ridge Parkway' and 'Chimney Rock State Park', each with a small map and a brief description. The bottom right corner of the page lists 'Difficulty' (Easy, Moderate, Strenuous) and 'Amenities' (Restrooms, Visitor Center, Gift Shop, etc.).



TRACK Trail locations are networked through the Kids in Parks program's website; and various social media outlets are used to connect users with trails and the program.

Linking Public Lands



Kids in Parks has partnered with several different major land management agencies to expand their network of trails across state and agency boundaries.

Connect Community Partners



Kids in Parks has formed partnerships with city/county parks departments, schools, universities, pediatrician offices, hospitals, corporations, foundations, private donors, and more to form their network of trails.

Provides Incentives for Participation



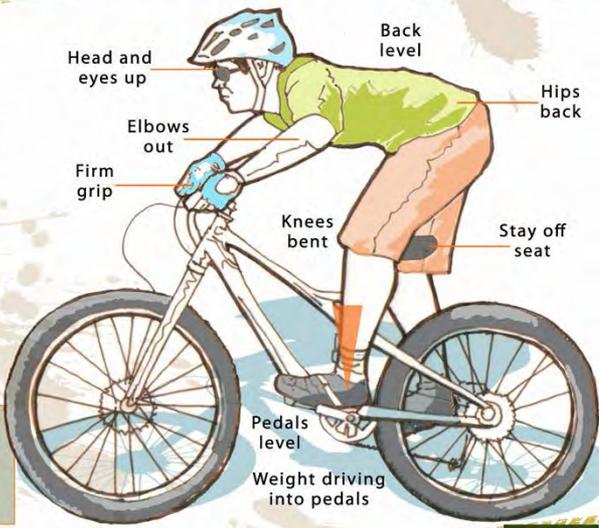
Kids can earn prizes for registering their adventures through the Kids in Parks website. In order to earn their prizes, kids have to answer 12-15 questions about their experience on the trail, which provides assessment about the use of the trails.

Various Types of Trails

BODY POSITIONING

- **Body positioning** is the foundation for all bicycle skills. On the pump track, proper body positioning is going to help you maintain speed, balance and control. Start by standing on your pedals, keeping them level to the ground.
- **Balance** your weight evenly between your feet and your hands. Bend at the waist so that your back is level to the ground, with your knees bent, elbows out and head up.
- **Stay relaxed** as you encounter the obstacles on the track.

Avoid crashing by **NOT** sitting on your seat while riding the pump track



 kidsinparks.com

SCAN QR CODE TO WATCH VIDEO

COMING SOON

Biking TRACK Trails

In an attempt to reach people of varying ages and interests, Kids in Parks has opened several TRACK Trails that utilize alternative forms of outdoor recreation activities.



Paddling TRACK Trails



Geocache TRACK Trails

1st TRACK Trail – August, 2009



The first TRACK Trail opened on the Blue Ridge Parkway at the Asheville Visitor Center on August 29th, 2009.

Gateway Trails



Realizing that novice users to our parks may find a trail in a National Park intimidating, Kids in Parks began installing “Gateway Trails” in communities along the Blue Ridge Parkway in the summer of 2010, creating a network of trail opportunities along the Parkway. The first gateway trails were in a North Carolina State Park and a U.S. Forest Service site.

Building The Network of Partners



The Kids in Parks program continued to expand their network of “Gateway Trails” into communities along the Parkway by installing trails in City/County Parks, on private property and in Virginia State Parks.

Proof of Concept



In 2011, KIP tested the program's "Proof of Concept" to determine if TRACK Trails could be easily replicated in any park in the United States.



TRACK Trail Growth by Year

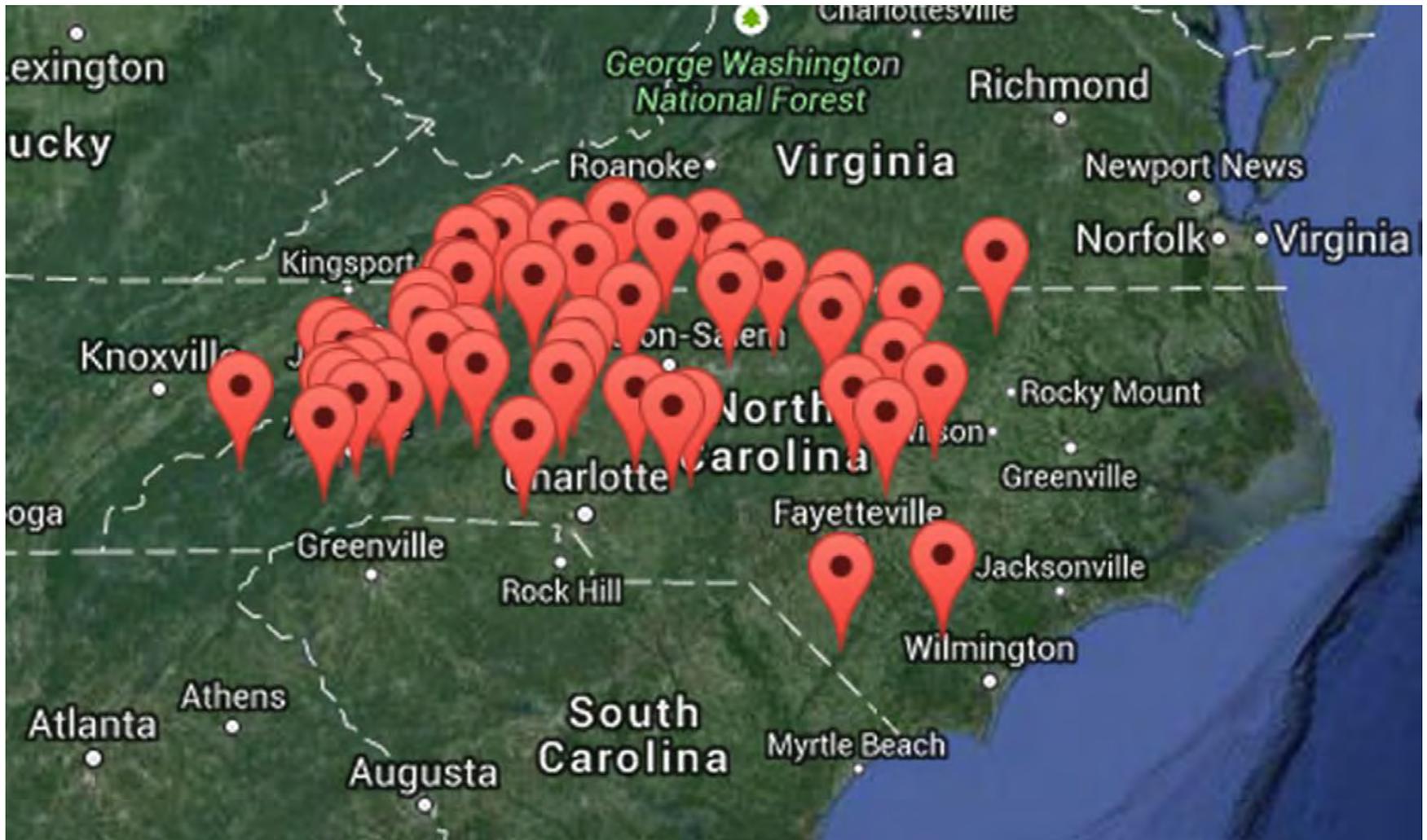
2009 – 1st TRACK Trail
2010 – 5 TRACK Trails
2011 – 11 TRACK Trails
2012 – 40 TRACK Trails
2013 – 80 TRACK Trails
2014 – 106 TRACK Trails
2015 – 112 TRACK Trails



In 7 States (NC, VA, SD, MD, WV, CA, SC)
and Washington, D.C.

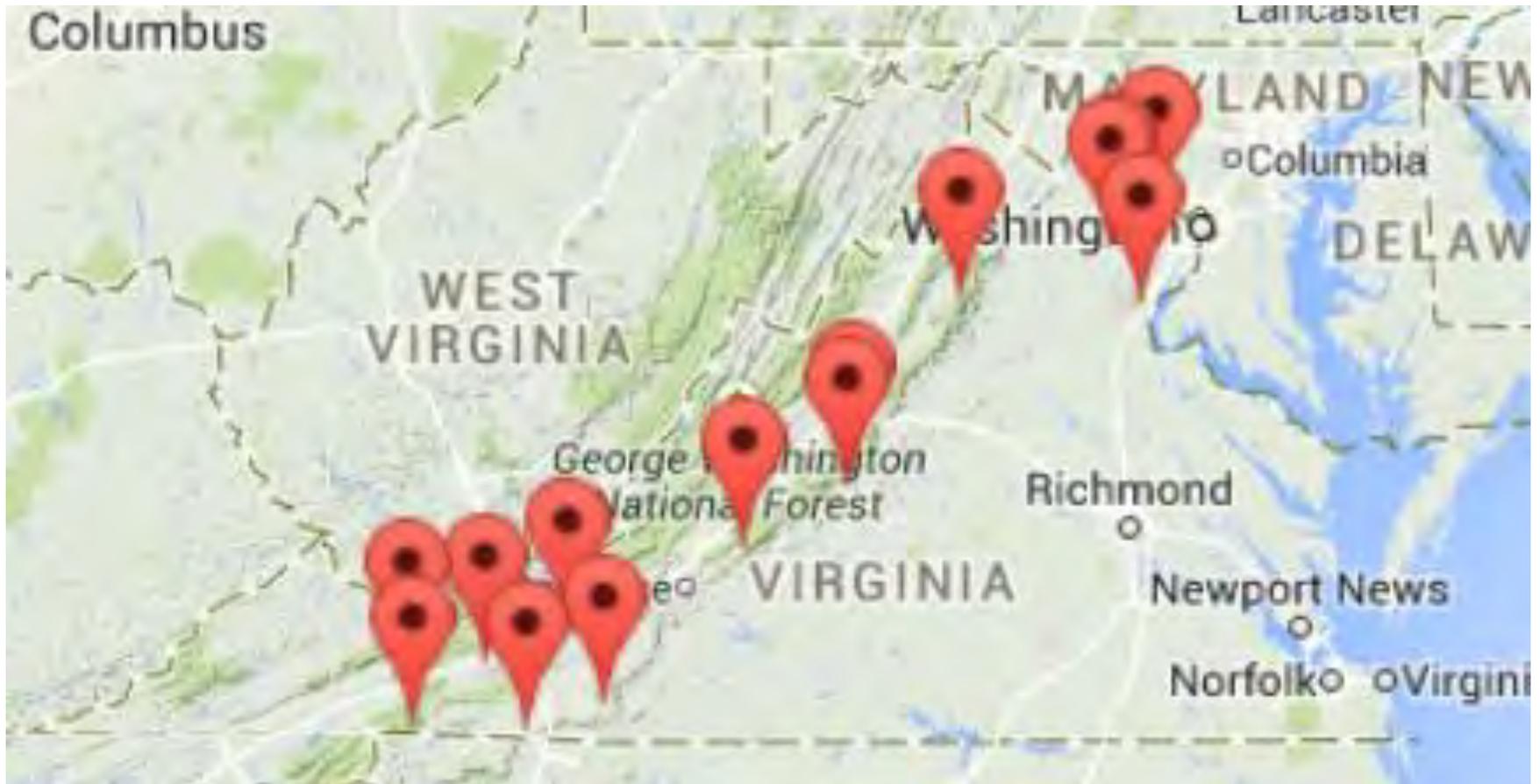
Current TRACK Trails

North Carolina TRACK Trails



There are currently 65 TRACK Trails in North Carolina.

