

Forest Friends SUMMER CAMP

.....
A Week-Long Urban Forestry Camp Adventure

Join me and my
friends at this
remarkable
camp!



Funding through a Florida Forest Service grant, with support from the Florida Urban Forestry Council and implemented by the Friends of Cuscowilla.



Acknowledgments

This Urban Forestry Camp Program is possible through a grant from the USDA Forest Service. We would like to acknowledge the forestry experts who provided invaluable training and advice, the sponsors for their financial support, and the 2025 Cuscowilla Summer camp staff who ensured the camp activities ran smoothly.

.....

Organizations

Florida Forest Service
Florida Urban Forestry Council
Friends of Cuscowilla
Cuscowilla Nature & Event Center
Weyerhaeuser
Florida Project Learning Tree
Elise Cassie, Environmental Education Specialist & Urban Forestry Camp Program Manager

.....

2025 Instructors

Shilah Carroll, M.Ed.
Lisa Sauberan, Ph.D.
Cynthia Holland, Ph.D.

.....

2025 Camp Guest Forestry Mentors

Todd Little, Urban and Community Forestry Program Coordinator, Florida Forest Service
Sarah Hendry, Weyerhaeuser
Joe MacKenzie, Senior Forester, Florida Forest Service
Larsen McBride, Senior Arborist, Resource Environmental Solutions, LLC Arborist
Carol Mini, City of Palm Coast Urban Forester, Palm Coast Urban Forester

.....

Program Design: Carla Sinclair, Sinclair Design Studio
Production Coordinator: Gerry Cervenka, Editype

.....

The work upon which this Urban Forestry Camp Guide is based was funded, in whole or in part, through a sub-recipient grant awarded by the USDA Forest Service through the Florida Department of Agriculture and Consumer Services. The contents do not necessarily reflect the views or policies of the USDA Forest Service nor does mention of trade names, commercial productions, services, or organizations imply endorsement by the U.S. Government.

Some illustrations within this publication are “Designed by Freepik.”



Forest Friends Urban Forestry Camp

Introduction

Forest Friends Urban Forestry Camp is a weeklong day camp focused on careers in urban forestry through an immersive, hands-on program designed to inspire and educate upper elementary and middle school students about the importance of trees, forests, green spaces, and environmental stewardship in urban settings. This camp combines outdoor exploration activities, expert-led forestry inquiries, and interactive experiences to introduce students to a variety of career paths in urban forestry.

Program Curriculum

Project Learning Tree

Project Learning Tree (PLT) is a high-quality environmental education program, an initiative of the Sustainable Forestry Initiative. PLT advances environmental literacy, stewardship, and career pathways, using trees and forests as windows on the world. An additional feature of the Project Learning Tree approach includes “Every student learning outside and hands-on learning and teaching.” (PLT, 2023).

Career Explorations

Throughout the camp, campers will explore different career options within urban forestry. PLT trained camp teachers and guest expert mentors such as foresters, arborists, environmental scientists and landscape architects will share insights about their work and the skills required for these professions. Campers will be invited to ask questions, discover job roles and engage in inquiry based outdoor activities alongside teachers and guest expert mentors, to develop a community of learners with campers learning collaboratively with experts in the field.

Hands-On Activities

Campers will engage in a variety of activities such as tree plantings, tree identification, and forest management simulations, and guided inquiry that encourages urban sustainability.

Collaborative Projects, Authentic Artifacts, and Earned Badges

Campers will engage in collaborative projects to develop teamwork, problem-solving skills, and planning skills. As campers progress through the sequence of experiences, they will complete authentic artifacts, such as scientific drawings, data sets, texts, and artwork by applying STEM skills. Accomplishments are celebrated as campers complete milestone tasks during the camp’s activities.

**Welcome to
Camp!**



Florida State Parks and Local Initiatives

During the 2025 Pilot Camp, a spotlight on a local Florida State Park (Paynes Prairie State Park) and exposure to Florida State Junior Ranger activities was incorporated. A half-day field trip to a local state park or other resource brings to life the work of forestry and urban forestry mentors.

The 5 E's

Forest Friends Urban Forestry Camp's activities focus on a highly effective teaching framework called *The 5 E's*. Each of the 5E's highlights a stage in this inquiry-based instructional model. The 5E's stand for Engage, Explore, Explain, Elaborate, and Evaluation. Each phase builds on the previous to promote high engagement, active learning, creativity, and critical thinking.

Traditional Camp Recreational Activities

In addition to adapted PLT and other forestry-based activities, campers will engage in various camp-like recreational activities each day. This includes: archery, wall climbing, and swimming.

We All Need Trees

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will examine** various products and determine which ones are made from trees.
 Campers **will classify** products that come from trees.

Materials and Pre-Lab Instructions

Chart paper, pencils, markers, tape and/or glue, paper bags, and items below.

cinnamon	cork	book	wrapping paper
sun screen	chewing gum	crayons	soap
sugar	pencil	twine	fruit
cleaning agents	fire log	notebook	paint
balsa wood	glue	tape	pine cone
syrup	coffee	cosmetics	toilet paper
paper towel			

Collect items or photos of items, one per student. Place each item in a paper bag. One per student. Number each bag. Each student will get one bag.

Activity

Campers will move around the space and ask other campers yes/no questions in a 20 questions style to predict what tree products needed for our camp can be found in each bag.

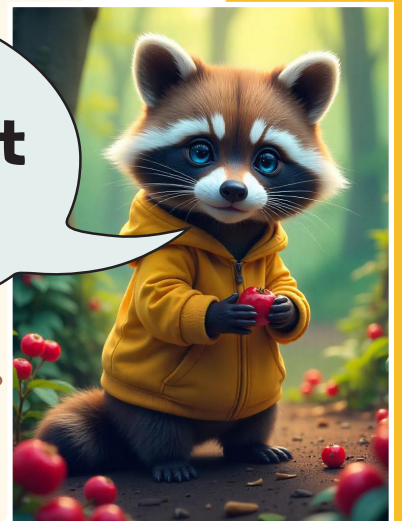
Model the procedure with a paper bag inside of another paper bag. Participants can look inside their own bag but can not allow others to look inside.

Divide into two groups. The challenge is to properly identify the items in each of the bags. Teams will have a collective log to record predictions. Provide students time to circulate and record predictions.

Evaluation/Student Artifacts

At the end of the activity, reveal all the products in each bag. Have campers discuss the variety of items. Discuss the concept of “WOOD” *You Believe It Comes From Trees*.

I wonder...
Do trees get sick?



A Tree's Life Scavenger Hunt and Adopt a Tree

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will model** life stages of a tree.

Campers **will observe** and compare trees at different stages of life.

Campers **will make a diagram** to show their understanding of a tree's life.

Materials

- Copy of *Life Stages of a Tree* (copy in Appendix)
- Copy of *My Tree Journal* (copy in Appendix)

Activity

Provide small groups with a copy of the diagram showing the life stages of a tree. Discuss with the students the various stages of a tree's life.

Seed Stage

A tree's life starts out as a seed. Seeds for trees come in various shapes and sizes. Seeds contain the embryo of the tree that provides nutrients to support early growth. Sunlight, water, and oxygen are necessary for the seed to germinate and begin growing.

Seedling

With the right conditions, the seed will sprout into a seedling. While in the seedling state, roots grow downward and a small shoot begins to grow upward. As leaves begin to grow, photosynthesis begins and the tree produces its own food.

Sapling Stage

Seedlings that grow stronger develop into saplings. Saplings are not yet mature trees; they can stay in this stage for many years depending on the kind of tree. A sapling has a thin trunk and its branches continue to grow upward as it matures.

Mature Trees

Once a tree reaches maturity it can produce seeds, flowers, and fruit. Mature trees are important to the forest ecosystem by providing oxygen to the atmosphere and food and shelter for animals.

