Silvio O. Conte National Fish and Wildlife Refuge

Activity Booklet

Presented by:

Junior Wildlife Ranger

Upgrade your digital badge!

This Book Belongs To:

U.S. Department of the Interior March 3, 1849

U.S. Fish & Wildlife Service

National Wildlife Refuge System

Welcome to Silvio O. Conte National Fish and Wildlife Refuge! My name is Tuptip, and I am an Eastern Painted Turtle.

I live here and while my favorite spot is the river, I have friends that hang out all along the trail.

To earn your badge, you must complete all of the activities for your age group in this booklet.

Tree Swallow

(age group: 4-7)
Complete three of the eight activities

Red Tailed Hawk

(age group:8-10)
Complete five of the eight activities

Eastern Painted Turtle

(age group: 11-13+)
Complete seven of the eight activities

Finished?

Show your booklet to refuge staff member or Volunteer at the Kiosk to receive a:

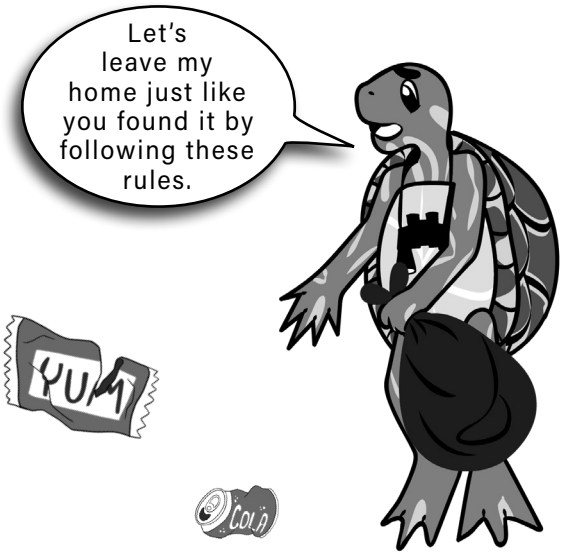
1. **Digital Passport and Badge: Scan QR code with the camera on your phone**
2. **Signed certificate**
3. **Silvio O. Conte National Fish and Wildlife Refuge Badge**

Visit multiple times to **upgrade** your **digital badge** in your **digital passport!**

You can also visit other participating sites to collect more badges and earn rewards.
For participating sites and more information, visit www.juniorwildliferanger.org

Footprints

Activity 1: Leave No Trace!



National Wildlife Refuges are special places, and it is our job to leave them the same way we found them! Refuges provide a protected environment for both plants and animals to live. They allow us to visit animals in their natural habitats and enjoy the beauty of nature.

Leave No Trace teaches that we are to **take only pictures** and **leave only footprints**. There are several rules to follow when visiting national refuges and other public lands.

1. **Dispose of Waste Properly.**
2. **Leave What You Find.**
3. **Respect Wildlife.**
4. **Be Considerate of Other Visitors.**

Name **three ways** you can follow **Leave No Trace** while you are at the refuge.

_____

_____

_____

If you see anything on your hike that breaks the Leave No Trace rule, write it here.

_____

What can you do to practice these principles at your home?

_____

What can you do to practice these principles within your school and your community?

_____

_____

Pollinators

Activity 2: Peaceful Pollinators

As you begin to walk down the trail you will notice on both sides of the path is the refuge's **Pollinator Garden**.

What is a pollinator? Can you name one?

_____

Why are pollinators important?

_____

Pollen allows plants to grow seeds and fruit. When these seeds are scattered to the ground, they grow into new plants. Without pollinators, there would be no plants!

Pollinators are animals that move pollen — often the yellow or white, dusty powder on a flower or leaf —from one plant to another. Butterflies, bees and even birds are all pollinators!

Pollinators help provide much of the foods we eat. Many types of fruit, vegetables and nuts all depend on pollinators to grow. Without pollinators we would not have these foods.

Walk through the **pollinator garden**. Find at least one species of plant listed below and draw it along with any pollinators you see.

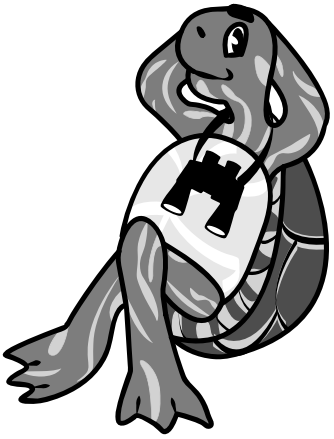
Swamp Milkweed
Asclepias incarnata

Seaside Goldenrod
Solidago sempervirens

Smooth Aster
Symphyotrichum laeve

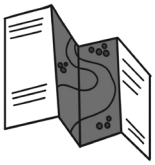
Navigators

Activity 3: Can you be a Navigator?



As you walk this trail you will see mile markers that say .1, .2, .3, and so on. These markers are meant to help with navigation. We navigate when we try to find our way around, usually in a place we are not familiar with.

Can you circle the tools below that would help you navigate?

