

Sky Meadows State Park

Junior Ranger Program

Naturalist Activity Booklet

For children ages 8-12





SKY MEADOWS STATE PARK JUNIOR RANGER PROGRAM

Welcome to our Jr. Ranger– Naturalist booklet! By opening this book you begin your journey to becoming an official Sky Meadows State Park Jr. Ranger. After completing this booklet and attending one nature program, bring your completed book to the Visitor Center. Present it to the Ranger. They will review your book and issue you your official badge!

Good luck in your journey, and remember to tread lightly on the land. Practice ‘Leave No Trace’ principles at all times in the park, and most importantly, have fun!

Leave No Trace Principles

1. **Plan ahead and prepare:** Learn about the park rules. Check the weather before you come. Bring enough water, sunscreen, bug spray with you. Dress for the weather.
2. **Travel and Camp on durable surfaces:** Stay on the trails.
3. **Dispose of waste properly:** Don't litter. Take your trash with you when you leave.
4. **Leave what you find:** Don't pick flowers or leaves. Don't take home rocks, pinecones, or any other souvenirs.
5. **Minimize campfire impacts:** Fires are only allowed in certain areas. If you build a fire, keep it small and make sure that it is completely out before you leave.
6. **Respect wildlife:** Watch all wildlife from a safe distance. Do not try to touch or feed any wildlife. If you have a pet with you, keep it on a leash and under your control at all times.
7. **Be considerate of other visitors:** Be kind to other people in the park. While on the trails, keep your voices quiet so that you and other people can enjoy the sounds of nature.



Activity Alerts!

Poison Ivy - When completing these activities, keep an eye out for *POISON IVY*. Remember: “leaves of three, let it be”. Not every plant with three leaves is poison ivy, but unless you are certain of the identification, it is best to keep your distance.



Ticks - Be sure to apply insect repellent around your lower legs and arms before the hike; check





A NOTE TO CAREGIVERS

We hope that you and your child enjoyed the Junior Ranger - Naturalist experience. These activities were designed to introduce young explorers to the natural wonders of Sky Meadows State Park. There are many other opportunities for self-guided exploration every day at the park. These include Historian and Agriculture related explorations.

Make the most of your field explorations with our Discovery Backpacks found in the Park's visitor Center. These backpacks are stocked with the guides and tools you'll need to spend a day of self-guided discovery at the park.

We have 3 different Discovery Backpack themes that allow you to explore the various natural wonders of Sky Meadows State Park:

-  Beginning Birding
-  Insect Investigation
-  Woodland Wonders

Each Discovery backpack includes field guides, maps, activity cards and other tools that will help you enjoy a day of exploration.

Backpacks are available at the Visitor Center on a first-come, first-served basis. There is no charge to check out and use a Discovery Backpack, however, an adult 18 years or older must be present to sign for the backpack.

For more information on the programs, events, and services available at Sky Meadows State Park, please visit our website at www.virginiastateparks.gov or call the park at (540) 592-3556.

Sky Meadows State Park
11012 Edmonds Lane
Delaplane, VA 20144



NATURE PROGRAM

While at Sky Meadows State Park, attend one of Park's Nature Programs*. Fill in the program information below. At the end of the program, ask the Park Representative to sign their name on the line marked "Park Representative Signature." If you are at the park on a day that no Nature programs are offered, stop in to the Visitor Center and make observations of what you find in the Visitor Center Nature area and ask the Ranger on duty some questions about the natural features of the park.

Title of the program you attended : _____

Date: _____ Time: _____

Two things that you learned from the program that you did not know before attending:

1. _____

2. _____

Park Representative Signature

Date

* For a complete listing of Nature Programs, please visit our online Calendar of Programs/Events at <https://www.dcr.virginia.gov/state-parks/sky-meadows>.



WHAT IS A NATURALIST?

A naturalist is a person who studies nature. The most important skill you can have as a naturalist is "observation". This is how you begin to understand and experience the world around you.

The closer you look, the more you will discover about nature. When you begin to notice nature's details and how they interact, you begin to understand the importance of preserving the environment and how nature works within it.

At Sky Meadows State Park, all of the Park Rangers spend time getting to know the natural world around them. The Rangers hike the park trails throughout the year to observe the seasonal changes to our beautiful park environment. Becoming a Junior Ranger will increase your observation skills to fully appreciate nature more as our Rangers do; to observe the winter snows melt and the flowers and trees begin to bloom; to watch as birds build nests and lay their eggs; to see the snakes and frogs emerge from their winter dens and enjoy the warmth of Spring and Summer months. As Summer turns to Fall, the leaves change color and the birds begin to migrate to their winter homes. All year long, the Rangers and Junior Rangers watch as nature completes it's yearly cycle. These observations allow us to care for our cherished land.