Harvest or Dead Tree

Undisturbed mature trees can live for decades or hundreds of years. Eventually the tree will reach the end of its lifecycle and become a dead tree or "snag." Some trees are harvested to make wood products like furniture, toilet paper, or pencils.

I wonder...
What is urban forestry?



Rotting Log

Trees that die naturally eventually fall to the ground and become a rotting log. This is how the tree decomposes. Fungi, bacteria, and insects break down the wood and return the nutrients to the soil which enriches the soil for new plant life.

Acting Out the Life of a Tree

Campers will act out the life stages of a tree using the following as a guide (although this activity was originally written for younger campers, older campers enjoy it as well!).

Read	Action
Imagine that you are a tree seed that has fallen from a tree. Crouch down and curl up into a ball.	Campers will crouch down and curl up into balls.
You start to grow, and you get bigger and bigger.	Campers extend their feet and legs.
Wiggle your toes as your roots grow downward into the soil.	Campers wiggle their toes.
You start to grow a stem and branches. Get on your knees and slowly raise up your arms like branches. You are now a seedling.	Campers begin to rise slowly and raise up their arms.
Wave your hands as you grow leaves on all your branches.	Campers wave their hands to simulate leaves.
You are taller and your trunk is thicker. You are now a sapling. Stretch your body towards the sunlight.	Campers stand up and reach their arms high and puff out their chests.
You are growing stronger and stronger. The wind gently blows your leaves and branches.	Campers sway back and forth in the wind.
AHHHH. You have now grown into a mature tree.	Campers will say AHHHH.
You begin to make seeds, so many, many seeds. Wiggle your fingers to show your seeds.	Campers wiggle their fingers.
Flick your hands to spread those seeds.	Campers flick their hands.
You are a home to lots of wildlife. Birds and squirrels nest in your branches.	Campers crook one of their arms to make a spot for a nest.
As you get older, you are attacked by insects and fungi.	Campers scratch all over.
You are starting to get weaker. You get hit by lightning and you lose a branch.	Campers make a loud noise and let one of their arms fall to their side.
Woodpeckers peck into your dead wood and make holes.	Campers make hammering noises (knock, knock, knock).
After a long while, you fall down in a storm.	Campers make a creaking sound and fall to the ground.
After you are dead, you become a home to many small animals and plants, beginning another life cycle.	Campers run their fingers from one hand down the other arm.

continued...

A Tree's Life
Scavenger
Hunt and
Adopt a Tree

Re-creating a Tree's Life Stages

In small groups, campers will work together to create a poster of a tree's life stages on chart paper.

Stages of a Tree's Life Scavenger Hunt

In small groups of 2-4 campers, explore the camp grounds to locate examples of each of the stages of a tree's life. For each stage, pause and make observations. Look for evidence that supports each of the life stages.

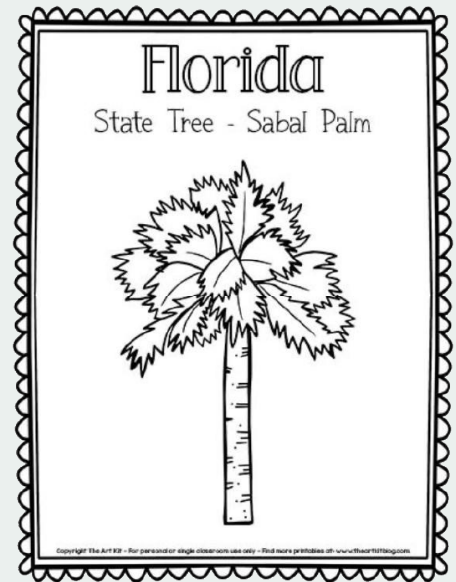
- Tree Seeds
- Sapling
- Injured or unhealthy tree
- Snag — a standing dead or dying tree, providing critical habitat for many wildlife species
- Seedling
- Mature tree
- Elderly tree
- Rotting log or dead branches with plants and insects on them

Adopt Your Favorite Tree

Towards the end of the scavenger hunt, find a tree that's special to you. Once a tree is selected, campers will make observations about the tree using their senses (touch, smell, sound, etc.).

Discuss with campers the following facts about Florida's State Tree, the Sabal Palm:

- Commonly found in the southern states.
- It is Florida's State Tree. It was officially named as Florida's State Tree by the Florida Legislature in 1953.
- The Sabal Palm can be found on the flag of South Carolina.
- The Sabal Palm is also called the Cabbage Palm.
- Sabal Palms are some of the oldest trees on earth, dating back around 85 million years. That's about 20 million years before dinosaurs went extinct.
- The heart of the palm can be used for food and medicine.
- Native people often used materials from this tree to make baskets and roofs for early houses, and they are often still used today (see examples).
- Many animals use the Sabal Palm for food, shelter, and nesting materials.
- Sabal Palms are used in landscaping due to their low maintenance needs, as they are drought tolerant.
- Sabal Palms can grow 80-90 feet tall.



Fun Fact: Sabal Palms are actually a type of grass, but most people think they are trees!

Provide the handout *My Tree Journal*. Using this handout as a guide, campers will record their observations on the *My Tree Journal* pages in the Appendix.

Create an Adoption Certificate

In their interactive field notebooks, campers will create an adoption certificate for the tree, found in the Appendix. They should include a sketch or tracing of the tree. They should draw its trunk and leaves and write a few words to describe it.

continued...

**A Tree's Life
Scavenger
Hunt and
Adopt a Tree**

Tree ID and Plant a Tree

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will describe** how leaf shapes, sizes, and other characteristics vary from plant to plant.

Campers **will identify** several trees using various physical characteristics.

Campers **will plant** a tree with the guest forestry mentor.

Materials

- Prepared *Leaf and Twig Arrangement* handout (1 per student)
- Gather sample leaves of several trees on grounds
- Prepared tree identification pages (sample page 189 or page 191 in the e-book version of *Explore Your Environment K-8 Activity Guide*)
- Tree field guides
- Pencils
- Colored pencils
- Tracing paper
- Card stock
- Acrylic paint
- Scientific drawing of trees students that can trace

Activity

Orient the students to the features of a tree field guide.

Starting with leaf structure, have students record observations of 3-5 various leaves in their field notebook. Observations can include sketches and words.

Continue to make observations of trees that can be found near the learning site. Campers will record observations of 3-5 trees using sketches and words.

The guest forestry mentor and camp staff will introduce the prepared tree identification cards. Campers will collaboratively work to identify the trees using their observations with the support of the guest forestry mentor.

Evaluation/Student Artifacts

Individual: Leaf Observations, Tree Observations

Collaborative: Tree Identification Card

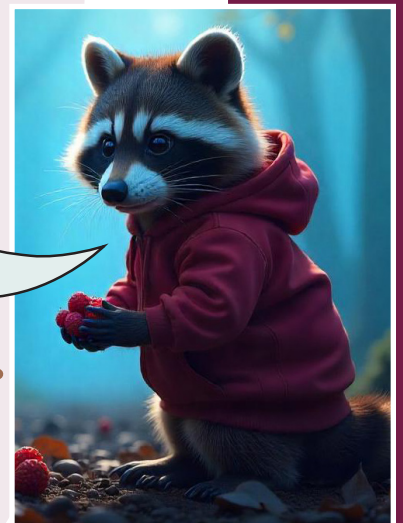
Optional: Leaf Rubbings or Leaf Prints with acrylic paints

Tree Tracing

Make an animal or person from twigs, bark, pine cones, leaves, acorns or hickory nuts.

I wonder...

What are the benefits of urban forests?



Green Jobs Career Interest Survey

Adapted from Project Learning Tree (2021)
Green Jobs: Exploring Forest Careers

Objectives

Campers **will complete** a forestry career interest survey (adapted from PLT, *Green Jobs: Exploring Forest Careers*).

Campers **will prepare** questions for a forestry mentor to learn more about this career.

