





## A NOTE TO CAREGIVERS...

We hope that you and your child enjoyed the Junior Historian 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.

Make the most of your field explorations with our Discovery Backpacks. 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 and cultural 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.

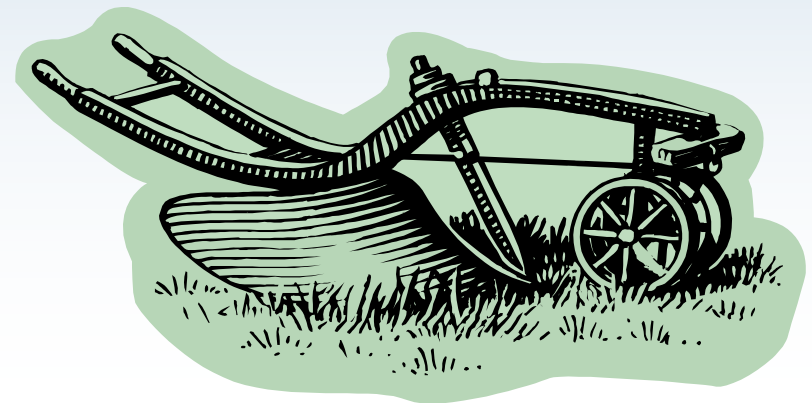
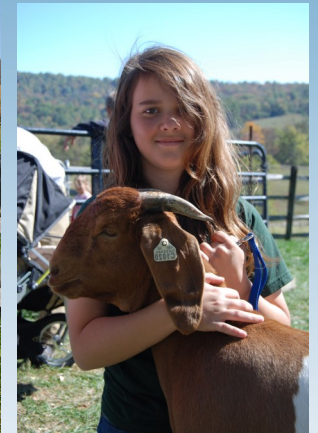
For more information on the programs, events, and services available at Sky Meadows State Park, please visit our website at [www.virginiastateparks.gov](http://www.virginiastateparks.gov) or call the park at (540) 592-3556.

Sky Meadows State Park  
11012 Edmonds Lane  
Delaplane, VA 20144

## Sky Meadows State Park

# Junior Ranger Program

## Farmer Activity Booklet For children ages 8-12





## SKY MEADOWS STATE PARK JUNIOR RANGER PROGRAM

Welcome to our Jr. Ranger– Farmer 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 history program, bring your completed book to the Visitor Center and 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, and 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 Alert!

Cattle live here at the park all year long. Sometimes, they graze in fields that also have hiking trails. Stay safe by keeping your distance and not touching or feeding the cattle.



## RANGER-LED AGRICULTURE PROGRAM

Now, that you are done with the activities in this booklet attend a program, take a house tour or speak with a ranger. Ask the Ranger to sign their name on the line marked "Ranger Signature." Once you are done with this page return your booklet to the Visitor Center to receive your badge!

Title of the program you attended:

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Date:

Time:

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

1.

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2.

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Ranger Signature

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For a complete listing of Agriculture Programs, please visit our online Calendar of Events at [www.virginiastateparks.gov](http://www.virginiastateparks.gov)

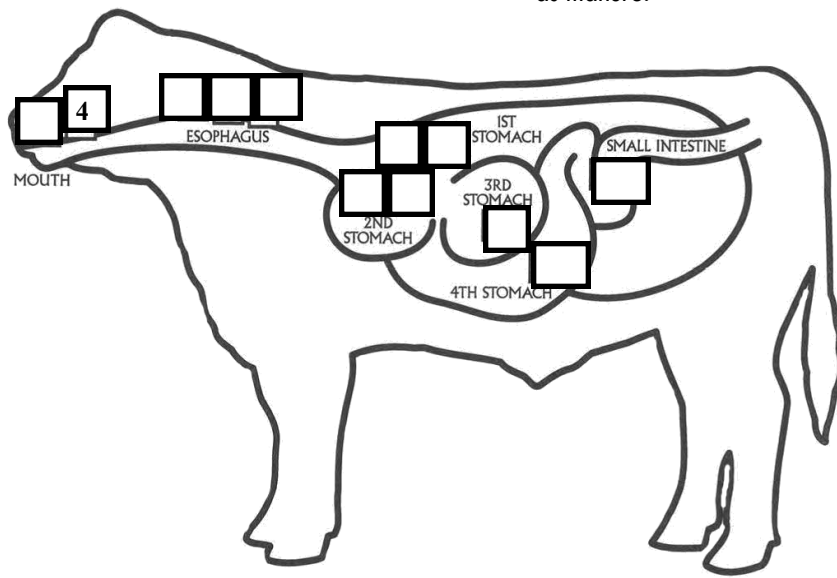


## LIVESTOCK: CATTLE

In 1850, Abner Settle had 13 beef cattle. Today, you will find over 100 cattle at the park. Cattle are mammals that belong to a special group called *ruminants*. Ruminants have unique stomachs with four compartments that allow them to eat plant-based foods that other animals cannot eat. Their special stomachs recycle their food to get the most nutrients possible.