Virginia TRACK Trails



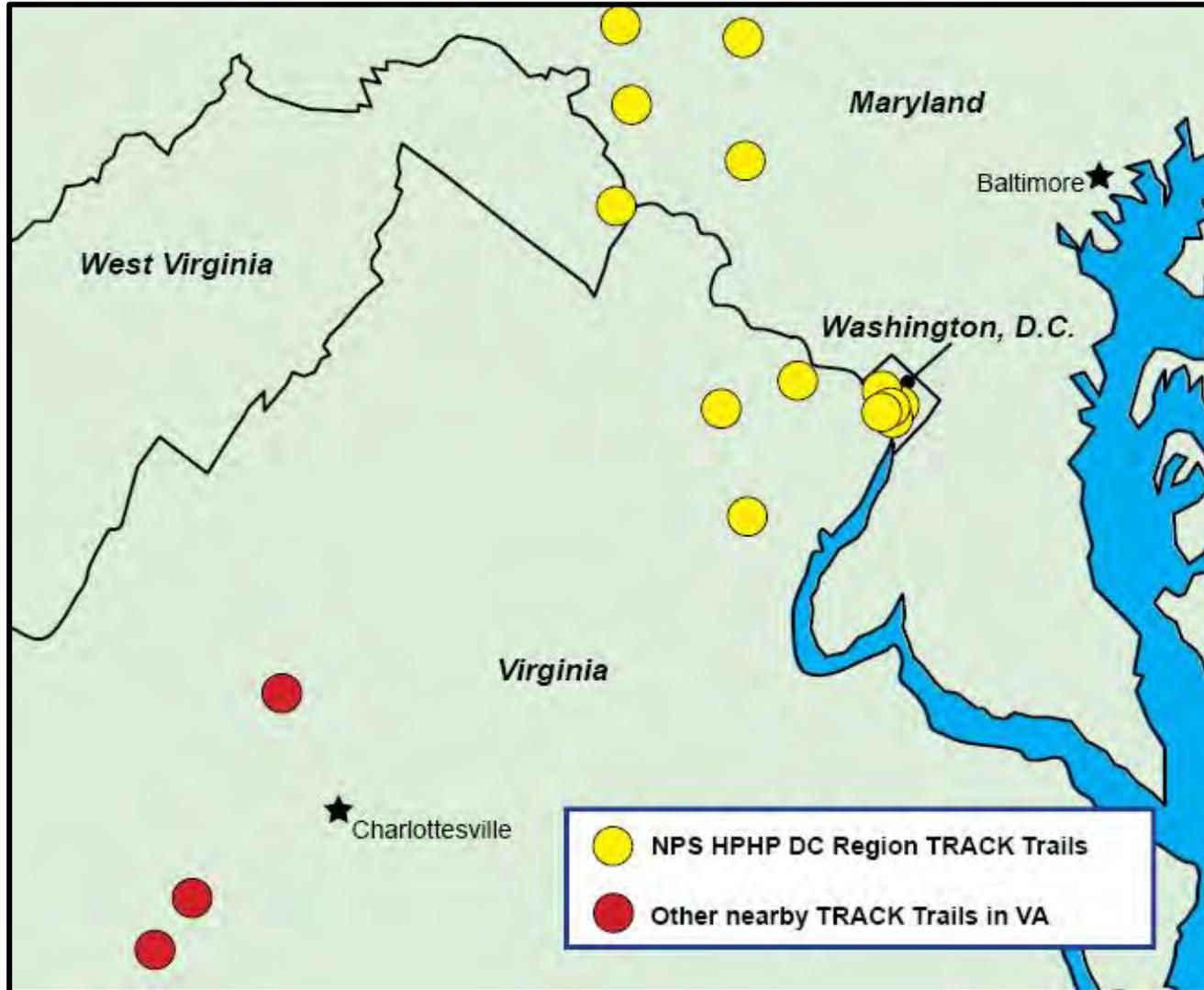
There are currently 14 TRACK Trails in Virginia.

South Dakota TRACK Trails



There are currently 21 TRACK Trails in South Dakota.

DC Region TRACK Trails

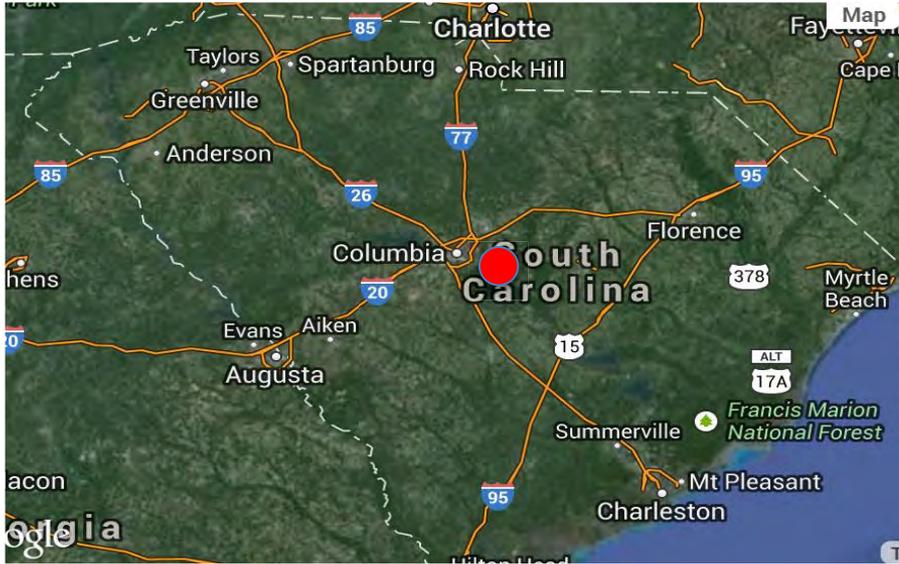


There are 14 TRACK Trails in National Parks in the Washington, D.C. region.

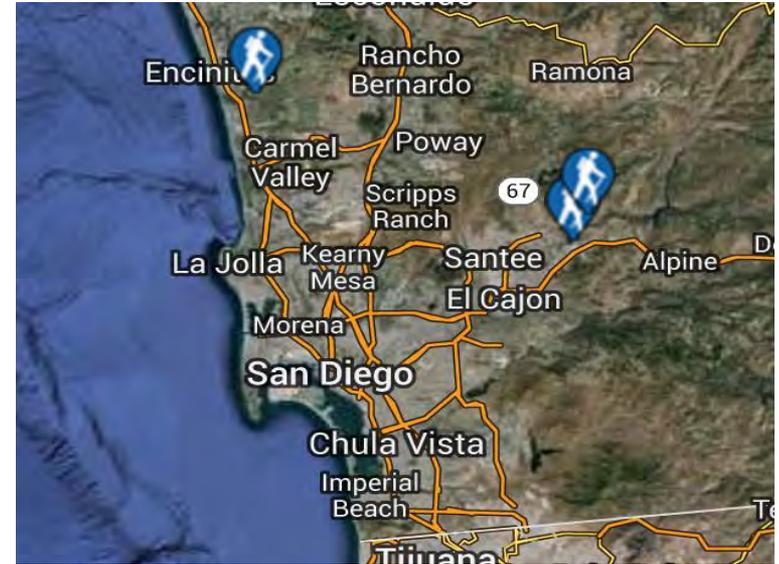
There's a TRACK Trail at the White House!



South Carolina and California Trails



There is currently 1 TRACK Trail in South Carolina at Congaree National Park.



There are currently 3 TRACK Trails in California in partnership with the San Diego County Parks Department.

Results

KIP Hiking TRACK Trail – DATA

As of December 31, 2014:

1,254 Trail TRACKers

2,437 Registered Adventures

90% indicated they would return
(0.005% indicated they would not return)

85% came in “family groups”

2.85 = Average Group Size

7.05 = Average Age



Repeat Use / Use of Network

Registered Adventures

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	758	80	29	9	2	1	0	0	0	0	0	0	0	0	0
2		148	37	10	3	5	2	0	0	0	0	0	0	0	0
3			54	6	10	2	1	0	0	0	0	0	0	0	0
4				36	5	0	2	3	0	0	0	2	0	0	0
5					16	6	4	2	0	0	0	0	0	0	0
6						5	1	1	1	0	0	0	0	0	0
7							4	0	1	0	0	1	0	0	0
8								1	1	1	0	0	0	0	0
9									0	0	0	0	0	0	0
10										1	0	0	0	1	0
11											1	0	0	0	0
12												0	0	0	0
13													1	0	0
14														0	1
15															0

499 kids registered more than 1 TRACK Trail Adventure

499/1257 = 40% return rate

378 kids registered more than 1 TRACK Trail Location

378/499 = 75% of returnees went to more than 1 trail location!

+ 2 others:

24 Adv. @ 21 TTs

26 Adv. @ 22 TTs

Health of Our Parks



52% were first-time visitors to the park

42% intentionally visited the park for the TRACK Trail

13% indicated this was their first time hiking

40% returned for a second adventure

Health of Our Kids



Approximately **79,000 miles** have been hiked by kids on TRACK Trails. (~ 3 trips around the Earth)

Over **40,000 hours** spent unplugged and outside by kids on TRACK Trails. (~4.5 years)

More than **12,000,000 Calories** have been burned by kids on TRACK Trails.

They Don't Come Alone



With an **average group size of 2.85**, those numbers can be multiplied by a factor of 3 to obtain the program's larger outcomes:

240,000 miles walked...

120,000 hours spent outdoors...

36,000,000 calories burned... by people on TRACK Trails

Other Elements of Success

Park Rx – Pediatrician Displays

The Kids in Parks TRACK Trails program provides a network of trails designed for kids and families. Each TRACK Trail has a series of self-guided brochures that turn your hike into a fun-filled adventure.

Hi, I'm TRACK!

I'm KIP!

Kids can earn PRIZES for each TRACK Trail adventure they register at kidsinparks.com

We're trail guides for the Kids in Parks program. Grab a rack card to find an outdoor adventure near you!

Let's play outside!

The Kids in Parks TRACK Trails program provides a network of kid-friendly trails. Children can earn free prizes by going on the trails and tracking them on our website kidsinparks.com

Go on an adventure and Earn free prizes

facebook.com/kidsinparks

Board of Health of the District of Columbia

kidsinparks.com

Kids in Parks has installed “pediatrician office trailheads” in the lobbies of hospitals and doctor offices as part of the Park Prescriptions (Park Rx) movement.

Park Rx – Prescription Pads

R_x *Outdoor Activity in Nature*

Patient's name: _____

Today's Date: _____ Recommended Dosage: _____

- go for a hike on a TRACK Trail (log your adventure at kidsinparks.com) or a trail in a green space near you
- go for a run or ride a bike
- play a sport or other game with friends outside

Unlimited refills!