Materials

Individual copies of *Green Jobs Career Interest Survey* (copy in Appendix).

Activity

Have students fill out the *Green Jobs Career Interest Survey*.

Have students generate 1-3 questions they may have about the careers in the survey. These questions will guide their interest for career presentations during the week.

Guest forestry mentor will provide a general overview of their career choices and answer student-generated questions about their profession.

Guest forestry mentor will lead the students through a tree planting ceremony commemorating the beginning of a forestry career exploration.

Evaluation/Student Artifacts

Individual: Forestry Career Interest Survey

Collaborative: 3-5 questions to ask forestry mentor

Individual: Sketch of planted tree, with identification information

I wonder...

**Why care about
trees in urban
areas?**



Trees for Many Reasons

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will discuss and analyze** fictional stories related to natural resources.

Campers **will determine** whether the main ideas of the stories build a case for sustainable use of natural resources.

Materials

- A copy of *The Lorax*
- Index cards for comic strip
- Colored pencils
- Pencils
- Markers

Activity

Camp teacher will read *The Lorax* with the students. Campers will be encouraged to make sketches of scenes in the story as they listen. Campers can also record words or statements that seem important to the story.

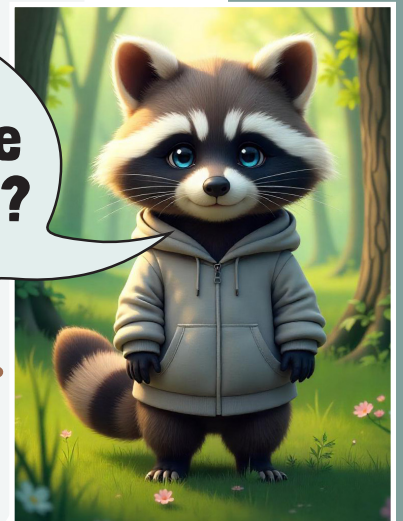
After the reading, present campers with a variety of questions.

- What could the Once-ier have done differently to not run out of trees for making “Thneeds”? Do you think people should conserve all trees “from axes that hack”? Why or why not?
- What did the Once-ier mean by “UNLESS”? What can people do to make sure that trees will be available for lots of different uses in the future?
- Compare the Once-iers’ attitude toward the environment at the beginning of the story with this attitude at the end.
- In the video version of the story, the Once-ier explains his actions by saying “If I didn’t do it, someone else would.” Do you think this is a good reason for doing what he did? Why or why not?
- The Lorax says he speaks for the trees. What does this mean to you? What is the Lorax’s attitude at the end of the story?
- What seems to be Dr. Seuss’s reason for writing this fable?

Evaluation/Student Artifacts

After the discussion, campers will work to produce an “index card” comic showing a sequence of events in the story.

I wonder...
What is a tree doctor called?



Every Tree for Itself

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will model** how trees compete to meet their essential needs.

Campers **will describe** how varying amounts of light, water, and nutrients affect tree growth.

Materials

- 4-6 different color poker chips — enough of each color so that each student can have at least two chips. Keep the colors separate to start.
- *Tree Needs* handouts for each student (copy in Appendix)

Activity

1. Discuss with the campers what trees need to live (sunlight, water, carbon, and other nutrients like nitrogen).
2. Reference each of the following visual aides: water cycle, carbon cycle, and nitrogen cycle.
3. Have campers stand in a circle, separated by an arm's length.
4. Each student represents a tree in a forest. Each tree's goal is to meet as many of their needs as they can to remain a healthy tree.
5. Have campers root themselves in the circle and raise their arms above their heads like tree branches.
6. Spread 4 different color poker chips representing a different tree need (Blue=water, yellow=sunlight, white=carbon, green=nitrogen).
7. When given the signal to go, campers will reach to gather as many poker chips as they can without being uprooted. To help campers keep their feet in one place — to imitate roots — use paper plates for each camper or other “roots.”
8. Record on *Tree Needs* handout how many of each resource they gathered.
9. Discuss the results using the following questions:
 - a. How many of each resource did each tree get?
 - b. Are any trees missing any of the resources?
 - c. Discuss what might happen to a real tree that isn't able to meet all of its needs.
 - d. Discuss what might happen to a real tree if it gets too many resources. Trees that get too much or too little of the tree's needs can become stressed and unhealthy.
10. Campers will move closer together in the forest. Redistribute the poker chips around the campers (“trees”).
11. On the go signal, campers will again gather as many resources as they can without being uprooted.

12. Record the results on the *Tree Needs* handout.
13. Compare the results of the first round to the second round. In the second round, each tree will have fewer resources. Discuss with the campers what these results would mean for each of the trees (some trees will be healthy, some will be stressed and unhealthy).
14. Repeat the process using the following scenarios:
 - a. Fewer water resources
 - b. Fewer sunlight resources
 - c. Fewer carbon resources
 - d. Fewer nitrogen resources
 - e. Stress events (droughts, hurricanes, fires, tornadoes, etc.)

Discuss the results of each of the rounds with the campers, reinforcing the idea that fewer resources impacts the health of each of the trees.
15. For the final round, include two additional colors of poker chips representing red for fire and black for insect infestation. Do not identify what each color represents until after the round. After the round discuss with campers how trees that collected red or black poker chips have been impacted by fire or insects. Discuss with campers how these two elements can impact the health of each tree.
16. Using the final round results, discuss how the following forestry careers can work to improve the health of trees and forests:
 - a. Forester
 - b. Forest fire fighter
 - c. Arborist
 - d. Wildlife biologist

Evaluation/Student Artifact

Individual - *Tree Needs* student page

Collaborative

Introduce a tree cookie, and/or have enough tree cookies for each camper to use and/or keep. Explain how to count tree rings and how to interpret the life of a tree through tree rings.

Campers will collaborate to write a story describing 10 years in a tree's life. The story will start with a statement. Each camper will add a statement or sentence to the story to include events that positively and negatively impact the tree.

I wonder...

What are those white patches on some tree trunks?



Poet-Tree

Adapted from Project Learning tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will express** their environmental perspectives using various forms of poetry.

Campers **will analyze** their own and the poetry of others to discover meaning.

Campers **will share** their poetry with others.

Materials

- Paper
- Pens, pencils, markers
- Notebooks
- Chart paper
- Samples of poem visual aid

Activity

1. The guest forestry mentor will provide a 15-minute overview of their profession and how they work to protect tree and forest health. Campers should jot down important words the mentor shares in their presentation. Invite the students to ask questions of the mentor to gather more information about the profession.
2. Based on campers' experience at camp so far, students will individually and collaboratively create poetry inspired by the mentor's presentation and the activities at camp.
3. Read either poem: *Trees* by Joyce Kilmer or *The Oak Tree* by Johnny Ray Ryder, Jr.
4. Provide an example of a haiku and a cinquain poem. Each student will write a haiku and a cinquain poem individually. Guest mentor and teachers can circulate, providing assistance to campers as needed.
5. Each camper will share their two poems in small groups.
6. In the same small groups, campers will collaboratively write an acrostic poem using the word FORESTFIRE.
7. Each group will record their acrostic poem on chart paper and share with the entire group.

Evaluation/Student Artifact

Acrostic poem

I wonder...

**Do humans
get more than
wood from
trees?**



Make Your Own Paper

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will describe** the steps in the paper-making process.

Campers **will identify** the inputs and outputs of the paper-making process.

Materials

- Scraps of paper
- Blender
- 5"×7" or larger wooden frame
- Screen or mesh, stapled to the wooden frame
- Large tub (8"×10" or larger, to fit the wooden frame)
- Fine-weave towel or microfiber towel

Activity

Preparing Pulp

1. Tear scrap paper and newspapers into small pieces.
2. Soak the paper in water for several hours ahead of time.
3. After soaking the paper, blend the paper and water to create a smooth, soupy pulp. Add more water or paper to obtain the desired consistency. For thicker paper, use less water.