By becoming a Junior Ranger- Naturalist, you will develop the skill to observe and appreciate nature in all of its splendor. Help us to preserve our environment.

This book belongs to: _____

Junior Ranger - Naturalist In Training

Date

NATURE JOURNALING

Find a place in the park that has a variety of plants and looks like it could be good habitat for different animals and birds. Sit and observe the area for 10 minutes. **Using the box below, draw the plants, animals, birds and natural land features that you see. Label the things you draw. Be sure to fill in the information below to document your observations like a true Naturalist!**

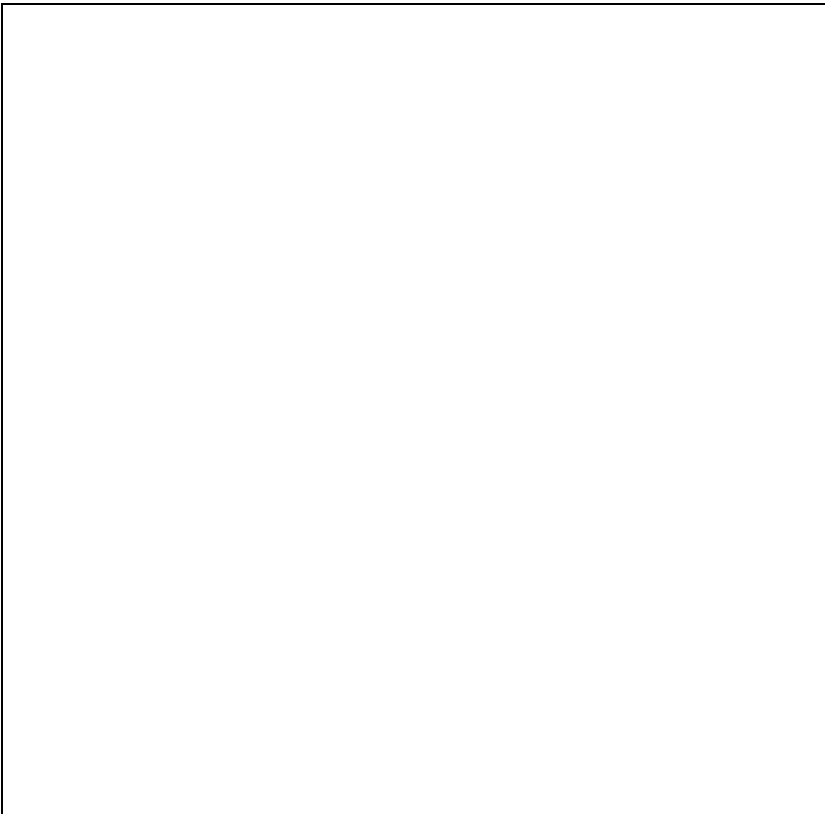
Observation Area

Location:

Date:

Weather:

Time:



TREES

Naturalists identify trees by their branches, leaves and bark. **Find some trees in the park that are interesting to you. Use the *Tree Finder* and *Peterson's First Guides: Trees* books in the Woodland Wonders Discovery Backpack to identify two types of trees that you see on the trails: two *Evergreen* and two *Deciduous* trees**

My tree is an **Evergreen**:

It's leaves are like needles?

How many needles are in each bundle? _____.

My tree has pinecones ? _____.

My two trees are _____ and _____.

Draw a picture of one needle bundle here::



My trees are **Deciduous** (find one with simple leaves and one with compound leaves - see the tree guide for help)

Its branches are opposite or alternate?

It's leaves are simple (one leaf per branch) or compound (many leaves per branch)?

It's leave edges are smooth or toothed?

It's seeds that are like _____.

It's flowers that look like _____.

Draw a picture of one tree leaf (or leaves) here:





PLANTS

There are thousands of different trees and plants species in Virginia (too many to list in this booklet) The below activities will help you observe the variety of plant life at Sky Meadows.

Take a hike on one of the park's wooded trails such as Boston Mill Road, South Ridge Trail, or Gap Run Trail? **As you hike the trails, observe and count the plants that you find along the trail . Complete the scavenger hunt list below (write in the quantity that you found in the provided block). The trail guides found in the "Woodland Wonders" Discovery Backpack will help you in naming the plants that you observe.**

1) Are growing on the ground in the shade	
2) Are growing on the ground in full sun	
3) Are not green in color?	
4) Are growing on a rock	
5) Are growing on another plant or tree	
6) Does not have a flowers	
7) Are taller than you	
8) Are smaller than your thumb	

Plants make seeds so that new plants will grow. There are many different kind of seeds. **Try to find the three types shown and record how many you found below each type:**



Parachute: Seeds that are blown by the wind.