Health professional's signature: _____

Parent/child signature: _____



Endorsements

American Academy of Pediatrics



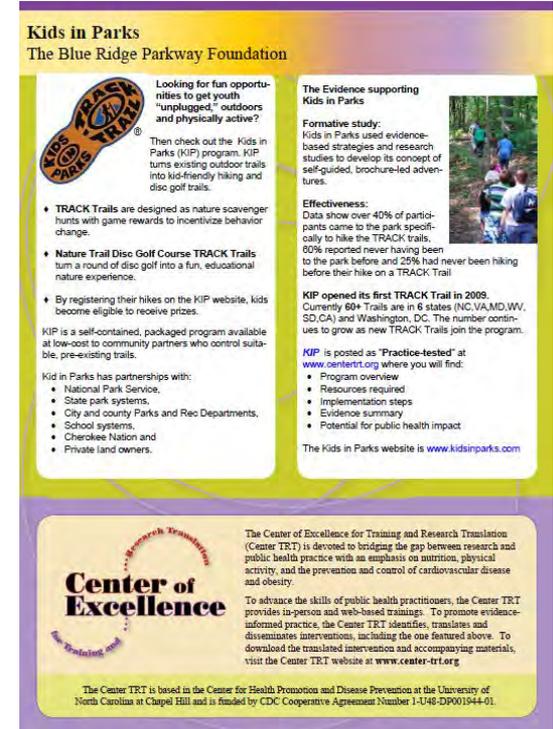
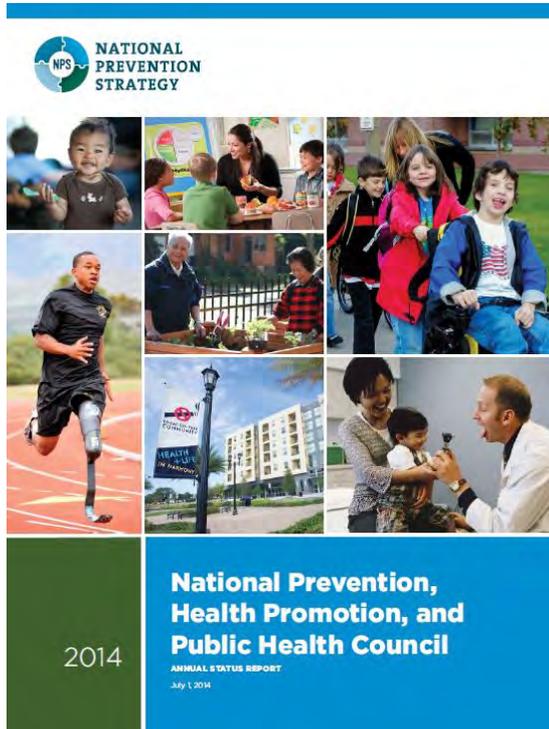
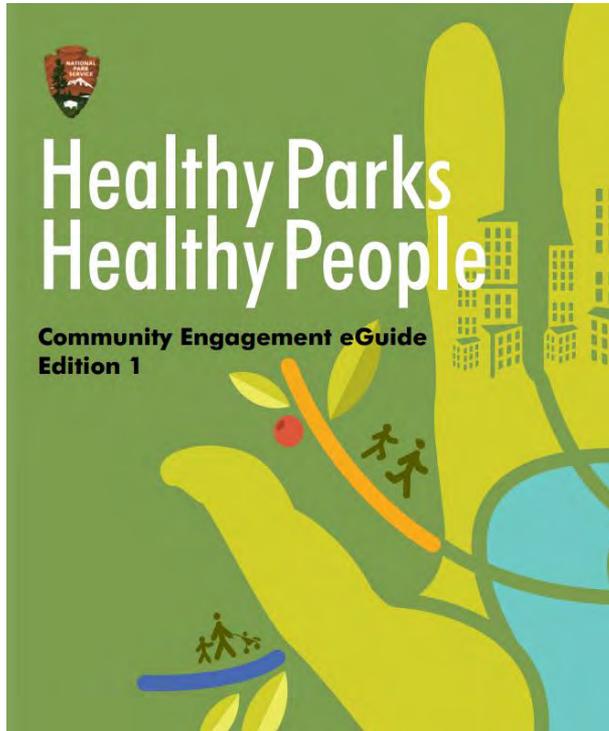
In 2011, Kids in Parks staff presented the program to the American Academy of Pediatrics. The program was endorsed by the AAP as a program pediatricians could prescribe to their Patients as part of the Park Rx initiative.

Let's Move! Champions of Change



In March 2012, the Kids in Parks program won the “Let’s Move! Champions of Change” award from the White House for getting kids active outdoors.

Other Recognition



Highlighted in 2014 NPS HPHP Community Engagement e-Guide

Mentioned in the 2014 National Prevention Council's report released by the U.S. Surgeon General

Listed as a "practice-tested intervention" by the Center for Training and Research Translation – a program of the CDC.

Basic Design Principles

Considerations

Budget

Quantity (2,000 / 10,000 / 50,000 – Storage?)

Paper Quality (70lb Gloss, 80lb Book, Waterproof)

Paper Size (8.5 x 11, Legal,

Folds (bi-fold, tri-fold, booklet)

Use Bright Colors



Use Contrast

Songs from the **Wood** Check the box next to each tree you find on your hike.

the Face (front)

The face of the instrument vibrates and transmits sound like a speaker. For the best sound, a soft wood needs to be used. In the Blue Ridge Mountains, red spruce is the best choice. If red spruce cannot be found, white pine can be used instead.

Red Spruce

Red spruce is an evergreen that grows at higher elevations. Red spruce trees have short needles with sharp points that branch out from all sides of the twig. Look for round cones that are a little larger than an egg.



White Pine

White pine is an evergreen tree with long needles in **bundles (fascicles) of five**. The cones are long and thin. The tree trunk is straight.



Mandolin

the Fingerboard

The fingerboard is a thin piece of hard wood that is glued to the front of the neck. Because the metal strings would dig into a softer wood over time, an extremely hardwood, like dogwood, needs to be used.

Dogwood

Dogwood bark looks like a worn checkerboard with crooked squares. In spring, dogwoods have yellow flowers with four white modified leaves, called bracts.



the Neck

The strings on an instrument need to be strung very tightly. Because of this, a sturdy wood is used for the neck. Wild cherry has been used because of its strength and rich color.

Wild Cherry

A young cherry tree has smooth dark bark, with horizontal stripes called **lenticels**. A lot of trees have thick cracked bark when older.



the Sides and Back

When a string is plucked, sound waves travel down inside the instrument. For the best sound, a hard wood is needed to reflect the sound back out through the face of the instrument.

Sugar Maple

Sugar maple has been the favorite hard wood for the back and sides of stringed instruments in the Blue Ridge Mountains for years.

The sugar maple leaf looks like a hand with five fingers. They have winged seeds, called **sumaras**, that spin as they fall from the tree.



Mountain Banjo



Color, shape and image type (illustration vs picture).

Break the Borders

Smoke Signals

How can you tell if a fire has occurred in a forest? Look for the following signs of fire along the trail.

Serotinous pine cones

Serotinous cones are only found on trees that are adapted to fire, such as pitch, shortleaf, and table mountain pines. Serotinous pine cones do not open until a fire melts the glue that holds the scales together. This way the seeds will drop when the forest floor is burned clear and the seedlings have plenty of room to grow.



Stump Sprouts

Stump sprouts are a method of regeneration (regrowth) of a plant after a fire. Stump sprouting exists in trees and shrubs such as bear oak, scarlet oak, mountain laurel, Catawba rhododendron, and other species. The ability to sprout from the trunk is common in hardwoods but rare in conifers.



Fire scars on a tree

A tree with a fire scar usually looks like it has an upside-down "V" cut into the base of the trunk. The scar is created when the fire burns fuel at the base of the tree and chars the layers beneath the bark.



Pine Sprouts

After a fire, the mineral soil is exposed and competing plants are cleared to allow pine seedlings to sprout. Without fire, trees such as pitch, shortleaf, and table mountain Pines would eventually vanish from the landscape.



Epicormic Branching

Epicormic branches are shoots that grow directly from the trunk of a tree. Dormant buds buried deep in the thick bark of a pitch pine come to life after a fire or other injury to the crown (top) of the tree.



Fire flowers

In addition to the trees and shrubs mentioned earlier, 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 the spring or summer?



pink lady's slipper



mountain golden heather



ash-leaved golden banner

A stump with fire scars

(Hint: look in the visitor center.) When a tree that has been damaged by fire is cut down, you can often see fire scars in the tree's rings. Sometimes you can even tell how old the tree is and how many fires it has endured through its life.



Layout Flow

Discover treasures in Constitution Gardens

History and nature can be found together here in Constitution Gardens. Follow along the trail and discover just a few of the stories this park has to tell.



Vietnam Women's Memorial

To the north of the trail through the trees you can see a bronze statue of three nurses caring for a wounded soldier. This memorial honors the thousands of women who served their country during the Vietnam War. Eight yellowwood trees are planted around the memorial to recognize the eight women who died during the war. Can you count all eight trees?

American Yellowwood



The American yellowwood is a small tree native to parts of Tennessee, Kentucky, and Arkansas. It has smooth, grey bark and **compound leaves** (many leaflets on one stem). In late spring, yellowwood trees bloom with fragrant white and pink flowers.

Designed and illustrated by Elise A. Kahl

Weeping Willow

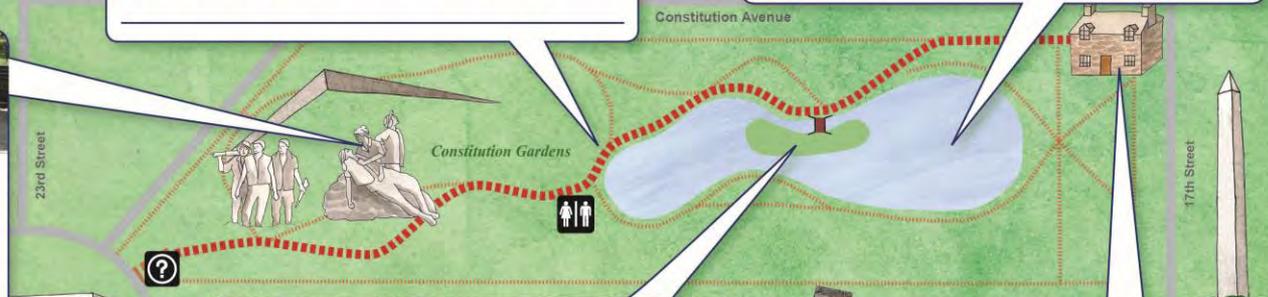


Originally from China, weeping willow trees grow near water and can reach heights of 50 feet. The skinny leaves that hang down on branches look like tears falling, giving the tree its name. Stand by a weeping willow, close your eyes and listen to the tree. Describe what you hear.

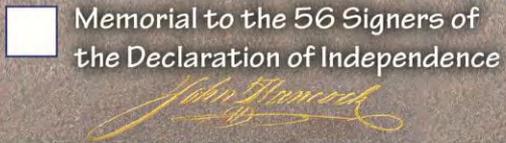
Mallard Duck



To attract a mate, the male mallard has a shiny green head and neck. The female is camouflaged to protect her nest from predators. She can raise up to a dozen chicks at one time! How many mallards do you see swimming in the pond?



Memorial to the 56 Signers of the Declaration of Independence

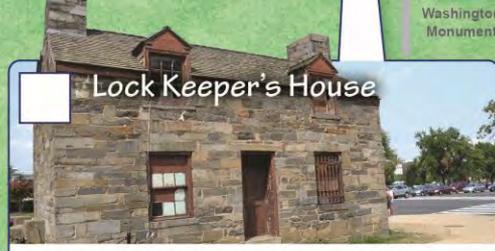


In the summer of 1776, fifty-six people came together to unite our country and move towards a new beginning by signing the Declaration of Independence. Read part of the Declaration below and sign your "John Hancock".

"...We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness..."

sign here

Lock Keeper's House



Boats used to travel up and down a canal that followed the same path as Constitution Avenue. The Lock Keeper's House operated similar to a modern day traffic light, controlling the movement of boats along the canal. What year does the plaque on the house say it was built?



Alignment

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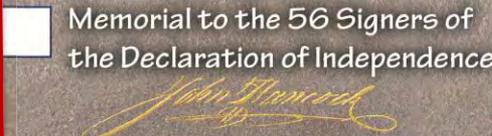
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Word Count

☐ Hummingbird Hand-swings

Look for ruby-throated hummingbirds feeding on flowers around woodland edges and fields. Hummingbirds flap their wings over 50 times per second! 50 wing-beats per second equals 1500 wing-beats in 30 seconds.



How many times can you flap your "wings" in 30 seconds?

☐ Ant Strength Training

Ants are very strong insects, able to lift objects much heavier than their own bodies. Can you lift your own body weight? An easy way to find out is by doing push-ups.



Find a clear, safe spot on the trail and see how many push-ups you can do!

☐ White-tailed High Jump

Keep your eyes and ears open for white-tailed deer in the woods and meadows. In order to move quickly through the tall grasses and shrubs, white-tailed deer leap very high —sometimes over 6 feet in the air!



How high can you leap straight up in the air?

☐ Green Frog Hop

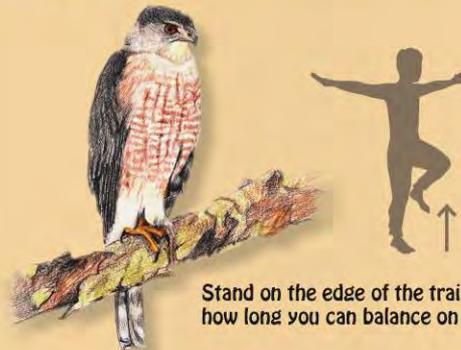
Listen for the "gunk!" sound of the green frog around ponds and streams. Green frogs make a tasty snack for predators such as snakes and herons. To escape quickly, frogs use their strong back legs to hop away.