Setting Up the Paper Forming Area

1. Stretch and staple mesh material over wooden frames to create a "screen."
2. Place the tub under the frame to catch excess water.

Forming the Paper Sheet

1. Each camper will work to dip the meshed frame into the pulp mixture and scoop the pulp. They will then shake the frame back and forth to spread the pulp evenly.
2. Allow the excess water to drain out.
3. Campers can add decorative items like leaves or flower petals directly to the pulp.

Press and Dry

1. Place a towel on top of the wet pulp to press out any remaining excess water.
2. Flip the paper onto a flat surface like another towel or piece of cloth.
3. Use heavy flat objects to press out any remaining water.
4. Allow the paper to dry completely for at least 24 hours.
5. Once dry, peel the paper off of the surface. Campers can trim the edges or they can be left rough.

Evaluation/Student Artifact

Paper for last day thank-you notes.

I wonder...
**What animals
 use urban
 trees?**



Environmental Health For All

Adapted from Project Learning Tree (2023)
Explore Your Environment K-8 Activity Guide

Objectives

Campers **will examine** the principle of environmental health by looking at a case study of the local community.

Campers **will explore** environmental health issues in the local community.

Campers **will propose** actions to address local environmental health issues.

Materials

- Tree density map of the local area visual aid
- Pens and pencils
- Camper notebooks
- A copy of *The Lorax*

Activity

1. Read the following statements. Have students rate them on a scale of 1-10. 1 is strongly disagree, 10 is strongly agree. Or, if time allows, adapt the PLT activity “Viewpoints on the Line” (<https://www.plt.org/activity-resources/prek-8-activity-19-viewpoints-on-the-line/>) using the a-d statements.
 - a. Access to clean air and water is the most important human right.
 - b. Some people are exposed to more pollution than others.
 - c. Some people have better access to parks and green spaces than others.
 - d. It’s fair that some people have healthier living conditions than others.
2. Display the Tree Density Map for your local area, highlighting key landmarks for reference. Discuss with the campers the variations of tree density in different locations in the local community. Additionally identify waterways and potential sources of water and air pollution. Place post-it notes on the map identifying high and low tree density along with potential air and water pollution sources.
3. Share with the campers the following benefits of urban trees:
 - a. Urban trees can provide shade to residents.
 - b. Urban trees can lower a city’s temperature by as much as 15 degrees on hot days.
 - c. Urban trees can improve air quality.
 - d. Urban trees can reduce noise levels.
 - e. Urban forested areas can increase a city’s sense of community.
 - f. Urban trees and forests can create a nicer looking city.
 - g. Access to green spaces and parks can reduce stress in city residents.



I wonder...
What are the benefits of urban forests?

4. As a group identify areas that are more at risk for physical and mental health issues based on the density of trees, sources of pollution, and access to green spaces like parks and natural areas.
5. Select one area on the map that is at high risk. Read the following case study.

Alex's family lives in this area of the city. This area of the city does not have as many trees as other areas, providing less shade from Florida's hot sun.

The lack of trees in this area has created health problems for residents in this neighborhood. Since the tree density is low in this area, many residents spend more time indoors, which can lead to more health problems like asthma, diabetes, and heart conditions compared to other neighborhoods in the city.

Tree density is often related to wealth and class. Residents in Alex's neighborhood experience poverty at a higher rate than other areas of the city. Due to higher rates of poverty, residents do not have extra money to pay for planting and maintaining trees around their homes and in their neighborhood.

Discuss with campers how this represents an environmental health issue.

6. Based on the discussion, campers will brainstorm in small groups to outline the following on chart paper. Groups will present their posters to the whole group.
 - The Problem
 - The Challenges
 - Proposed Solutions

Evaluation/Student Artifact

Student posters

Nature Photography

Adapted From Project Learning Tree (2021)
Green Jobs Exploring Forest Careers

Objectives

Campers **will explore** the beauty of trees and the natural world showcasing plants, landscapes, animals, and patterns.

Campers **will participate** in a Nature Photography Scavenger Hunt.

Materials

- Tablet computers or smartphones to take photographs
- Samples of nature photography from notable artists like Ansel Adams and John Moran
- *Nature Photography Scavenger Hunt* handout

Activity

1. Share samples of nature photography from notable artists. Lead a discussion with the campers about the techniques and style used by each artist.
2. Discuss with the campers the importance of nature photography as a profession and a hobby. Including the following:
 - Nature photography raises awareness about environmental issues.
 - Nature photography inspires conservation efforts.
 - Nature photography fosters a deeper connection to the natural world.
 - Nature photography documents changes in nature over time and provides valuable data for scientific research and conservation planning.

Evaluation/Student Artifacts

Photos taken by students

I wonder...

What does an arborist do?



Ode to State Park

Objectives

Campers **will identify** the importance of state parks as natural resources for all citizens to utilize.

Campers **will identify** state parks in the local area and explore the history of one state park.

Campers **will begin** the virtual Junior Ranger Program.

Campers **will create** a song celebrating one of the state parks in the community.

Materials

- Pens and pencils
- Lyrics to the song *Seminole Wind* by John Anderson. Leaders can find a song written by a local musician to use with this activity.
- Copies of *History of Paynes Prairie* (copy in Appendix), or use a state or national park nearby.
- Paper

Activity

Divide the campers into two groups. The groups will visit two stations to explore state parks.

Station 1

As a small group, campers will explore a map of Florida State Parks, or another state's park. Discuss how state parks are an essential resource to citizens. Campers will circle the closest state park to their current location.

Campers will complete the Junior Ranger Oath and are encouraged to register for the Florida State Park Junior Ranger program independently. Every state has a State Park Junior Ranger program, and the National Park Service does as well.

Station 2

Provide a written copy of *The History of Paynes Prairie*, or a park of your choice. Campers will follow along in a read-aloud. While engaged in the story, campers will jot down notes and complete drawings.

Whole Group

Gather both small groups together. Provide song lyrics for *Seminole Wind* by John Anderson. Play the song twice and have students annotate the song's references to parts of the *History of Paynes Prairie*.

Discuss with the students the various historical references and natural resources mentioned in the song. Discuss why the songwriter decided to use these references.

Divide the campers into groups of four. The campers will compose a new song celebrating Paynes Prairie, using natural items they find as musical instruments (sticks for drumming, leaves for rustling sounds, and grass as whistles).

Each group will then perform the songs they created for the whole group.

Evaluation/Student Artifact

Student songs will be written into their interactive notebook.

I wonder...
What is sustainable forestry?



EXAMPLE

Welcome to the Forest Friends Urban Forestry Camp

On behalf of the Florida Forest Service, Florida Urban Forestry Council, Friends of Cuscowilla, and Cuscowilla Nature & Retreat Center, we would like to welcome you to the Forest Friends Urban Forestry Summer Camp.

I hope you are looking forward to having a weeklong adventure exploring topics in forestry and learning about forestry careers — as well as experiencing camp activities (swimming, archery, climbing wall, and challenge course)!

Enclosed are several forms which need to be filled out before camp. They are:

1. Summer Camp Waiver
2. Medications Form
3. Diet, Nutrition, and Allergy Form
4. Authorized Pick-Up Form

Please be advised that we are requesting attendance for the entire week. Certificates and swag bags will be given out on the last day for those who attended all days.

Items to Bring to Camp

- Bathing suit
- Towel
- Personal snacks (in case you don't like the multiple snacks provided)
- Drink container (Gatorade and water will be provided)
- Sunscreen

Meals

Camp will be providing breakfast, lunch, and snacks throughout the day.

Breakfast items: cereal, yogurt, granola breakfast bars, drinks, fruit cups, etc.

Lunch will be catered each day.



Be sure the following forms are filled out!

EXAMPLE

Registration Form

.....