.1 mi	Stop here and look around. Find a favorite tree and draw what you've found.		.1 mile is about as long as 13 school buses in a row! 
.2 mi	If you're here take a pause. Find a favorite bug or animal, it can have wings, scales or paws.		.2 miles is as long as the Eiffel Tower is tall! 
.3 mi	Stop here and listen around. Use the space and describe your favorite sound.		.3 miles is like walking down 5 football fields! 
.4 mi	Stop here one final time. Now draw your favorite anything you can find.		.4 miles is about as long as 59 telephone poles laid end to end! 
. mi	If you see more mile markers during your visit and want to record something you saw, here's an extra space! (Don't worry this is just a bonus, you can complete the activity without doing this one.)		

Birdwatching

Activity 4: An "Eggciting" Challenge!

As you continue down the trail, do you hear or see any birds? Use the table below to help you with your birdwatching. **Birdwatchers** try to identify birds with binoculars and sometimes their bare eyes too.

So why do people watch birds? Scientists count birds to see if bird populations are doing well or if they are threatened or **endangered**. A species is **endangered** if scientists think it could go extinct. Birdwatching also tells us if a population of birds moves to a new area. As a bird watcher, you become a citizen scientist. And of course, birdwatching is also fun!

If you see a bird, put a checkmark in the box! At the end of your visit, count how many birds you've seen and check which commendation you've earned. A **commendation** is an award given out for special accomplishments!

Bobolink
Dolichonyx oryzivorus

Eastern Wild Turkey
Meleagris gallopavo silvestris

Great Horned Owl
Bubo virginianus

Red Tailed Hawk
Buteo jamaicensis

American Woodcock
Scolopax minor

Barn Swallow
Hirundo rustica

Red Bellied Woodpecker
Melanerpes carolinus

Tree Swallow
Tachycineta bicolor

Found one bird?
Congrats you are a terrific bird watcher

Found 2 birds?
Wow! You are a master bird watcher

Found 3 or more birds?
You are a legendary bird watcher

Pool Party

Activity 5: Vernal Pool Party!

While walking the trail you may spot large pools of water. These are called **vernal pools**. **Vernal pools** are shallow bodies of water that fill up with rain water and dry out every year when the water **evaporates**. **Evaporation** is when a liquid, like water, turns into a gas. This keeps hungry fish out so animals like frogs, salamanders, and turtles can survive.

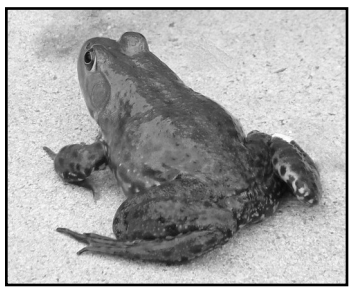
These animals are called **amphibians** and **reptiles**! **Amphibians** are animals that spend part of their lives on land and the rest of their lives in the water. Most hatch from eggs. They have gills and fins that allow them to survive in the water and a lot of them also have legs that are good for moving on land!

Reptiles are cold blooded, meaning they use the sun and warm air to help warm their bodies. They also have protective scales or bony plates on the outside.

Below we have some reptiles and amphibians that love to hangout at the vernal pool. Can you figure out which animals are amphibians and which are reptiles?

Circle R if you think the animal is a reptile and A if you think it's an amphibian.