Read the information below and then follow the path of food as it moves through the cow's stomachs. **Write the step numbers on the diagram below.** Some numbers will be used more than once.

- Teeth tear and chew food in mouth.
- Food travels down the esophagus.
- Cud (swallowed food) mixes and softens in stomachs 1 and 2.
- Teeth tear and chew food in mouth.
- Cud passes through stomachs 1, 2, 3, and 4 as it is digested and nutrients absorbed.
- Waste materials pass through the intestines and exit the body as manure.



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## MR. SETTLE'S FARM

In the 1840's Abner Settle had a farm where Sky Meadows is today. Mt. Bleak, the stone and wood house, was his farm home. Abner grew corn and wheat here, and produced 350 pounds of butter in a year. As you walk around the Mt. Bleak house, you will see a mix of old and new. While farm machinery has changed since Mr. Settle's time, how crops grow and what crops need to stay healthy, is still the same.

Today, Sky Meadows State Park continues the farming tradition of Mr. Settle and those farmers before and after him. Cattle graze in our meadows; vegetables grow in our garden; honeybees pollinate our blossoms and give us delicious honey. As you complete the pages of this book, think about how the farm would be the same or different if you were here in the 1840's.

Before you begin the activities in this book, here are some common farming terms that you may need to know:

**Agriculture:** the science, art or practice of maintaining the soil, growing crops and raising livestock.

**Apiary:** a place where beehives are kept and bees are raised for their honey.

**Crop:** plants grown by people in large amounts for food or other use.

**Livestock:** animals (especially farm animals) raised for food or other use.

**Nutrient:** a substance that plants, animals, and people need to live and grow.

**This book belongs to:**

**Junior Farmer In Training**



## MR. SETTLE'S FARM

It's the year 1850. We have been given a chance to tour Mr. Settle's farm, Mt. Bleak. We will see the different plants and animals that make up the farm.



wheat

In 1850 Mr. Settle's farm produced 680 bushels of wheat. Each bushel of wheat weighs 60 pounds. How many pounds of wheat did Mr. Settle grow?



corn

That same year he grew 400 pounds of corn to feed his animals and make corn meal. A bushel of corn weighs 56 pounds. How many pounds of corn did Mr. Settle grow?



Mr. Settle owned 10 horses. Before tractors, all farm machines were powered by horses. In addition, horses were needed to transport corn and wheat to the mills and carry people in wagons or in the saddle.



Mr. Settle had 13 beef cattle and 7 milk cows at the farm. He was able to produce 350 pounds of butter in a year.



The 23 hogs that roamed the woods surrounding Mt. Bleak gave the Settles the ham and bacon needed to feed their family and the enslaved people of Mt. Bleak.



## GOOD BUGS VS. BAD BUGS

Plant pests have always troubled farmers. When Abner examined his fields he would have been looking for signs of insect damage. For example, the corn borer crawls into the ears of corn and eats the kernels. Fortunately, there are insect predators to control pests like the corn borer.

Below are a few insects commonly found in gardens and on farms. Read the descriptions and then circle the "good bugs" that you would want to find in your garden.



**Cabbage Worm:**  
Eats the leaves of cabbage and lettuce.



**Corn Borer:**  
Chews tunnels into corn ear and stalks.



**Earthworm:**  
Improves soil and helps drain water in dirt.



**Lacewing:** Eats aphids, mealybugs, spider mites, and whiteflies.



**Tomato Hornworm:**  
Eats tomatoes, peppers and potatoes.



**Slug:** Feeds on vegetables; leaves holes and slime.



**Squash Bug:**  
Sucks juice from cucumbers, melons, pumpkins and squash.



**Whiteflies:**  
Suck sap from cucumber, potato and tomato plants.

**Extra Activity** Can you find the kitchen garden in the Historic Area? Without going inside the fence, do you see any bugs flying around? How do you think Abner got rid of the "bad bugs"?





## FENCES

According to the 1850's census, Abner Settle farmed 350 acres of land. With hogs, oxen, sheep, cattle and horses, as well as corn and wheat in the fields, fences would be as important to Abner as they are for us today. Think about what resources were used to build the fences. **Which of the fences below could have been here in the 1840's?**

As you explore the park, look for each type of fence pictured below. As you find a fence type, write the area of the park where you saw it.

Split-rail fencing



Net Wire fencing



Rock Wall



Picket fencing



## THE HARVEST THEN & NOW

If you went back in time to Mr. Settle's farm, you would not see any cars. Mr. Settle's farm machines were pulled by horses because cars were not invented yet. **Can you find this machine?** It is near the blacksmith forge behind the large Dairy Barn. It takes hay that has been cut down and pulls it up to the top of the machine, which then falls into a wagon. The job of this machine is to load the hay making it easier for people.



**Invent a modern day hay loader. What would you use to power it? Could you invent more parts to the machine to make the job of harvesting and selling the hay even easier?**

**Hint:** Think about the technology we use today (cell phones, wifi, etc...)