Forest Friends Urban Forestry Summer Camp @ Cuscowilla Nature & Retreat Center

Forest Friends Urban Forestry Summer Camp is an exciting opportunity for rising 6th - 8th grade students to probe forestry careers through hands-on activities and career explorations.

Date:

Times:

Location: Cuscowilla Nature & Event Center, 210 SE 134 Ave, Micanopy, FL 32667

Transportation provided from Lincoln Middle School (bus leaves at 7:45 am promptly) or parent/guardian drop off/pick up at Cuscowilla Nature & Event Center.

No cost to families. Breakfast, lunch, and snacks are provided. Swag Bag with forest-themed items provided upon completion of the camp.

Applications open April 15, 2026 • Applications close May 15, 2026

Notification of acceptance: May 23, 2026 via email from friendsofcuscowilla@gmail.com

Priority will be given to:

- Rising 6th - 8th graders
- Underrepresented families
- Students who are able to attend all 5 full days of camp

Goal: To inspire youth to explore forestry careers through hands-on activities and career explorations guided by forestry mentors and certified teachers.

* Indicates required question

Student's Name (first and last) *

Parent/Guardian Name (first and last) *

Parent/Guardian Email Address *

Parent/Guardian Primary Phone Number (include area code) *

Student's School Name*

Student's Grade Level for 2026-2027 School Year (check one) *

6th Grade 7th Grade 8th Grade

Is the student able to attend all 5 FULL days of camp? (check one) *

Yes No

EXAMPLE

Summer Camp Waiver

Please complete the following form to complete your registration for Day Camp.

Authorization and Acknowledgment: By signing this waiver and consent, I, the legal parent/guardian grant permission for my child(ren) to participate in any and all activities including but not limited to lifeguard-supervised swimming, fishing, boating, and archery under supervision of certified instructors at Cuscowilla unless otherwise specified on the Camper Medical Form. I recognize and acknowledge the inherent risks that these activities may present for my child(ren).

I acknowledge that the possession or use of alcoholic beverages and illegal drugs are strictly forbidden during Cuscowilla Summer Camp programs. I understand that the possession of any weapon (firearm, knife, explosives, etc.) is strictly forbidden on Alachua County property.

I authorize Alachua County to release my demographic information to supporting affiliates who help with the cost of my child(ren) attending camp. Because I acknowledge the risks of allowing my child(ren) to participate, I agree to release and hold harmless Alachua County, its trustees, directors, officers, employees, agents, affiliates, volunteers, and medical staff from any and all injury claims of any other nature which may result from my child(ren)'s participation at and travel to or from Cuscowilla. I agree to indemnify and hold Alachua County, its Staff and other children at Cuscowilla harmless from any and all liability caused by my child(ren), whether intentional or not.

Please select one of the following (required — select at least one option):

- I agree
- I do not agree

Medical Consent: Cuscowilla will make every effort to contact me in the case of an emergency. I give my permission for Cuscowilla and its medical staff to administer any medications needed and to provide and arrange for any necessary medical treatment to my child(ren) while at Cuscowilla, including onsite and offsite emergency care. I accept responsibility for the costs of all such medical treatment.

We are unable to complete registration for your camper should you not accept medical consent in case of an emergency.

Please accept the above Medical Consent (required):

- I accept

Photography, Videography, and Media Release: In consideration of my child(ren)'s participation at Cuscowilla, and without any further consideration from Cuscowilla, I hereby grant permission to Alachua County, staff, and affiliates to utilize my child(ren)'s appearance, performance, or voice in any and all manner and media throughout the world for the purpose of promotion, reporting, or publication. Cuscowilla may use my child(ren)'s likeness, voice, and biographical material in connection with publication, promotion, exhibition, and distribution of such material. I understand that no royalty, fee, or any other compensation of any kind shall become payable to me by reason of such release and use of any photography.

EXAMPLE

Please select one of the following (required - Select at least one option):

- I accept
- I decline photography, videography, and media release

County forms shall be verified under penalties of perjury. Where determined that parent submitted fraudulent information, student shall be withdrawn. State law provides that whoever knowingly makes a false statement in writing with the intent to mislead a public servant in the performance of his/her official duty commits a misdemeanor of the second degree. (F.S. 92.525 and 837.06)

Parent is defined as: Either or both parents of a camper, any guardian of a camper, any person in a parental relationship to the camper, or any person exercising supervisory authority over a camper in place of the parent.

I have read this form carefully and have had all questions answered before signing this legal document and giving the consents and waivers contained in it. I acknowledge that this is a legal document and I will be bound by my agreement to its terms. I represent to Alachua County and Cuscowilla that all information provided in the Camper Medical form is accurate and complete and that I have the legal authority to provide consent on behalf of my child(ren).

Camper's Name (required):

Parent Guardian Name (required):

Parent/Guardian must sign. Signature represents legal authority for child listed above.

Relationship to Camper (required):

Parent, sole custodial parent, joint custodial parent, legal guardian

Signature (required):

Date (required):

EXAMPLE

Medications Form



“Medication” is any substance a person takes to maintain and/or improve their health. This includes vitamins and natural remedies.

Camper Medication (required — select at least one option):

- My camper will not take any medications while attending camp
- My camper will take the following medication(s) while at camp

Please list the name of the medication, reason for taking it, time given, dose given, and how it is given:

Please remember that we REQUIRE all medications to be in their original containers with labels which show the camper’s name and how the medication should be given.

The following non-prescription medications may be stocked in the camp Health Care Center and are used on an as-needed basis to manage illness and injury.

- Acetaminophen (Tylenol)
- Phenylephrine decongestant (Sudafed PE)
- Antihistamine/allergy medicine
- Sore throat spray
- Lice shampoo or cream Calamine lotion
- Ibuprofen (Advil, Motrin)
- Pseudoephedrine decongestant (Sudafed)
- Guaifenesin cough syrup (Robitussin)
- Generic cough drops
- Antibiotic cream
- Aloe
- Bismuth subsalicylate (Pepto-Bismol)

If your camper should NOT be given any of the above listed medication, please indicate which ones here:

EXAMPLE

Diet, Nutrition, and Allergies

.....

Please fill out this form to the best of your knowledge to help us provide the best care for your child.

Allergies (required — select at least one option):

- | | |
|---|--|
| <input type="checkbox"/> No known allergies | <input type="checkbox"/> The environment |
| <input type="checkbox"/> Food | <input type="checkbox"/> Other |
| <input type="checkbox"/> Medicine | |

If Other, please explain:

Please describe what your camper is allergic to and the reaction seen. If no known allergies, please type N/A (required):

Diet and Nutrition (required — select at least one option):

- My camper eats a regular diet
- My campers eats a vegetarian diet
- My camper is lactose intolerant
- My camper is gluten intolerant
- Other

If Other, please explain:

Is there anything else you feel we should know about your child's allergies or diet?

EXAMPLE

Authorized Pick Up



I give the following person(s) permission to pick up/drop off my child with picture ID.

Camper Name (required):



Authorized Person's Name:

Relationship to Camper:

Phone (include area code ~ (123) 456-7890):



Authorized Person's Name:

Relationship to Camper:

Phone (include area code ~ (123) 456-7890):



Authorized Person's Name:

Relationship to Camper:

Phone (include area code ~ (123) 456-7890):



Authorized Person's Name:

Relationship to Camper:

Phone (include area code ~ (123) 456-7890):



Authorized Person's Name:

Relationship to Camper:

Phone (include area code ~ (123) 456-7890):

Camp Evaluation Form

Camper Name:

School:

We value your opinion and would like for you to share your thoughts on the camp.

Please rate the following: Agree (A), Neutral (N), Disagree (D)

	A	N	D
The objectives of this camp have been achieved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The camp provided appropriate experiences.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The camp provided opportunities to explore forestry careers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The most interesting career exploration was:

What was your most enjoyable forestry activity?
Why?

Please put a check in the box that best describes what you think.