Pretend you're being chased by a predator and hop like a frog down the trail.

☐ Hawk Stance

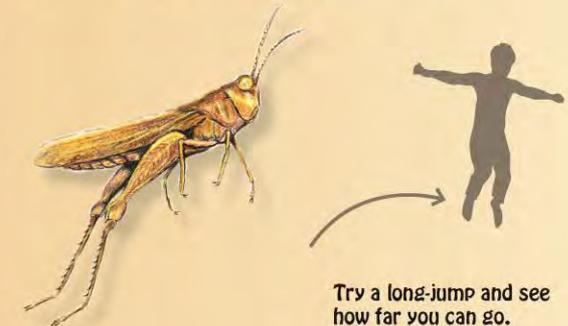
To conserve heat and energy, birds of prey such as sharp-shinned hawks often perch on one leg. Locking tendons in their feet allow birds to balance on one leg for hours at a time.



Stand on the edge of the trail and see how long you can balance on one leg.

☐ Grasshopper Long Jump

You may glimpse grasshoppers in areas with short grass or gravel. Grasshoppers can jump 20 times the length of their own body. If you could do that, you would be able to jump almost 100 feet!



Try a long-jump and see how far you can go.

50 words or less per text block.

3-30-3 Rule

~ 3 second message

~ 30 second message

~ 3 minute message

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.

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 lichens 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?

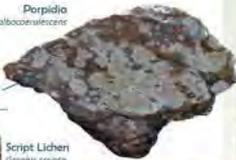
# of Lichens	
0	1-4
5-9	10-19
20-29	30-39
40+	

Air Quality: _____

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!

Porpida
Porpida cf. albocanadensis



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



Script Lichen
Graphis scripta



Gold Dust Lichen
Chrysothrix saxatilis

Foliose

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

Punctelia
Punctelia sulcata



Powdered Ruffle Lichen
Parmotreha hypotrachum
Look for little black "hairs" called elia!



Lungwort Lichen
Lobaria 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 cubensoniiformis



What would you name this lichen?



Pixie Cup Lichen
Cladonia chloropora



Old Man's Beard
Ulex albicoma

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?



Hikin' to Find Lichen

WHAT IS THAT? MOSS? UGLY WORMS... AN ALIEN SPACESHIP?? IT'S LICHEN! Together, some fungus and algae create an organism called lichen. In a symbiotic relationship, the algae and fungus both help each other survive. The Southern Appalachian Mountains have a high diversity of lichens and scientists are always finding new species!



USE THIS BROCHURE TO DISCOVER THE LIFE OF LICHENS AND HOW TO IDENTIFY THEM. BE CAREFUL NOT TO TOUCH LICHENS BECAUSE THEY ARE FRAGILE.

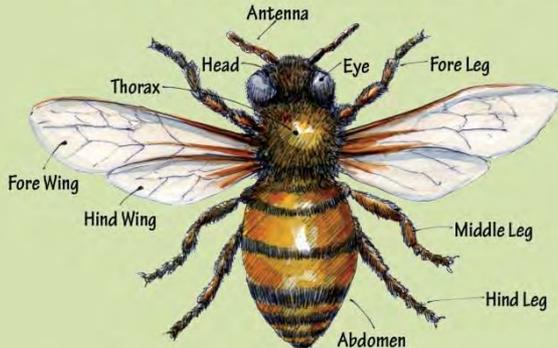
Proximity of Information

Insects

Insects are an extremely diverse group of animals. More than half of all known organisms on Earth are insects. There are over 1 million different types of insects!

The drawing of the honeybee below is typical of most insects. All insects have:

- A hard, external skeleton called an **exoskeleton**
- 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



On the drawing above, circle the three main body parts of an insect.

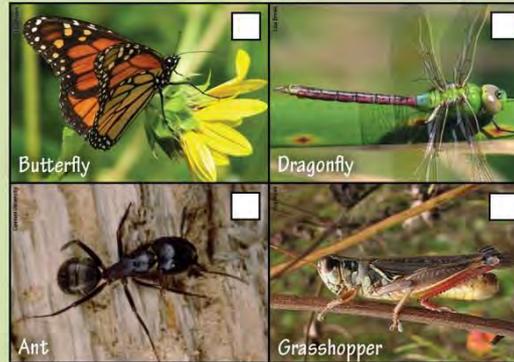
What is an Exoskeleton?

Unlike humans and other animals who have skeletons on the inside of their bodies, insects have their skeleton on the outside.

A hard exoskeleton protects an insect like a knight's armor.



How many different kinds of insects can you find today?



Other Arthropods

Arthropods are a group of creatures that make up about 80% of all living things on Earth. All arthropods have an exoskeleton, a segmented body and jointed legs. Insects, spiders and crustaceans are all arthropods.

Look Similar, But Different

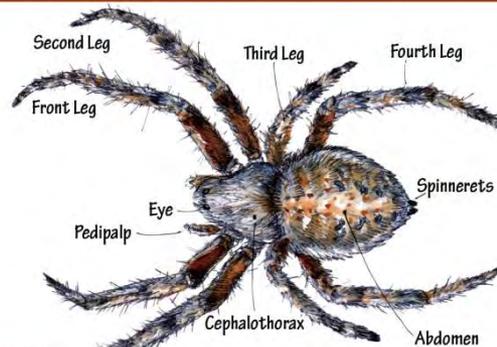
Although centipedes and millipedes look similar, they are not. Centipedes are venomous carnivores that eat insects and millipedes. Centipedes have two legs per body segment.



Millipedes are non-venomous herbivores that like to eat decaying plant matter. Millipedes have four legs per body segment.

Spiders

Although insects and spiders look similar, they are actually different. Insects have a three-part body and six legs. Spiders have a two-part body and eight legs.



Body Parts

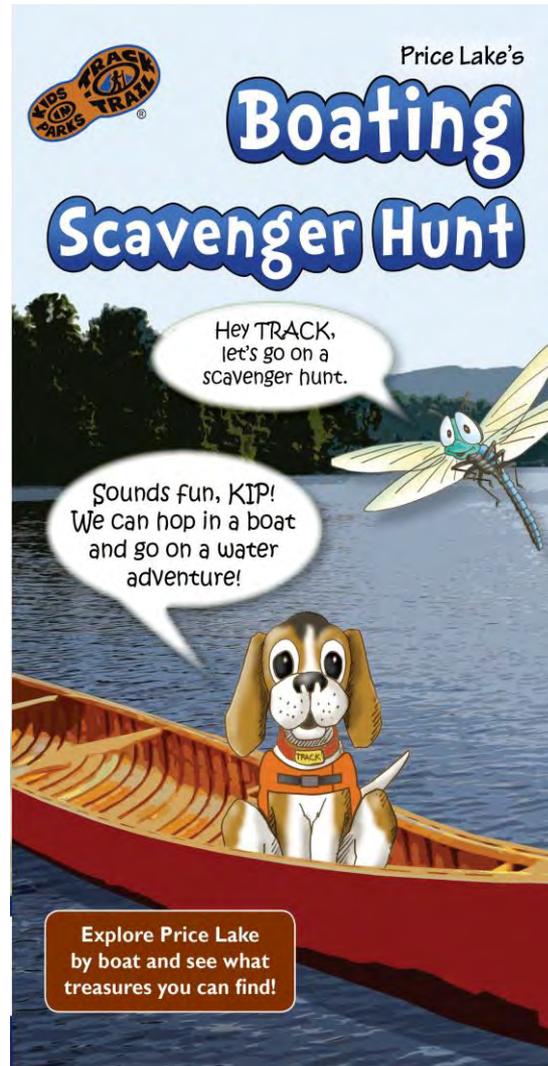
Spiders have a hard exoskeleton and a two-part body made up of the **cephalothorax** and **abdomen**. The head and thorax in insects are combined into the cephalothorax in spiders. It contains eight legs, pedipalps and has venom injecting fangs! A spider's abdomen has web-making **spinnerets**.



Hunting Strategies

Not all spiders live on or make spider webs. Some spiders actively hunt their prey by crawling through the leaf litter. Others patiently wait on vegetation. Where did you find the most spiders today?

Use Mascots



The Kids in Parks program uses two mascots (TRACK the dog and KIP the dragonfly) that lead many of the brochure-led activities.

Steps to Designing a Brochure

Example: Shenandoah National Park

Site Visit
 Research
 Mock-up
 Writing
 Graphic Design



COVER

Just like the animals that live in this forest, people can use their senses to learn about their environment. Humans have five major senses that we depend on – sight, hearing, touch, smell, and taste. Use your senses and your creativity to discover what this forest is like for a few of the plants and animals that live here.

Activities

Box Turtle
 Imagine what would it would be like to live an inch off the ground? Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before? What do you see anything a box turtle might eat? _____

Deer
 Whitetail deer call this forest and most of Shenandoah home. They find many different kinds of food in the forest and use the trees to hide from predators. A deer's big ears catch sound like a baseball glove catches a ball. Cup your hands and make deer ears. What can you hear around you? Can you hear better with bigger "deer ears"? How do large ears help a deer survive? _____ (possibly add a sound map)

Life on a rock
 Rock surfaces can be mini-worlds unto themselves! Check out these rocks. How many different things are on the rock? Look for different colors, shapes and forms, and growth patterns to help identify the differences. Gently touch the lichens and feel the mosses. How do they feel? _____ Is the rock habitat warm, cool, dry, or moist? _____ What would it be like to be a small insect and live on this rock? _____

Super Creative Title Here
 Use your senses and your creativity to discover what this forest is like for the plants and animals that live here. Activities can be done anywhere on the trail except the two that are labeled on the map.

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Image of lichen
 Image of moss

warm cool dry moist
 mosses

Describe what it would be like to be a small insect that lived on this rock.

Box Turtle View
 Imagine what it would be like to live an inch off the ground? Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before?

Circle what you see that a box turtle might eat.

berry mushroom
 leaf fern?

Bear's Nose
 Black bears have a strong sense of smell. Fun fact! About black bears. What can you smell around you?

Smell a leaf
 Smell a tree trunk
 Smell the ground

If you were a bear, what would you use your sense of smell for?

Squirrel Climber
 With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without tripping any plants on the ground. Look at the tree – its bark, limbs, leaves, color. Touch the tree and circle the words that describe its trunk.

soft slick rough
 hard coarse smooth

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why?
 * possibly warning

Explore Your Senses
 Make your way through the forest relying on your senses of sight, smell, hearing, and touch to learn what life is like for the animals who live here. Discover how animals use their senses to find food, avoid predators, and navigate through the woods. The activities can be done anywhere on the trail except the two that are labeled on the map.

Life On A Rock
 Rock surfaces can be mini-worlds unto themselves! Check out the rock outcrop at the trail intersection near the bridge. How many living things do you see? Look for colors, shapes, and growth patterns to help identify the differences. Gently touch the lichens and feel the mosses. Circle the words that describe how the rock habitat feels.

warm cool dry moist soft hard
 Describe what it would be like to be a small insect that lives on this rock.

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 Imagine what it would be like to live an inch off the ground? Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to bugs. Get down on all fours, and with your chin almost touching the ground, look around. List three things that you see, smell, or feel that you didn't notice before.

1. _____
 2. _____
 3. _____

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Smell the air
 Smell a leaf
 Smell a tree trunk

If you were a bear, what would you use your sense of smell to do?

A Changing Forest
 Nature is constantly changing. Decades ago this forest was shady, moist, and cool eastern hemlock trees. An insect, called the hemlockis, was accidentally brought to Shenandoah and has killed most of the old stumps of dead hemlock trees along the trail. There are still some young hemlocks growing. Can you find a young hemlock tree?