Frog



R **A**

Salamander

R **A**

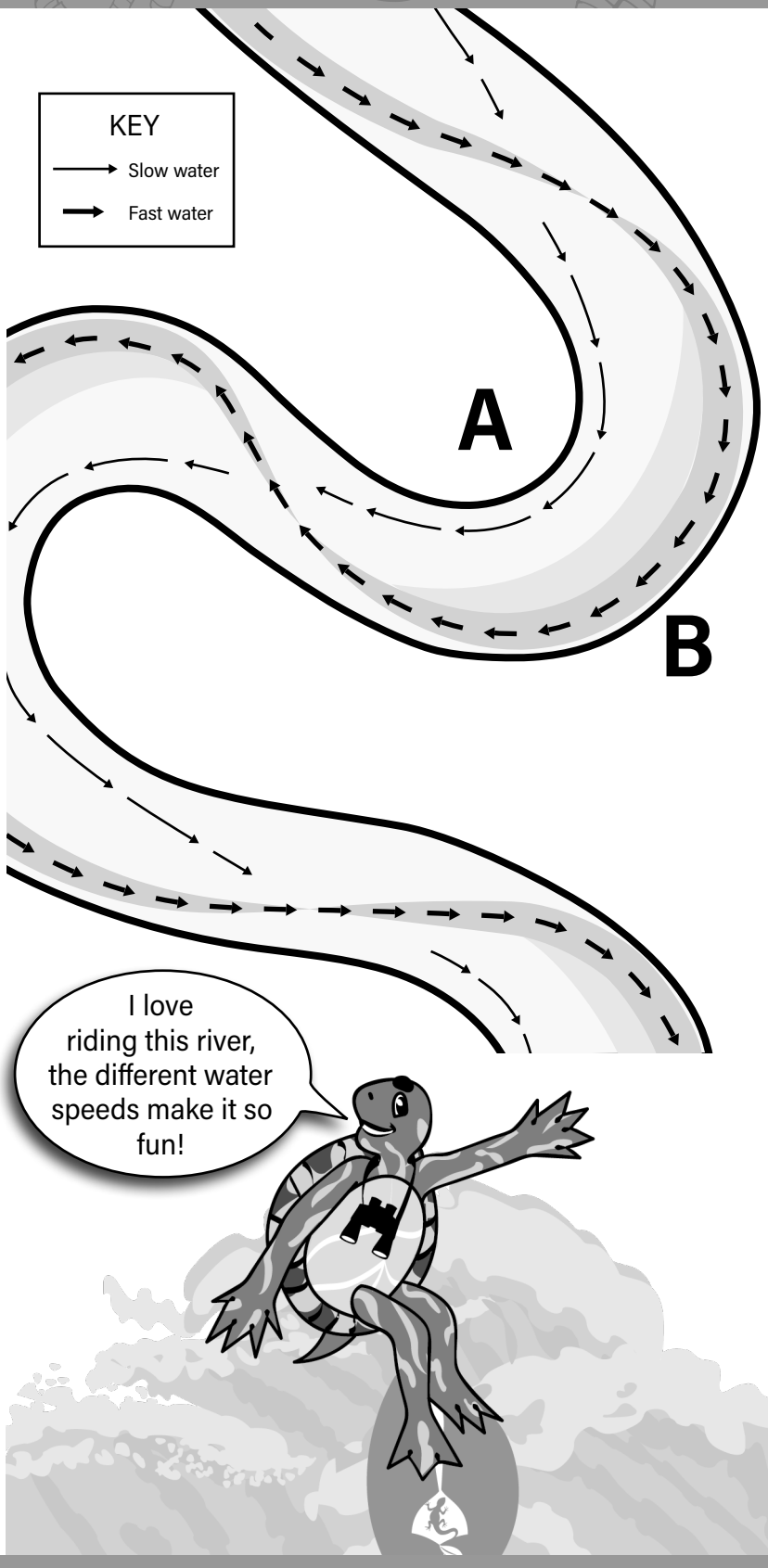
Turtle

R **A**

Snake

R **A**

Rivers



Activity 6: River Ranger!

As a river flows, it breaks down the soil and makes **banks**. A **cut bank** is a side of a river that is very steep. This causes the water to move faster. Cut banks are found on the outside of a bend in a river. **Erosion** is when the moving water of the river wears away the dirt and soil to create those cut banks.

Another part of a river is called a **point bar**, and you'll find these on the inside bend, or curve of a river. As the water curves around the bend in the river, it slows down. The sediment, or natural bits like sand and rock that travel through the water, hit and stay on the ground when it goes slower and form the point bar.

Rivers flowing past cut banks and point bars begin to curve back and forth across the landscape. These are called **meandering rivers**.

Find a leaf on the ground and place it in the river at the parts that are marked with an A and B.

Is part A a point bar or a cut bank?

_____

Is part B a point bar or a cut bank?

_____

Trees

Activity 7: Birches, Sumacs, and Pines Oh My!

Trees help keep our air breathable by removing **carbon dioxide** and other harmful air pollutants. Air pollution occurs when gases, dirt, dust, smoke and smells get into the air and make it unclean. Carbon dioxide is a gas in the air that is released when we breathe, or when we burn things. Plants take in carbon dioxide during photosynthesis. **Photosynthesis** is how plants make their food. They take in carbon dioxide, water and sunlight to make their food and oxygen for us to breathe.

To identify a tree, start by looking at the size, shape, and color of its leaves. Use the riddles below to find trees along the trail and match the riddles to the pictures.

If you have trouble finding a tree ask a ranger for help!

Tree A
Most trees are protected, standing tall and dark, but look for the **Birch** tree with the bright white bark.

☐ I found it!

Tree B
Look around carefully, there's no need to hurry, feel the **Staghorn Sumac**, its bark is quite furry.

☐ I found it!

Tree C
Seasons change and leaves fall all the time, but always with green needles, is our friend the **Pine**.

☐ I found it!

You are now a Junior Wildlife Ranger!

Claim your badge at the Visitor Center.
Scan the QR code poster at the visitor center to add or upgrade your badge in your digital passport.

Learn how to **collect more badges and earn rewards** by visiting juniorwildliferanger.org.

We invite you to join our mission and give at juniorwildliferanger.org/donate. Your support directly impacts the accessibility of environmental education for kids in all communities.

To learn more about Silvio O. Conte National Fish and Wildlife Refuge, visit https://www.fws.gov/refuge/Silvio_O_Conte or call 413-548-8002.

Junior Wildlife Ranger Pledge

As a Junior Refuge Ranger, I, promise to learn as much as I can about nature and theNational Wildlife Refuge System. I promise to protect and preserve the wildlife and plants and to help keep the water, land, and air clean. I will share what I have learned with my friends and family so they can help protect the refuge and our natural resources too.

Junior Wildlife Ranger

This certificate hereby certifies that

_____

Print your name here

Has successfully complete the Junior Wildlife Ranger Program at

Silvio O. Conte National Fish and Wildlife Refuge

_____ _____

Signature Date