	Very Satisfied	Satisfied	Neutral	Unsatisfied	Very Unsatisfied
Daily Activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Guest speakers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What did you like the best?

What did you like the least?

Do you have any comments/suggestions that would assist us in improving the camp?

Would you recommend the camp to others? Yes No

Would you come back to this camp next summer? Yes No

Thank you for sharing your thoughts.

History of Paynes Prairie

Paynes Prairie is a fascinating and ecologically rich area located in north-central Florida, just south of Gainesville. It has a deep and diverse history that blends natural, cultural, and ecological elements.

Pre-Colonial Times: Indigenous Peoples

For thousands of years, Native American groups such as the Timucua lived in the area. They utilized the prairie for hunting, fishing, and gathering. Artifacts and burial mounds suggest long-term habitation.

Spanish Colonial Period (1500s–1700s)

The area came under Spanish Control when Spain colonized Florida.

A Spanish cattle ranch called LaChua was established here in the 17th century and it became one of the largest ranches in Spanish Florida.

The term LaChua is thought to be a Timucuan word and eventually provided the basis for naming Alachua County.

Seminole and American Expansion (1800s)

After Florida became a U.S. territory, Seminole Indians used the prairie as a refuge and battleground during the Seminole Wars.

The prairie's name comes from King Payne, a Seminole chief who fought American forces and died in a battle near the prairie in 1812.

The region saw some agricultural settlement during this time but remained largely wild.

Late 19th to Early 20th Century

Parts of the prairie were drained for agriculture.

A steamboat once traveled on Alachua Lake (which would periodically form on the prairie due to seasonal flooding), and a railroad was constructed to support transport and trade.

Over time, drainage efforts failed and the land reverted to wetland and prairie conditions.

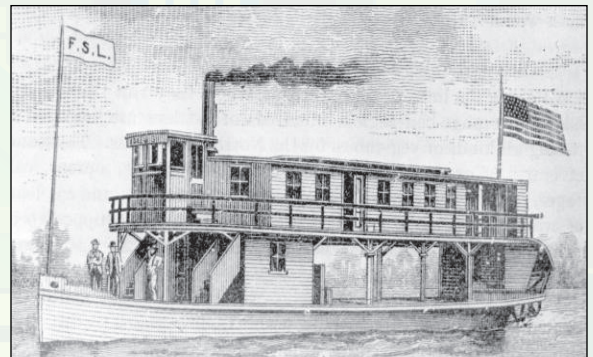
Modern Era and Preservation

In 1971, Paynes Prairie became Florida's first state preserve due to its unique ecological diversity.

The prairie is now a designated National Natural Landmark. It is home to a wide variety of wildlife, including wild horses, bison, alligators, and more than 270 bird species.

It also serves as an important educational and recreation space, offering hiking, birding, and environmental study opportunities.

Adapted from Paynes Prairie Preserve State Park, www.trailoffloridasindianheritage.org.



Drawing of the steamboat F.S. Lewis - Gainesville, Florida. 1880 (circa). State Archives of Florida, Florida Memory. <https://www.floridamemory.com/items/show/28069>, accessed 21 January 2022.

How to Make Handmade Paper

Step 1: How to Make Paper Pulp

Rip your scrap paper into small pieces. Add water to the bowl, making sure that all paper pieces are submerged. Soak the paper for an hour or two. After soaking, place the paper into your blender or food processor. Add enough water to cover. Blend into a pulp. The mixture should be smooth and well-blended.

Step 2: Create Your Paper

Fill your large shallow tub with a few inches of water. Add the paper pulp to the water and stir well. Submerge your screen into the water and slowly raise it, letting the paper pulp settle on the screen in a thin, even layer. You want the layer of pulp to cover the entire screen. If the layer is too thin it'll be difficult to remove from the screen or may rip.

(Optional) If you are adding dried flowers to your paper you can either mix them into the tub with the paper pulp initially or press them into the pulp immediately after removing the screen from the water. Both options will provide a different look — I prefer adding them on top of the paper and pressing them in, but keep in mind that several of the petals may fall off after the paper dries if you choose this option.

Step 3: Remove Excess Water from Your Paper

Place the entire screen on top of one of your larger absorbent towels and use a fine-weave towel (or microfiber towel) to gently press down and absorb any excess water. Repeat until you've removed as much water as possible. Use the towel to press straight down — avoid shifting the pulp around as this may cause holes to form.

Step 4: Finishing Your Paper

Place one of your fine weave towels down and flip the screen over. Starting in one corner, gently unroll and remove the paper from the screen while it is upside down. If the paper is a good thickness it should release easily. If you are having difficulty removing the paper, your paper may be too thin or still too wet. Let the paper dry at room temperature in a warm and well-ventilated area.

Seminole Wind by John Anderson

.....

Ever since the days of old
Men would search for wealth untold
They'd dig for silver and for gold
And leave the empty holes

And way down south in the Everglades
Where the black water rolls and the saw grass waves
The eagles fly and the otters play
In the land of the Seminole

So blow, blow Seminole wind
Blow like you're never gonna blow again
I'm calling to you like a long-lost friend
But I know who you are
And blow, blow from the Okeechobee
All the way up to Micanopy
Blow across the home of the Seminole
The alligators and the gar

And progress came and took its toll
And in the name of flood control
They made their plans and they drained the land
Now the glades are going dry

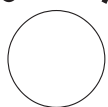
And the last time I walked in the swamp
I sat upon a Cypress stump
I listened close, and I heard the ghost
Of Osceola cry

So blow, blow Seminole wind
Blow like you're never gonna blow again
I'm calling to you like a long-lost friend
But I know who you are
And blow, blow from the Okeechobee
All the way up to Micanopy
Blow across the home of the Seminole
The alligators and the gar

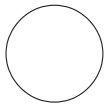
Songwriter: John David Anderson
Seminole Wind lyrics © Almo Music Corp., Holmes Creek Music



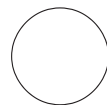
acorn



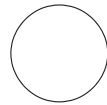
snail



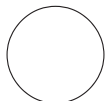
Tree STUMP



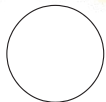
WILD BUSH



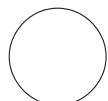
Berries



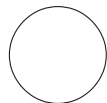
3 Types of Tree



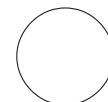
rock



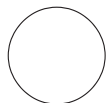
flower



MUSHROOMS

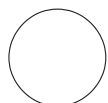


Fallen Leaf

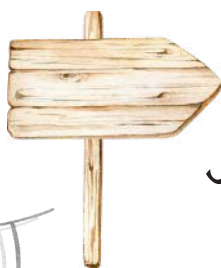


Nature
scavenger HUNT

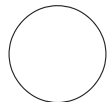
can you FIND ALL OF
THE ITEMS LISTED?