Eastern Hemlock

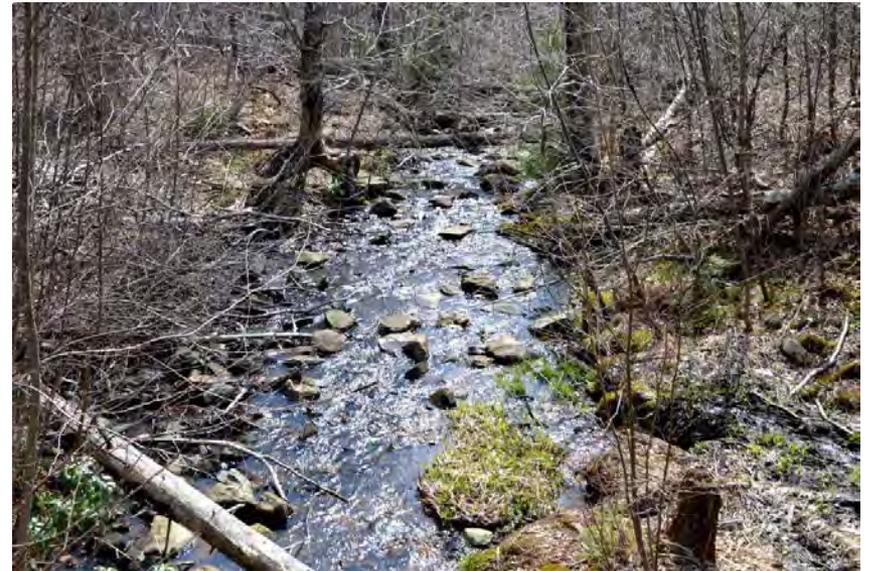
Look for rounded needles and cones the size of nickels.

Squirrel Climb
 With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without tripping any plants on the ground. Look at the tree – its bark, limbs, leaves, and color. Touch the tree and circle the words that describe its trunk. Note: Please do not climb up the trunk of trees... If you see a hole, you didn't dig that tree!

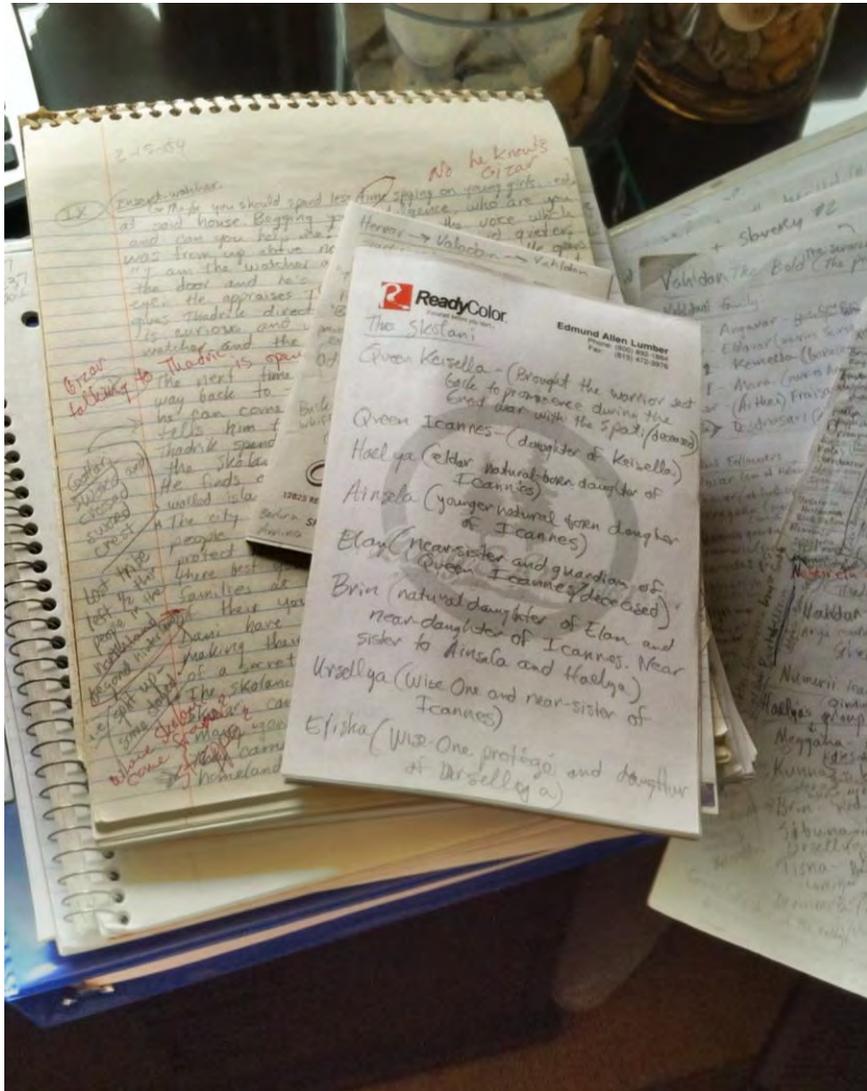
hard soft slick rough
 coarse smooth

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why?

Site Visit



Research



Text Writing

COVER

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(possibly add a sound map)

Life on a rock

Rock surfaces can be mini-worlds unto themselves! Check out these rocks. How many different things are on the rock? Look for different colors, shapes and forms, and growth patterns to help identify the differences. _____ Gently touch the lichens and feel the mosses. How do they feel? _____ Is the rock habitat warm, cool, dry, or moist? _____ What would it be like to be a small insect and live on this rock? _____

Bear's Nose

Draft Mock-Up

“If I was an animal living at Shenandoah National Park...”

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Box Turtle

Imagine what it would be like to live an inch off the ground! Box turtles are omnivorous, meaning they will eat just about anything – from fruits to mushrooms to plants. Get down on all fours, and with your chin almost touching the ground, look around. What do you see, smell or feel that you didn't notice before? _____
What do you see anything a box turtle might eat? _____

Bear's Nose

Black bears have a strong sense of smell. Find a comfortable spot and smell everything around you. How many different smells do you smell? _____
With your eyes closed breathe in deeply through your nose. Now what do you smell? _____
Which direction is each smell coming from? _____
If you were a bear, how would you use your sense of smell? _____



Life On A Rock

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What would it be like to be a small insect and live on this rock? _____

Squirrel Climber

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree – its bark, limbs, leaves, color. Touch the tree – is it smooth, rough, slick, course, hard or soft? _____
Then, find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why? _____
* poison ivy warning

Snag

Nature is constantly changing. Decades ago this forest was shady, moist and cool year-round because it was filled with giant eastern hemlocks. An insect, called the woolly adelgid, was accidentally brought to North America and has killed most of the old hemlocks in Shenandoah. Look for “skeletons” of dead hemlock trees along the trail. There are still some young hemlocks that are growing, so maybe one day the hemlock forest will return. Draw a picture of what you think the forest will be like the next time you visit.

Advanced Mock-Up

Super Creative Title Here

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warm dry
cool moist

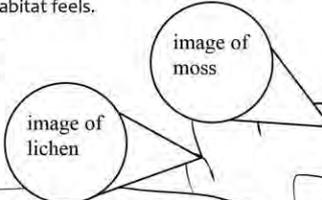
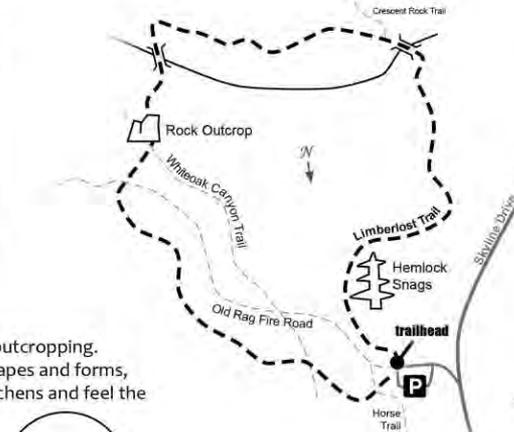
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Circle what you see that a box turtle might eat.

berry mushroom
leaf fern?



Bear's Nose

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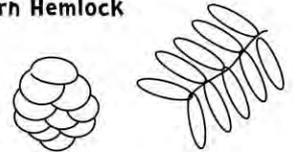
- Smell a leaf
- Smell a tree trunk
- Smell the ground

If you were a bear, what would you use your sense of smell for? _____

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Eastern Hemlock



Squirrel Climber

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree – its bark, limbs, leaves, color. Touch the tree and circle the words that describe its trunk.

soft slick smooth
hard course rough

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why? _____

*poison ivy warning

Final Brochure

Explore Your Senses

Make your way through the forest relying on your senses of sight, smell, hearing, and touch to learn what life is like for the animals who live here. Discover how animals use their senses to find food, avoid predators, and navigate through the woods. The activities can be done anywhere on the trail except the two that are labeled on the map.

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warm cool dry moist soft hard

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3. _____



Bear's Nose

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- Smell a tree trunk

If you were a bear, what would you use your sense of smell to do?



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Eastern Hemlock

Look for rounded needles and cones the size of nickels.



Squirrel Climb

With small sharp claws, squirrels are excellent at climbing trees. Find a tree you can walk up to without trampling any plants on the ground. Look at the tree – its bark, limbs, leaves, and color. Touch the tree and circle the words that describe its trunk.

Note: Poison ivy can climb up the trunks of trees... so if you see a hairy vine, don't hug that tree!

soft slick smooth
hard coarse rough

Find a second tree that looks completely different. As a squirrel, which tree would be easier to climb to escape a predator? Why?



Designing Bilingual Brochures

English-Spanish





Muchas cosas en la naturaleza pasan desapercibidas. Su tamaño, su color y su localización hacen que sea difícil encontrarlas.

Many things in nature go unseen. Their size, color and location can make them hard to find.

En tu ruta de hoy, trata de encontrar alguna de estas cosas.

On your walk today, see if you can find some of these things.

Hummingbird Wing-flaps
Los Alefeos del Colibrí

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

Los colibríes mueven sus alas alrededor de 50 veces por segundo, es decir, 1500 veces en 30 segundos.



How many wing-flaps can you do in 30 seconds?
¿Cuántas veces eres capaz de mover tus brazos como si fueran alas durante 30 segundos?

Ant Strength Training
La Fuerza de una Hormiga

Ants can lift objects much heavier than their own bodies. Can you lift your own body weight?

Las hormigas son capaces de levantar objetos mucho más pesados que sus propios cuerpos. ¿Puedes levantar el peso de tu propio cuerpo?



Find a safe spot and see how many push-ups you can do!
¡Busca un lugar seguro y comprueba cuántas flexiones puedes hacer!

Deer High-jump
El Salto de Altura del Ciervo

In order to move quickly through tall grass and shrubs, deer leap very high. They can jump up to 6 feet in the air!

Para moverse rápidamente en la maleza y entre los arbustos, los ciervos pegan brinco muy altos, a veces hasta 6 pies de altura.



How high can you jump?
¿Qué altura puedes alcanzar dando un salto?

Frog Hop
El Salto de la Rana

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

Las ranas utilizan sus fuertes ancas traseras para saltar y escaparse de depredadores como las serpientes o las garzas.



Hop like a frog down the trail to escape a predator!
¡Salta como una rana a lo largo del camino para escaparte de un depredador!

Hawk Stance
La Postura del Gavilán

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

Para conservar el calor y la energía, los gavilanes a menudo se posan sobre una pata durante horas.



How long can you balance on one leg?
¿Cuánto tiempo puedes mantenerte en equilibrio sobre una pierna?

Grasshopper Long-jump
El Salto de Longitud del Saltamontes

Grasshoppers can jump 20 times the length of their own body. If you could do that, you'd be able to jump 100 feet!

Los saltamontes pueden saltar 20 veces la longitud de su propio cuerpo. ¡Si tú pudieras hacer esto, podrías saltar una distancia de 100 pies!



Try a long-jump and see how far you can go!
¡Salta hacia delante y comprueba la distancia que alcanzas!

Cherokee Syllabary

□ Tulip Poplar ᵂᵂᵂ ᵂᵂᵂ



Growing straight and tall with light gray bark and a large broad leaf that looks like the tip has been bitten off, the tulip poplar is easy to find. The flowers of the tulip poplar are an important source of nectar for honeybees. Due to their large size, tulip poplar logs were often used by the Cherokee to make canoes. The Cherokee also used tulip poplar to heal wounds and cure digestive problems.