How many found?



Helicopter: Seeds that twirl in the wind.

How many found?



Hitchhiker: Seeds that attach to other things to be moved.

How many found?



BIRDS

The shape and size of a bird's beak gives clues to what kind of food it eats, how it catches its food and what sort of habitat it might prefer.

Match the pictures of beak types below with the description of their functions. Use the books found in the "Beginning Birding" Discovery Backpack to help you in this activity.



1.Straw - ____
Ruby Throated



2.Chisel - ____
Red Headed



3.Tearing-____
Bald Eagle



4.Strainer-____
Mallard



5.Cracking-__
Cardinal



6.Tweezers ____
Bluebird

A



Plants & insects found in water

B



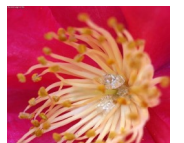
Insects in bark

C



Small insects

D



Plant Nectar

E



Animals

F



Seeds

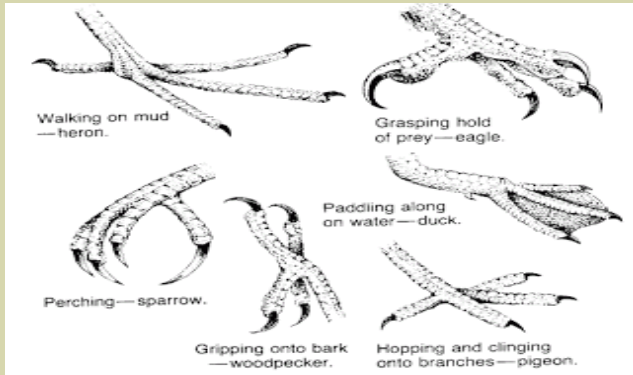


BIRDS

In addition to different types of beaks, birds have other physical adaptations to help them survive in nature.

Feet:

Birds' feet come in different shapes and size. Feet with long toes are good for walking on soft mud, while feet with sharp talons are good for capturing prey.



Feathers:

All birds have feathers. Bird's feathers help them fly and keep them warm.

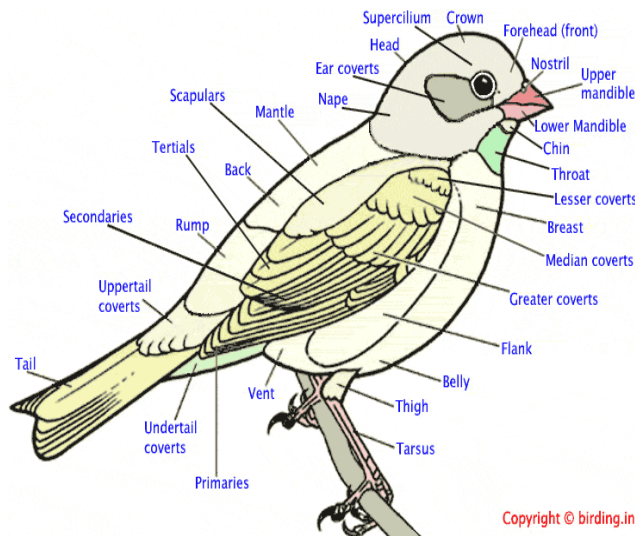
Birds have different types of feathers. Some feathers enable the bird to fly silently through the forest or soar high in the sky.

Feathers vary in colors and designs. Some birds' feathers change color with age or with seasons. Most male birds are more colorful than female birds (of the same species.)

Why do you think males bird have more colorful feathers?

Bird Anatomy:

An understanding of bird anatomy will help Junior Naturalists to identify birds. Observe these features and compare them to other birds.



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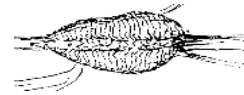
INSECTS

Explore one of the trails that takes you through open fields. [The Rolling Meadows Trail, the Piedmont Overlook trail, or the Hadow Trail]. Find an insect on your hike. Carefully collect it and use one of the magnifiers in the Insect Investigation Discovery Backpack to observe it. Use the insect field guide found in the Insect Investigations Discovery Backpack to discover what kind of insect it is. Answer the following questions. Be sure to return it to the trail when done with your observations

Did you find the insect? on a leaf or on the ground?	
What is its color?	
How many legs does it have?	
Does it walk or fly?	
Are its wings bigger than its body?	
Does it have big or small eyes?	
Are its antenna larger than its body?	
Is it bigger than your thumb nail?	
Does it have 3 sections (head, thorax, & abdomen)	

What kind of insect is it ? (use the field guide to help you)

Many insects leave signs on branches, bushes, rocks and in the soil. If you see an unusual shape, it may be the work of an insect. Look for eggs on leaves, cocoons on branches, and tunnels on tree trunks.