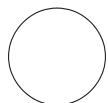
SHRUB



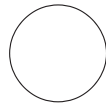
SIGN POST



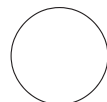
Bee



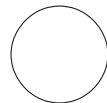
BIRD



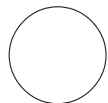
Squirrel nest



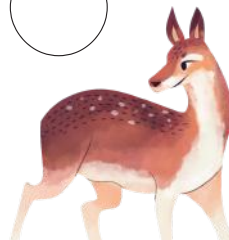
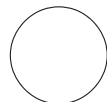
WILD FLOWERS

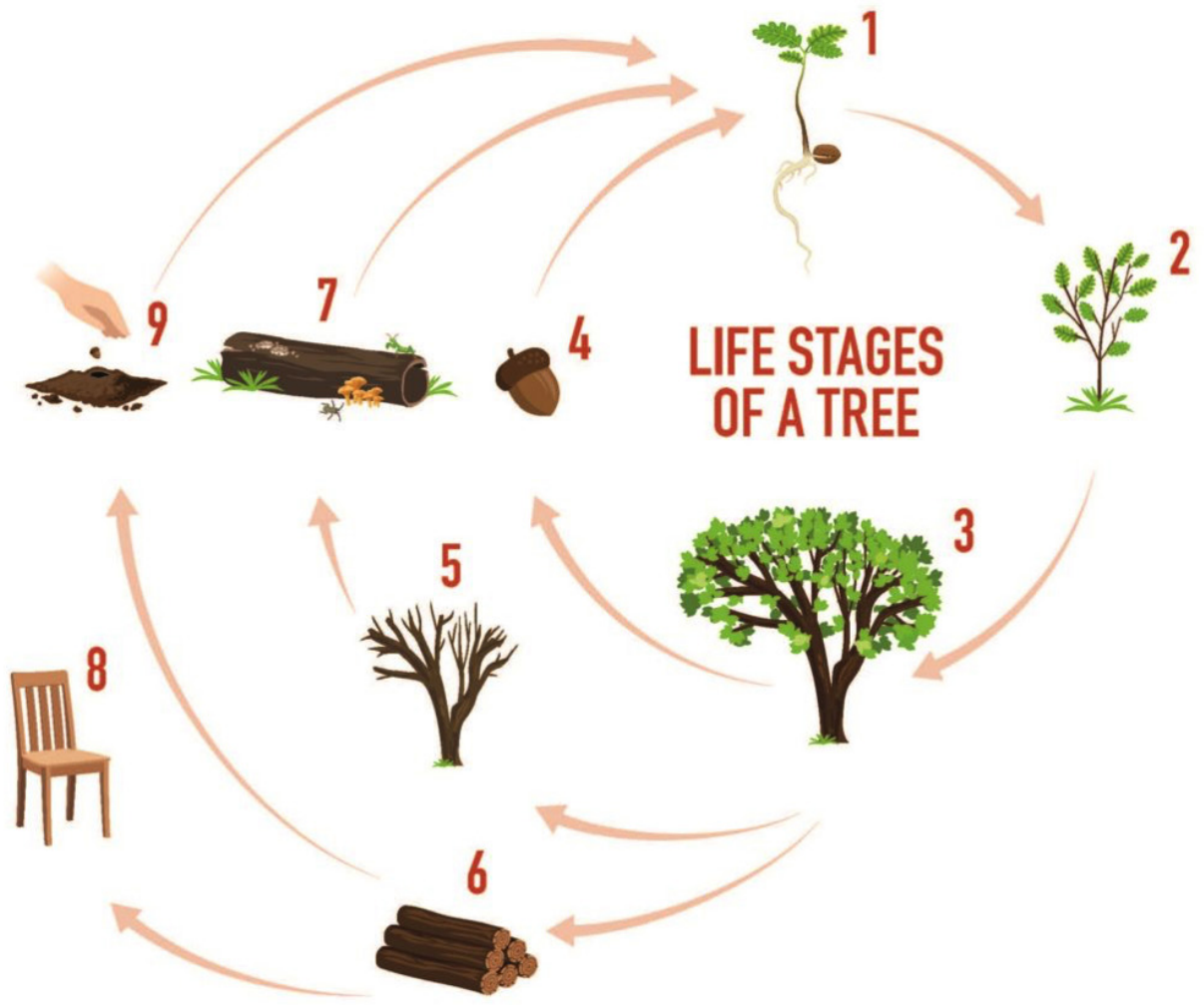


BUTTERFLY



animal Tracks





Graphic found in the *Explore Your Environment K=8 Activity Guide*, page 14, or page 16, e-book.



NAME _____ DATE _____

SENSING MY TREE

My tree smells like:

My tree feels like:

My tree looks like:

My tree sounds like:

My tree is:

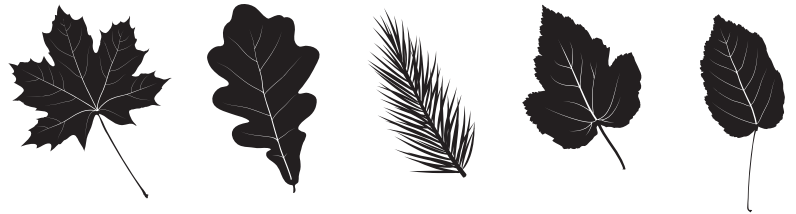
NAME _____ DATE _____

MY TREE'S LEAVES

Which tree has a shape most like your tree?

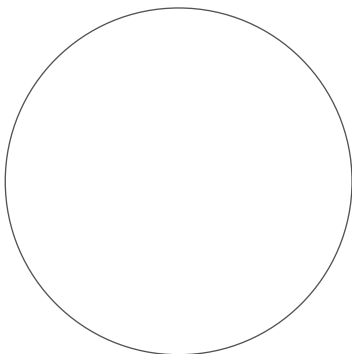


What shape are your tree's leaves?



Draw a leaf or make a leaf rubbing:

Color the circle to match your tree leaves.



I LOVE MY
GREEN JOB

CAREER CORNER

Trees are so beautiful! Many **ARTISTS** draw, paint, and take pictures of trees to share them with others.





ADOPT A TREE

CERTIFICATE

Name _____

Date _____

Type of Tree _____

Draw your tree and write a few words to describe it.





WORKSHEET

YOUR PERSONALITY AND GREEN JOBS

Learning about green jobs is the first step to becoming a leader in forestry and conservation. This quiz is a helpful tool to determine how your personality fits into the world of green forest jobs. Circle the characteristics you most identify with in each column, choosing as many as you want.

REALISTIC	INVESTIGATIVE	ARTISTIC	SOCIAL	ENTERPRISING	CONVENTIONAL
Athletic	Analytical	Artsy	Altruistic	Adventurous	Adaptable
Flexible	Cautious	Complicated	Cheerful	Aggressive	Amenable
Frank	Complex	Confident	Compassionate	Ambitious	Careful
Genuine	Critical	Creative	Convincing	Assertive	Conscientious
Handy	Curious	Emotional	Cooperative	Bold	Data-driven
Honest	Independent	Expressive	Generous	Charismatic	Dependable
Humble	Intellectual	Imaginative	Helpful	Dramatic	Detail-oriented
Mechanical	Introverted	Individualistic	Idealistic	Energetic	Efficient
Nature-focused	Logical	Innovative	Kind	Entrepreneurial	Orderly
Outdoorsy	Methodical	Intuitive	Passionate	Extroverted	Precise
Persistent	Modest	Leader	Patient	Goal-driven	Purposeful
Physical	Quiet	Motivated	People-focused	Inventive	Reliable
Practical	Rational	Open	Responsible	Optimistic	Reserved
Respectful	Scholarly	Original	Tactful	Persuasive	Scheduled
Self-reliant	Scientific	Spontaneous	Team player	Popular	Structured
Shy	Self-controlled	Unconventional	Understanding	Relaxed	Subdued
Tenacious	Specific	Visionary	Warm	Sociable	Thrifty
TOTAL:	TOTAL:	TOTAL:	TOTAL:	TOTAL:	TOTAL:

SCORING: Once you have selected the traits you identify with, count the number you have circled from each column and record in the bottom row of the table. The higher the score in each category, the more traits you share with that personality type. Many people are a blend of two personality types. See the next page for descriptions of the personality types.

Source: This quiz was based on Holland's Personality Theory, which identifies these six personality types.



NAME _____ DATE _____

For each round of the activity, describe the conditions (such as “trees spread out”). Then record how many of each tree resource you got.

		Sunlight	Water	Carbon from the Air	Nutrients	Other Need:
ROUND 1 DESCRIPTION: trees spread out	1					
ROUND 2 DESCRIPTION:	2					
ROUND 3 DESCRIPTION:	3					
ROUND 4 DESCRIPTION:	4					
ROUND 5 DESCRIPTION:	5					
ROUND 6 DESCRIPTION:	6					
ROUND 7 DESCRIPTION:	7					

CAREER CORNER

ARBORISTS (AR-bur-ists) are “tree doctors” who care for trees to make sure they stay healthy throughout their lives. Arborists must know many different tree species and understand what they each need to thrive.