□ Sourwood ᵂᵂᵂᵂ ᵂᵂᵂᵂᵂ



The sourwood tree has chunky bark and clusters of tiny white flowers in the spring. Sourwood bark was used by the Cherokee to treat diarrhea, and the straight twigs were used to make arrows. In one Cherokee legend, the daughter of the Sun was killed by a magic rattlesnake, and seven men retrieved her from the underworld by touching her with sourwood twigs and bringing her back to life.

□ Rhododendron ᵂᵂᵂᵂ ᵂᵂᵂᵂᵂ



Rhododendron is a small evergreen tree that grows well in the shade. The dark green leaves are long and skinny with a smooth, leathery feel. In the summer, rhododendrons blossom with beautiful pink or white flowers. To treat joint pains, the Cherokee would scratch a patient's skin and then apply a tea made from rhododendron and similar plants.

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.

Illustration by David Williams, TreeNet & W&A

□ Cherry Birch ᵂᵂᵂ ᵂᵂᵂᵂᵂ ᵂᵂᵂᵂᵂ



Cherry birch got its name because the bark of young trees looks like the bark of a cherry tree, with horizontal stripes called lenticels. The leaves have serrated (saw-toothed) edges, and the shoots have a wintery green scent. The Cherokee used birch to make a pleasant tasting tea that they drank for enjoyment and to settle the stomach.

□ Sassafras ᵂᵂᵂᵂᵂ ᵂᵂᵂᵂᵂ



The sassafras is a small tree that can be identified by its three distinct leaf shapes (entire, mittened and three-lobed). The fruits of the sassafras are eaten by many different birds. Sassafras tea was a favorite beverage of the Cherokee due to its great taste and the belief that it cleansed the blood. The bark and leaves were chewed and the spit produced was rubbed on spider bites.

□ Red Maple ᵂᵂᵂᵂ ᵂᵂᵂᵂᵂᵂ ᵂᵂᵂᵂᵂᵂ



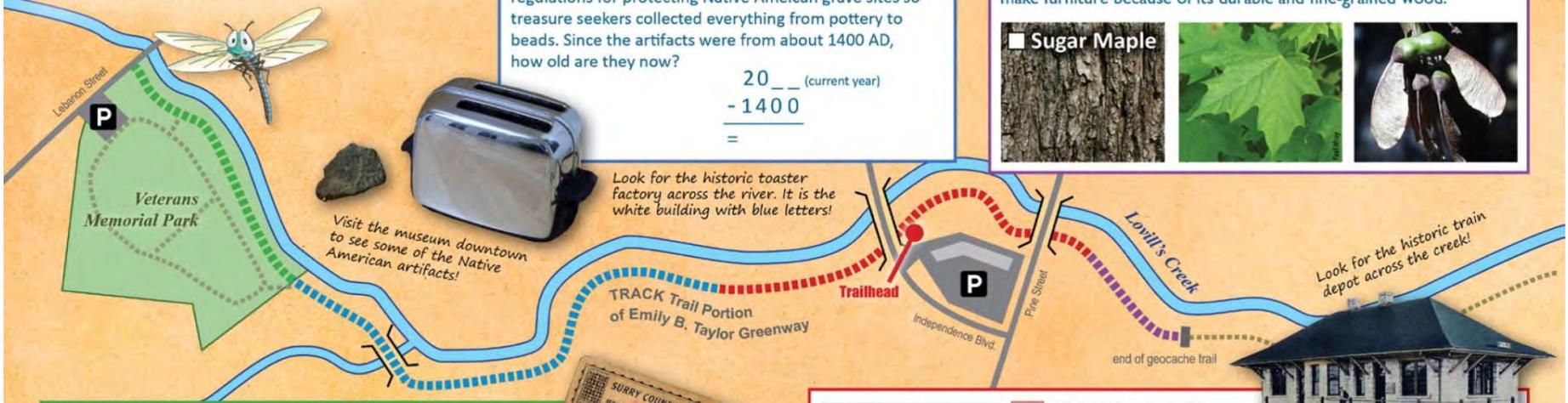
Able to grow in almost any soil condition, the red maple is one of the most abundant and widespread trees in eastern North America. With red twigs, buds, flowers and seeds, it's easy to see how the red maple got its name. In the fall, the leaves also turn a brilliant red color. The Cherokee boiled the bark of the red maple and used it to treat eye problems.

Designing Technology-Based Brochures

GPS / Geocache Brochures

Geocaching on the Emily B. Taylor Greenway

Are you ready for a geocache scavenger hunt? Plug in coordinates and discover just a few of the stories the greenway has to tell. Check each box when you find the cache and make an "x" on the map at your approximate location.



Toast of the Town



N 36° 30.433, W 080° 37.190

Hint: Near the fence, 2 plus or minus a quarter

In the late 1950's, Proctor Electric Company built what was then the largest toaster factory in the country! While digging the land for the building, a Native American burial ground was uncovered. Unlike today, there weren't any regulations for protecting Native American grave sites so treasure seekers collected everything from pottery to beads. Since the artifacts were from about 1400 AD, how old are they now?

$$\begin{array}{r} 20__ \text{ (current year)} \\ - 1400 \\ \hline = \end{array}$$

Look for the historic toaster factory across the river. It is the white building with blue letters!

Chair Rail



N 36° 29.701, W 080° 37.161

Hint: Don't get TIREd of searching.

Because the railroad made it easier to transport goods, the areas lumber and woodworking industry evolved into several large furniture factories. Chairs, tables, pie safes and much more were built here. Look for sugar maple on the greenway, a tree that is used to make furniture because of its durable and fine-grained wood.

Sugar Maple



Veterans Memorial Park



N 36° 30.861, W 080° 36.971

Hint: Don't forget to SIGN the log

In 1946, the American Legion and the Veterans of Foreign Wars purchased the 36 acre Taylor Farm to create Veterans Memorial Park. For over 65 years the annual county fair continues to be held here. What are your favorite things to do at a fair?

If you wander a little farther away from the geocache, you can find an army tank. What was the tank's nickname? _____



All Aboard!



N 36° 29.887 W 080° 37.052

Hint: Have you seen the Thomas the Tank Engine MOVIE?



Mount Airy was a small town of about 300-400 people until the railroad came in 1888. The railroad made shipping goods a lot easier. Within a year, cotton factories, woolen mills, tobacco factories and much more were built here.

There was even a passenger train which made the train depot one of the most important buildings in town. Today, a different train track is used through town to transport various goods. Passenger train service ended when automobiles (cars) became popular. What is your favorite way to travel? _____



GPS / Geocache Brochures

Geocaching on the Rockfish Valley TRACK Trail

Are you ready for a geocache scavenger hunt? Plug in the coordinates and discover just a few of the stories this trail has to tell. Check each box when you find the cache and make an "x" on the map at your approximate location. Then, use the information in each cache to answer the questions. **BONUS: Cache #5 has a take-home prize!**

2. The Rockfish River

 **N 37° 52.790, W 78° 54.475**

Hint: This cache is near (where the birds live ?)

If you were a drop of water that fell into this river, you could travel 25 miles to the James River, drain into the Chesapeake Bay and eventually end up in the Atlantic Ocean. The gravel in this river makes that same trip, eroding along the way to form the sand at Virginia Beach!
Pick up a piece of gravel. Can you name one of the minerals in this rock that will form the sand at Virginia Beach?



3. Basswood

 **N 37° 52.785, W 78° 54.318**

Hint: This cache is near the (basswood trees ?)

Can you spot the basswood trees here? They have heart-shaped leaves and gray bark with furrows and flat ridges. In the spring, these trees bloom with beautiful and fragrant clusters of yellow-white flowers. **What are some things that humans use basswood trees for?**



1. Early Settlers

 **N 37° 52.778, W 78° 54.502**

Hint: This cache is near (the trailhead sign?)

One of the first known settlers of this area was Samuel Reid, for whom Reid's Creek is named. In 1805, Samuel sold the land to Hawes Coleman. Six generations of Hawes's families lived and farmed on this land for over 100 years.

Imagine it is 1805 and you just bought all the land you see around you. Where would you build your house?

What crops would you grow?



5. Lay of the Land

 Use clues from the previous geocaches to reveal these coordinates!

This bottomland was originally used for growing tobacco. Around 1880 the area was turned into an apple orchard containing over 10,000 apple trees. After that, it was a cattle farm and a vineyard. Now the land is used as pasture for various livestock, and as a place for people like you to visit, hike and make discoveries! **What was your favorite discovery today?**



4. Sassafras

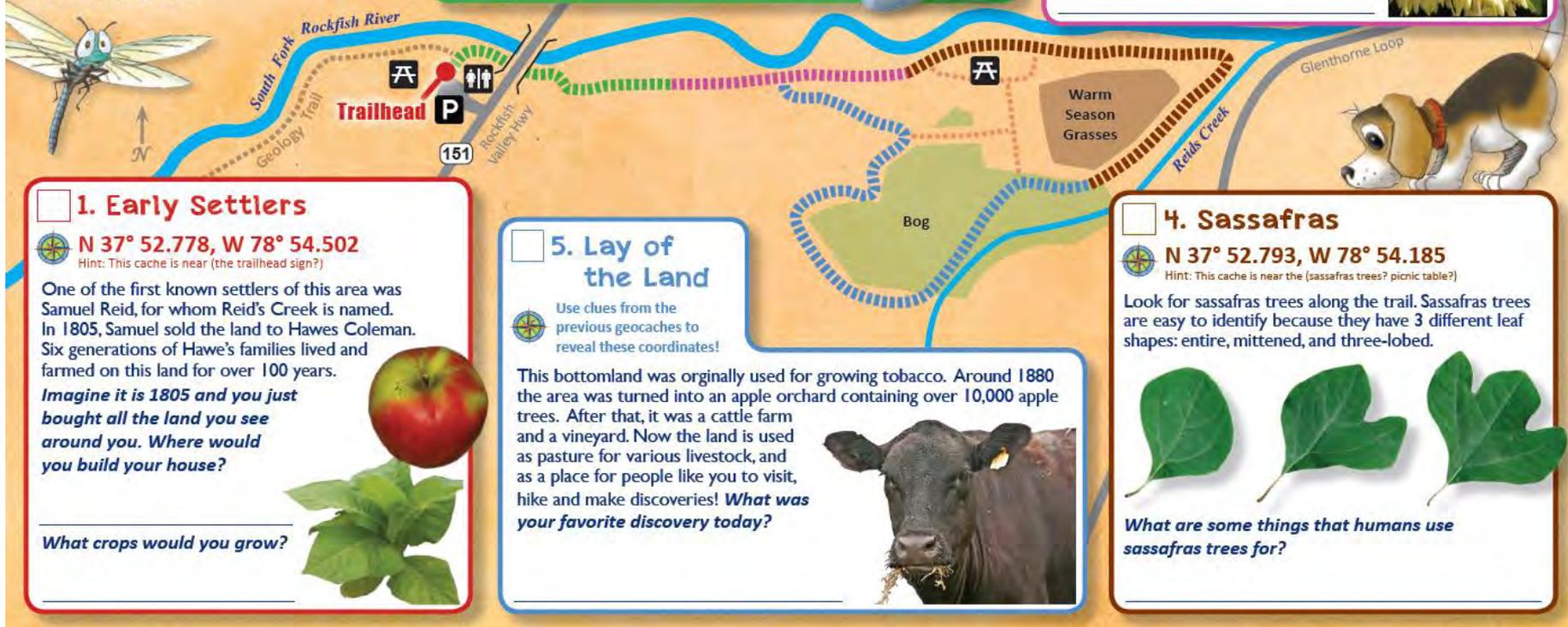
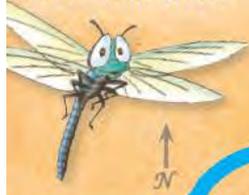
 **N 37° 52.793, W 78° 54.185**

Hint: This cache is near the (sassafras trees? picnic table?)

Look for sassafras trees along the trail. Sassafras trees are easy to identify because they have 3 different leaf shapes: entire, mittened, and three-lobed.