Praying mantis egg case



Gall - swelling in a branch or leaf made by tiny flies.



Leaf miner tunnels

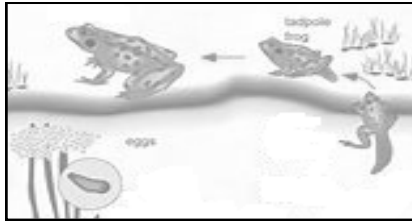
Try to find these common signs left by insects. Write these and any other insect signs you observe.

Record Observation here:



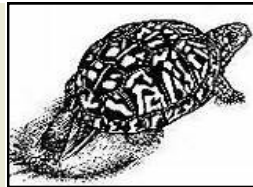
ANIMALS: REPTILES & AMPHIBIANS

The reptiles and amphibians lead quiet lives in the forest. Snakes, toads, frogs, salamanders, skinks, and turtles are shy creatures who will often hide when they sense humans in the forest. These small creatures can be harmed when we handle them. Snakes and turtles may bite if they feel threaten (picked up, handled, or walk close to their location). It is best to observe these animals from a safe distance so not to harm them.



Amphibians lay their eggs in water typically in vernal Pools or slow moving streams. Their young spend their lives in the water. The adults live on land but are always near the water.

Reptiles lay their eggs on land. Adults reptiles lay their eggs in a safe place (under ground, trees, or rocks). Babies need to hatch in a safe place to hide from predators.



Find an area of the park that has water near it. Turner Pond or Gap Run are good choices. While hiking, look alongside the trail for an ideal place for either amphibians or reptiles to raise their young and find food and close to water. **Describe this spot below, make sure to list the trail and any other spot details you can. Why do you think that this is a good spot?**

Record Observation here:



BIRDS

Learning to observe, identify and name birds in the wild is the first step in becoming a birder. Below are twenty birds that are common to Sky Meadows. Many of these birds are at the park year-round, others migrate south for the winter. Spend some time exploring the park, looking for these birds. **Circle the pictures of the birds that you observe. Use the *Bird Field Guide* found in the "Beginning Birding" Discovery Backpack to help in your observations.**

B	I	N	G	O
 Eastern Bluebird	 Great Blue Heron	 Turkey Vulture	 Eastern Meadowlark	 American Kestrel
 American Goldfinch	 Dark-eyed Junco	 Tufted Titmouse	 Carolina Wren	 Mourning Dove
 Chipping Sparrow	 Canada Goose	 Red-headed Woodpecker	 Indigo Bunting	 Red-winged Blackbird
 White-breasted Nuthatch	 Northern Cardinal	 Red-tailed Hawk	 Downy Woodpecker	 Carolina Chickadee
 Scarlet Tanager	 Blue Jay	 Northern Flicker	 Red-eyed Vireo	 American Crow

BIRDS FIELD OBSERVATION

Field observation skills are very important for bird identification. Use the observation form below to record your bird observation. Reference materials (with pictures) are available in the Discovery Backpack to help you. These include the *Peterson Field Guide* and the *Birds of Virginia Field Guide*.

While at the park, make one positive bird identification - its fun to do!

What is the bird's size? (the size of a lemon, banana, pineapple, etc.)

What color is the bird? Does it have more than one color? Are there patterns to the colors?

Did you see the bird in a tree, bush or near water? Was it swimming or wading?

Do the wings have patterns (colored patches, stripes, or tips?) Describe them.

How does it fly? (In an up-and-down pattern, straight and fast, hovering, soaring or gliding)

What are the shapes of its wings, tail and bill?

Does it have a crest on its head?

Other observed features:

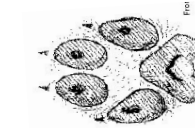
I have identified this bird as a _____.



ANIMALS: MAMMALS

Mammals are the easiest animals to recognize but often the hardest to see. Knowing how to look for the signs they leave behind will help you know which animals live at Sky Meadows.

Tracks

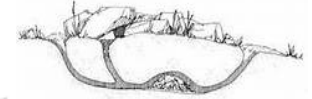


Scat

COYOTE



Homes



Left behind- bones, tree damage, antler sheds



Take a hike on one of our trails. **Find three signs that mammals have been in the area. Use the *Peterson Flash Guide – Animal Tracks* booklet found in the Discovery Backpack for help. List the three signs you found on the trail. What do you think is the mammal that left signs for you to discover?**

SIGN FOUND	MAMMAL
1) _____	_____
2) _____	_____
3) _____	_____

Think of three ways the mammals that left these signs share or compete with each other in nature.

- 1) _____
- 2) _____
- 3) _____