What are some things that humans use sassafras trees for?



Cell Phone Brochure

The Nature of Stone Bridge Trail



Are you ready for a nature adventure?
As you walk the loop, call in at each cell-phone stop and listen carefully for clues that will help you with the following activities.

17 Neighborhood Mammals

Thanks to the abundance of food and shelter here, many animals call Manassas National Battlefield home. Look for white-tailed deer browsing near the forest edge, and look for gray squirrels gathering seeds and nuts in the trees.

What do deer and squirrels do when they're scared?



23 A Great Place for Frogs

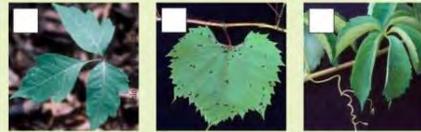
Do you notice anything different about this part of the trail? The elevation is lower, the plants and animals are different, and visitors have to walk on a boardwalk. This is because the area around you is a **Piedmont Swamp Forest** and contains many **vernal pools**! A vernal pool is a pond that is only full of water for part of the year. Since there isn't a year-round source of water, fish cannot live here, but amphibians can. Frogs and salamanders thrive in this temporary water habitat. **What is the name of the small noisy frogs found here in the spring time?**



15 Creepy Crawly Vines

Look for vines climbing up the trees near the wooden bridge. Three vines that grow here at Manassas are (1) wild grape, (2) virginia creeper, and (3) poison ivy.

Can you number them in the pictures here?



13 Your Watershed Address

You may know your street name, city and state, but do you know what watershed you live in? A **watershed** is an area of land that drains to a common point. If you were a raindrop that fell on this trail, you could drain into Bull Run, travel southeast into the Chesapeake Bay, and eventually end up in the Atlantic Ocean!



What is the name of the watershed you're standing in right now?

Draw what a dinosaur would look like on the Stone Bridge:



11 Where Dinosaurs Roamed

Did you know there used to be dinosaurs here? During certain times in the Earth's history, this whole area was under water, and an alligator-like dinosaur called **Tanytrachelos** lived here. In another period of the Earth's history, this area was a tropical forest, home to a dinosaur similar to the t-rex called **Kayentapus**.



Trailhead

Lee Highway

Bull Run

29

Disc Golf Trails

Nature Trail Disc Golf Courses



Since disc golf is essentially a “hike with a frisbee”, Kids in Parks uses the sport to reach the teenage / young adult population. Their Nature Trail Disc Golf Courses are provide interpretive information on the tee-signs and scorecards, allowing the player to learn about nature while the play.

Interpretive Tee-Signs

Fort Hamby Nature Trail Disc Golf Course

1

BLUE
PAR 3
A – 290'
B – 350'
Road and Beyond – OB

Out of Bounds

Hole 2

WARNING:
Do not throw until cars and pedestrians are clear!

Tulip Poplar

Also known as yellow poplar, **Tulip Poplars** (*Liriodendron tulipifera*) are some of the largest and fastest-growing trees in the region. They grow straight and tall with a light gray bark and a large broad leaf that looks like the tip has been bitten off.

Tulip poplars are important trees for honey production. In the spring, honeybees collect pollen and nectar from their abundant tulip-shaped flowers.



Due to their large size and straight growth, tulip poplar trees are also important in the timber industry. The sturdy wood is used to make clapboard siding, furniture, pianos, organs and many other things.



PRO TIP: OVERHAND THROW

Overhand throws are primarily used to get out of trouble, but they can also be used from the middle of the fairway or off the tee-pad. To throw an overhand, grip the disc with your thumb on the inside rim ("thumber"), or with a sidearm grip ("tomahawk"). Throw the disc like you would a baseball or football, releasing the disc at 1:00-1:30 with the "thumber" grip, or at 10:30-11:00 with the "tomahawk" grip. The flight path of an overhand is like a corkscrew, twisting toward the direction of the top of the disc. With practice, overhands can be extremely accurate, allowing players to precisely spike their discs in particular locations.



THE "GREENS"

During your round, use the pictures on this scorecard to identify a few of the evergreen trees and shrubs (plants that keep their leaves all year long) found here at Owen High School. Every time you hit an evergreen with your frisbee, try to identify it. Look at its bark, leaf shape and other identifying features. Soon, identifying evergreens will be as easy as making a five foot putt. Good luck and have fun!

RHODODENDRON



MOUNTAIN LAUREL



PITCH PINE



EASTERN WHITE PINE



EASTERN HEMLOCK



LEYLAND CYPRESS



AMERICAN HOLLY



Owen High Nature Trail Disc Golf Course

a Kids in Parks TRACK Trail

Register your Round... Earn a Prize.

The mission of the Blue Ridge Parkway Foundation's Kids in Parks program is to get kids and their families "un-plugged", outdoors and reconnected to nature. Since disc golf is a great way to do that, we want to give you some disc golf gear to ensure you are able to enjoy future rounds. All you have to do is register your rounds at: www.kidsinparks.com.

TREE Love

When disc golfers hit a tree with their disc and get a favorable bounce, they call that "Tree Love". Use the pictures on this scorecard to identify a few of the trees found here at Haw River State Park. Every time you hit a tree with your frisbee, take a second to try to identify it. Look at its bark, leaf shape and other identifying features. Soon, identifying trees will be as easy as making a five foot putt.

Tulip Poplar *Liriodendron tulipifera*



White Oak *Quercus alba*



Virginia Pine *Pinus virginiana*



Sourwood *Oxydendrum arboreum*



Sweetgum *Liquidambar styraciflua*



American Beech *Fagus grandifolia*



Flowering Dogwood *Cornus florida*



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Kids in Parks
founding partners



Paddling Trails

Price Lake Canoe Trail

Discover Treasures on Price Lake

Paddle around the perimeter of Price Lake and visit these colored zones to discover just a few of the stories the lake has to tell.

Wild Waters

Boone Fork Creek

Rain and snow from the surrounding peaks flow into Boone Fork and other small creeks that drain into Price Lake. The flowing water from these streams brings valuable nutrients and oxygen to the lake, making these areas abundant with aquatic wildlife. Carefully paddle around the mouth of Boone Fork and the other creeks. Look for insects on the surface of the water and schools of fish swimming below. What was the coolest thing you found? _____



Active Beavers

Beavers here at the lake are always busy gnawing and cutting down trees. The wetland on the south end of the lake was created by beavers. They used logs and mud to block the stream to raise the water level so they could build their dome-like homes, called lodges, in the water. Can you find any signs of beavers?



Chewed Trunk



Wetland



North American Beaver

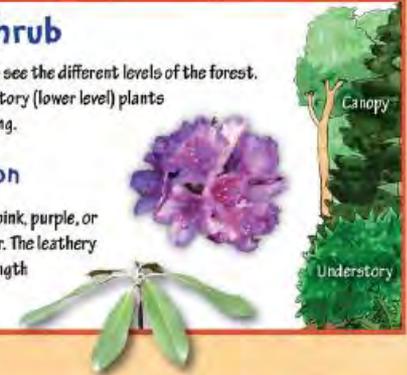


Evergreen Shrub

From a boat, you are able to see the different levels of the forest. Rhododendron is an understory (lower level) plants that stays green all year long.

Rhododendron

Rhododendron have bright pink, purple, or white flowers in the summer. The leathery oval leaves are about the length of an adult hand.



A Young Grandfather

Grandfather Mountain

While paddling along the lake's eastern shore, you get a unique view of Grandfather Mountain. Long ago, massive bodies of rock folded and compressed to form the Blue Ridge Mountains. In this area, older rock was actually pushed over younger rock. Over time, the older rocks on top eroded away, revealing the younger rocks beneath that form the distinct profile of Grandfather Mountain.



The Man behind the Park

Julian Price Dam

Julian Price was a nationally known insurance executive and civic leader. He originally bought this land (now called Julian Price Memorial Park) so that his employees would have a place to vacation. After Price's death in 1946, the estate was given to the National Park Service with an agreement that a lake would be made. Years later, the dam was built which created the 47-acre lake. From your boat you can get an excellent view of the dam at the northern end of the lake. What road goes over the dam? _____



Who's Swimming Underneath?

Fish

The lake is stocked with fish including all three trout species - brook, rainbow and brown. Brook trout is a large fish native to North Carolina. Brook trout only live in cool water and are powerful predators.



Brook Trout

Fish Food

Fish in Price Lake eat algae, zooplankton (microscopic creatures), insects and... other fish! The most common fish in the lake are golden shiners. These small fish were introduced to the lake to provide food for the bigger fish.



Golden Shiner

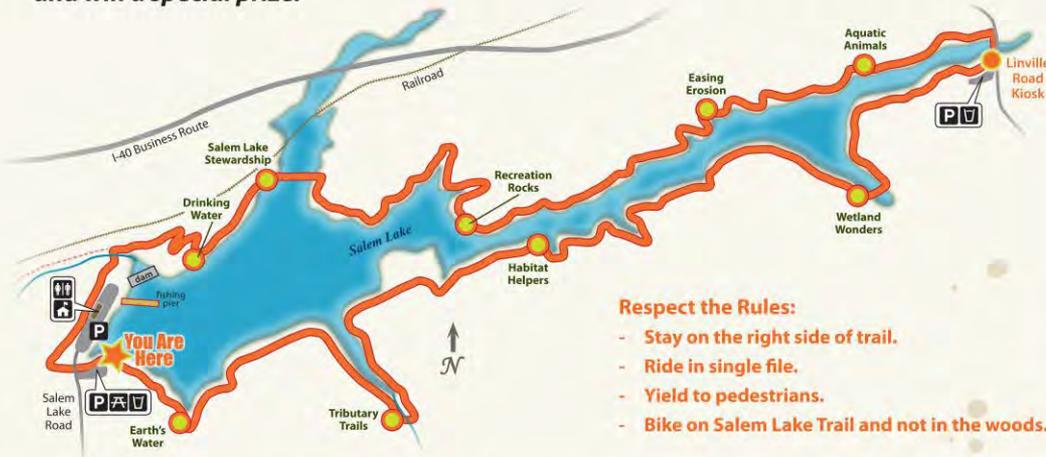
Similar to the GPS / Geocache brochure, the paddling brochure uses colored zones to connect content with specific regions around the lake.

Greenway Bike Trails

Salem Lake Greenway

WELCOME TO THE SALEM LAKE BIKE TRACK TRAIL

The Salem Lake Bike TRACK Trail features nine stations around the seven mile lake loop. Each station has a sign with interpretive information about the plants and animals that make Salem Lake their home, as well as some information about the value of the lake and why it's important to keep it clean. You will also find tips to improve your biking skills. In addition, each sign contains a secret code letter at the bottom right corner. Kids can register their rides on the trail at kidsinparks.com to earn free bicycle gear. **Remember the code letters and un-scramble them to enter the code word on the website and win a special prize!**



Cycling Tips: Pre-flight Check

Doing a quick equipment check before every ride can help save you time and injury. Be sure to check yourself, your gear and your bike to make sure you're ready to ride the trail.

HELMET

Be Smart. Protect your brain by wearing a properly fitted helmet. NC state law requires cyclists under age 16 to wear a helmet.

BRIGHT COLORS

Wearing bright clothing will make you more visible to others using the trail.

PADS AND GLOVES

Spills and crashes are a part of biking. Pads and gloves can help save your skin.

BRAKES AND BARS

Make sure your handlebars and headset are tight and that your brakes work!



WHEELS AND TIRES

Make sure your wheels are bolted on tight and that your tires are properly inflated (within the inflation range shown on the tire).

APPROPRIATE FOOTWEAR

Wear sturdy shoes that cover your toes.

(Illustration: Pencil Whisker, Wagon & Wheel)

Salem Lake and the surrounding lands and streams draining into the lake are part of the Salem Lake **Watershed**. This watershed provides habitat for wildlife, recreation opportunities for people, and a water supply for the city of Winston-Salem.



kidsinparks.com

The Salem Lake Bike TRACK Trail was made possible through partnerships formed between the Winston-Salem Recreation and Parks Department, the Blue Ridge Parkway Foundation's Kids in Parks program, and the generous support of the following private donors and businesses:



The Tessien Family

Ken's Bike Shop
Mock Orange Bikes



Kids in Parks founding partners

BlueCross BlueShield of North Carolina
Foundation



Look for code letters **HERE**

Interpretive Stops

TRIBUTARY TRAILS

A **tributary** is a small river or stream flowing into a larger river or lake. This stream is one of nine tributaries that drain into Salem Lake. Try to find them all as you ride around the trail!



A TRAIL TO THE OCEAN

Did you know the water flowing over the dam at Salem Lake could eventually wash up on the beaches of South Carolina? Here's how:

Salem Lake drains into Salem Creek (A), which is a tributary of the Yadkin River (B). The Yadkin River flows into the Pee Dee River in Uwharrie National Forest (C). The Pee Dee River flows into the Great Pee Dee River in South Carolina (D), which drains into the Atlantic Ocean about 30 miles South of Myrtle Beach (E).

If you were a drop of water flowing over the dam at Salem Lake, you could travel 18 miles along Salem Creek, 82 miles along the Yadkin River, 30 miles along the Pee Dee River, and 140* miles along The Great Pee Dee River to reach the ocean. How many total river miles would it be to the ocean?

$$18 + 82 + 30 + 140 = \underline{\hspace{2cm}} \text{ total river miles.}$$

*numbers are approximate



kidsinparks.com

Cycling Tips: Ups and Downs



RIDING UPHILL

When approaching an uphill section of trail, gear down and pedal hard to pick up speed. Keep your back straight and elbows bent. Try to avoid lifting yourself off of the seat or changing gear while riding uphill.



RIDING DOWNHILL

When approaching a downhill section of trail, move back on the seat, keep your elbows bent and your body low. Your legs should be relaxed and ready to absorb bumps. Use only the rear brake on downhills until you are comfortable enough with your balance to apply front and rear brakes evenly.

Illustrations by David Williams, Wings' n' Works



Code Letter T

WETLAND WONDERS

A **wetland** is an area of land that is saturated with water permanently or seasonally. There are many wetlands around Salem Lake. Notice the different grasses and plants growing in the wetlands. These plants and their roots help to absorb and filter water as it drains into Salem Lake. Wetlands also provide important habitat for animals such as dragonflies, frogs, and birds.

How many of the following animals and plants can you find in the wetlands around the lake?



The **blue dasher** is a common dragonfly that catches smaller insects flying in the wetlands.



Cattails provide a hiding place for animals and their roots help clean pollutants from the water.



The **green frog** lays its eggs in wetlands. Green frogs are eaten by fish, herons, and water snakes.



Water snakes are not venomous. They hunt for frogs and small fish in the wetlands.



Wood ducks are very shy and like to hide in wetlands. They dabble in the water for algae to eat.

Cycling Tips: Straight and Narrow

Don't end up in the water! Your bike will tend to go in the direction you are looking, so on narrow sections of trail it is important to look straight ahead and stay to the center if possible. When approaching a section of trail with obstacles such as rocks or logs, slow down and make sure you can see a clear path before proceeding. Mountain bikers call this "finding your line."



Illustration by David Williams, Wings & Wheels



AQUATIC ANIMALS

An **aquatic animal** is an animal which lives in water for most or all of its life. Fish, reptiles, amphibians, birds, and even some mammals are aquatic animals that live in Salem Lake. Here are some tips to help you try to spot these animals on your visits to the lake:

FISH living in the lake include bass, catfish, crappie, bream, carp and white perch. Look near the water's edge for minnows (baby fish) in the shallows, and watch for larger fish jumping in the middle of the lake. One of the best ways to see fish up close is to try some catch-and-release fishing here at the lake.



BEAVERS are most active at night, so the best time to look for them on the lake is at sunrise or sundown. Look along the edges of the lake for tree trunks with cone-shaped tops and teeth marks – these are signs that beavers have been in the area.

WATERFOWL (birds that swim) can be found on Salem Lake all year, but the largest variety can actually be found on the lake in the winter months. Some waterfowl, such as mallard ducks, dabble in shallow water for food. Others, such as double-crested cormorants, dive deep under the water to find food.



Cycling Courtesy: Stay on the Trail!

Although it may seem like fun to ride in the woods, it is safer and it is good biking etiquette to stay on the trail and respect the rules that the city has established for the Salem Lake loop. This will help to keep plants and animals out of harm's way, prevent soil erosion, and show other bikers that you want to keep Salem Lake beautiful for everyone to enjoy.



Illustration by David Williams, Wright & Nicks



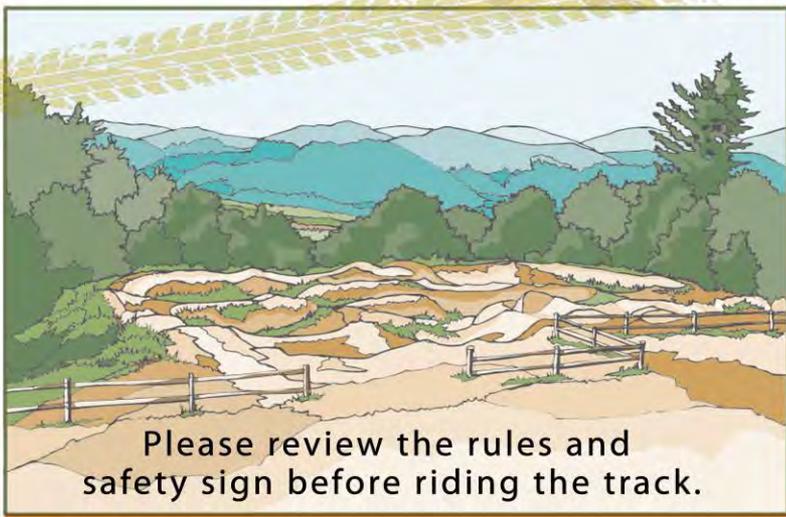
kidsinparks.com

Code Letter A

PUMP TRACK Trails

WELCOME

to the ROCKY KNOB BIKE PARK PUMP TRACK TRAIL



A “PUMP TRACK” is a unique mountain bike course where you can learn, practice and master the basic skills of mountain biking. The ultimate goal is to smoothly ride over the obstacles and “pump” your way around the entire course without pedaling.

Through a partnership formed with the **Kids in Parks** program, the pump track here at Rocky Knob has signs placed around the track with tips to increase your skills and enjoyment on the track. In addition to illustrations and text, each sign contains a QR code that links to an educational video about each skill. Additionally, kids can register their rides on the pump track at kidsinparks.com to earn special bicycle gear.

The Rocky Knob Bike Park Pump Track was created by: Elevated Trail Designs and Terra Tek Trails; and was made possible through partnerships formed between Watauga County, the Boone Area Cyclists, the Kids in Parks program, and the following businesses and private donors:

ROCKY KNOB PARTNERS



KIDS IN PARKS FOUNDERS

PRIVATE DONORS AND VOLUNTEERS

Individual Support:

The Tessien Family, Barry D. Greenblatt, Amelia Bennett, Eliza Bennett, Ricardo Ceppi, Kathleen Collins, Chad Eppley, Barry D. Greenblatt, Joshua J. McMann, Paul and Caroline Stahlschmidt, Steve White, and The Womacks

Organizational Support:

Appalachian Mountain Brewery, Bald Guy Brew, Cole's Lawn Care, Coyote Kitchen, Destination by Design, John Ritter at Edwards Jones Investments, Ray's Weather Center, and The Trust for Public Lands

Volunteers:

Alex Dawson, Drew Dixon, Ian Henderson, Jason Hightower, The Jacksons, Paul Norris, and Ryan Puckett



kidsinparks.com

Skills Signs

PUMPING

"PUMPING" is the essential skill for making your bike travel through the entire course without pedaling. Pumping is the act of shifting your body weight and absorbing forces to increase your momentum.

Good body position is essential to "pumping."

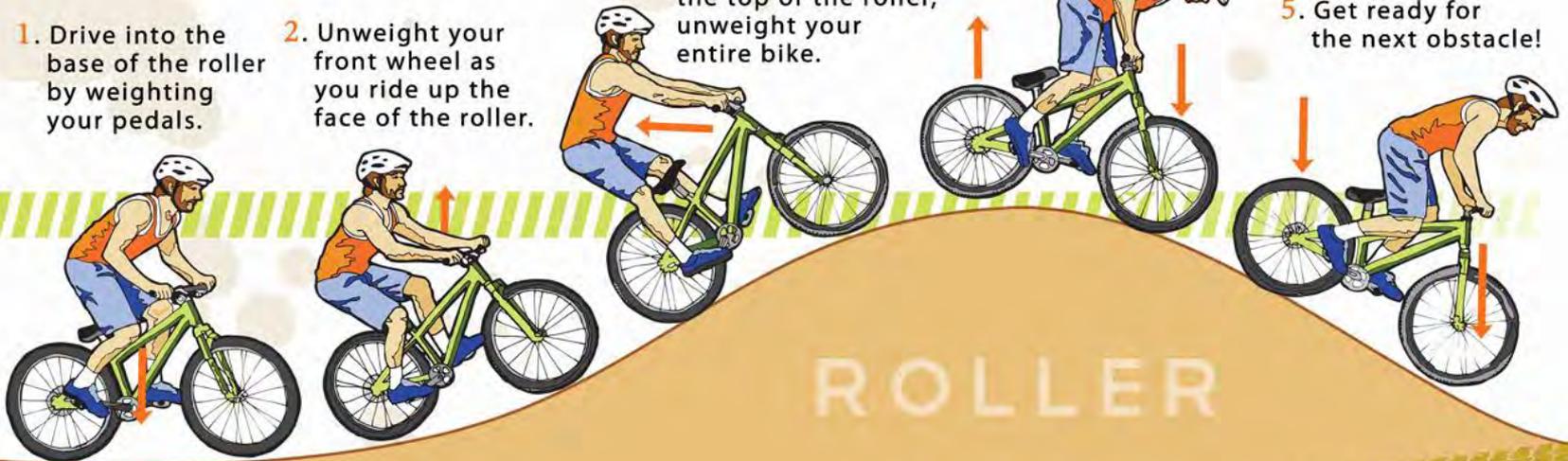
1. Drive into the base of the roller by weighting your pedals.

2. Unweight your front wheel as you ride up the face of the roller.

3. As you cross over the top of the roller, unweight your entire bike.

4. Then quickly weight your bike and push down as you ride down the back of the roller.

5. Get ready for the next obstacle!



kidsinparks.com

SCAN QR CODE
TO WATCH VIDEO

COMING
SOON

BUNNY HOP

"BUNNY HOP" allows you to lift the bike completely off the ground to clear obstacles and continue forward motion. Good body position is essential to "Bunny Hop."

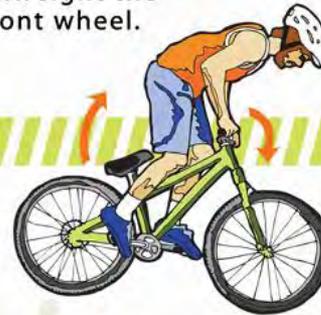
1. Push your weight into the pedals. Prepare to unweight your back wheel.



2. Unweight your back wheel as you roll.



3. Lean your body forward pushing into the pedals. Roll your wrist over and prepare to unweight the front wheel.



4. Lean back lifting both the front and back tires off the ground and prepare for a two wheel landing.



kidsinparks.com

SCAN QR CODE
TO WATCH VIDEO

COMING
SOON

MANUALLING A ROLLER

"MANUALLING A ROLLER" is a technique used to create forward motion over rollers without pedaling and gain forward momentum.

1. Drive into the base of the roller by weighting your pedals.



2. Approach front of roller in good riding position. Unweight front wheel at top of roller.



3. Extend legs and lean back at the top of the roller with back tire on ground.



4. Continue through the roller in a wheelie position.



5. Place your front tire on the downside of the second roller. Use your legs to soak up the top of the roller with your rear wheel.



ROLLER



kidsinparks.com

SCAN QR CODE
TO WATCH VIDEO

COMING
SOON

Questions?

Contact Us



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