I LOVE MY
GREEN JOB!



FOREST SERVICE RESEARCH: BY-THE-NUMBERS

An estimated **10.6 million** families, individuals, trusts, and estates make up the category of *family forest and woodland* ownerships.



They control **more** forest and woodland than any other group.

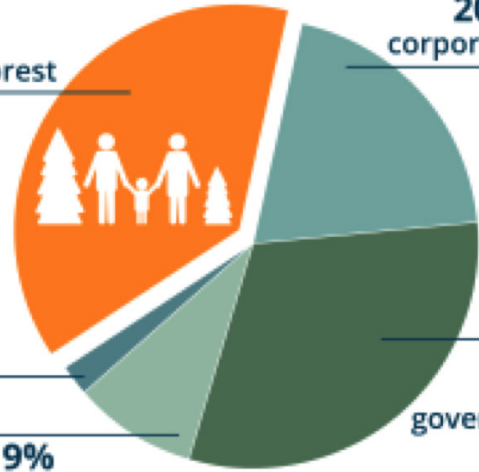
38%
family forest

20%
corporate

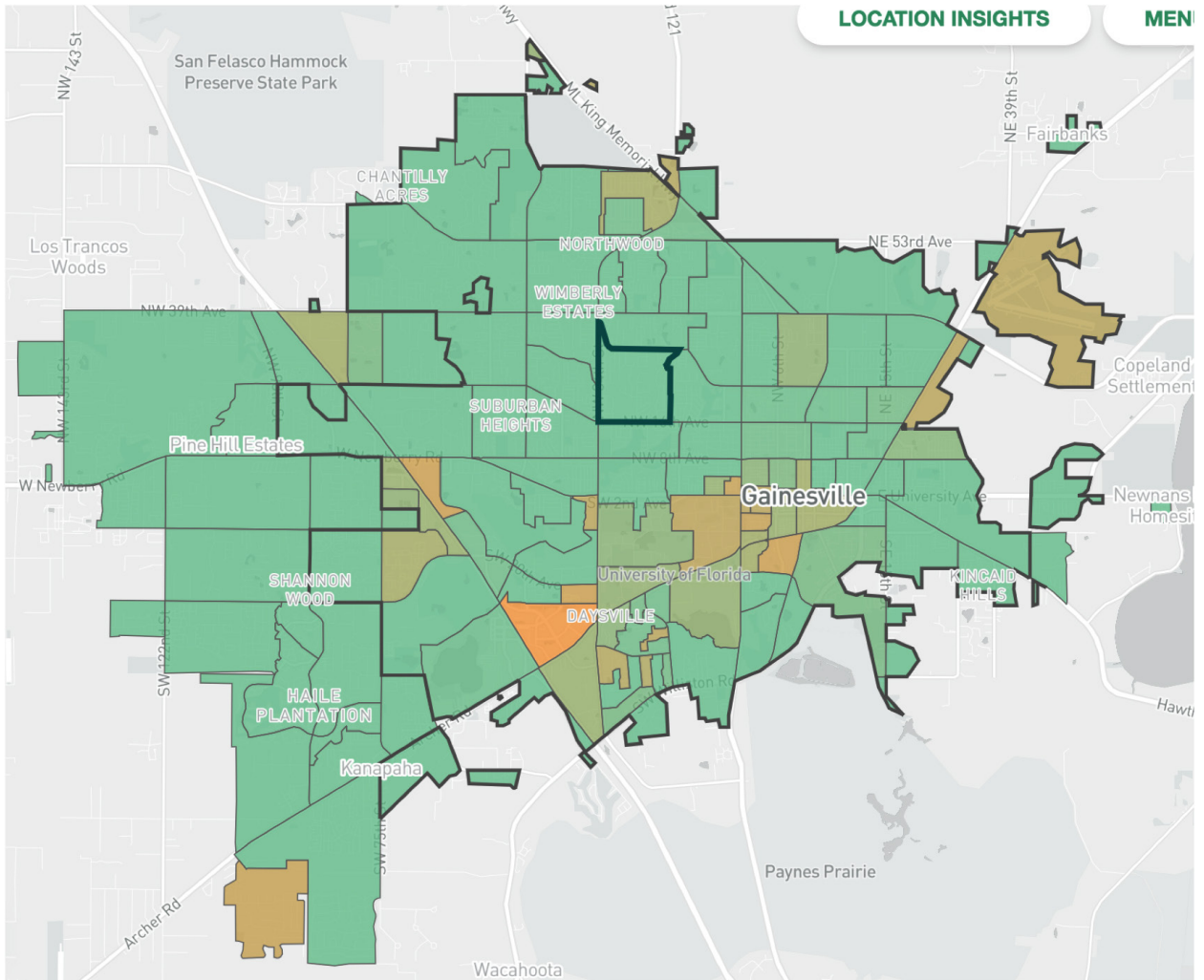
2%
local

9%
state

31%
federal government



Source: Forest Resources of the United States, 2017



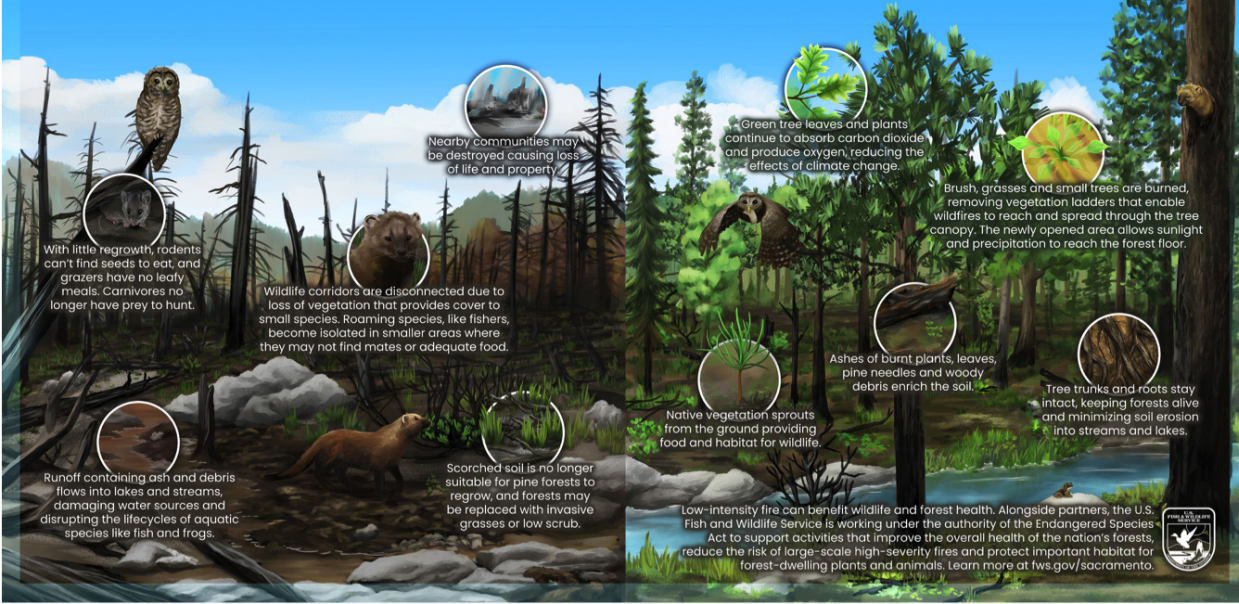
How does fire impact forests and wildlife?

Wildfires are inevitable, but not all fire is harmful to forests. Low-intensity fires can naturally “clean” and thin the forest by removing flammable and thick vegetation on the forest floor. The result is improved habitat for wildlife, healthier soil and new growth of native plants.

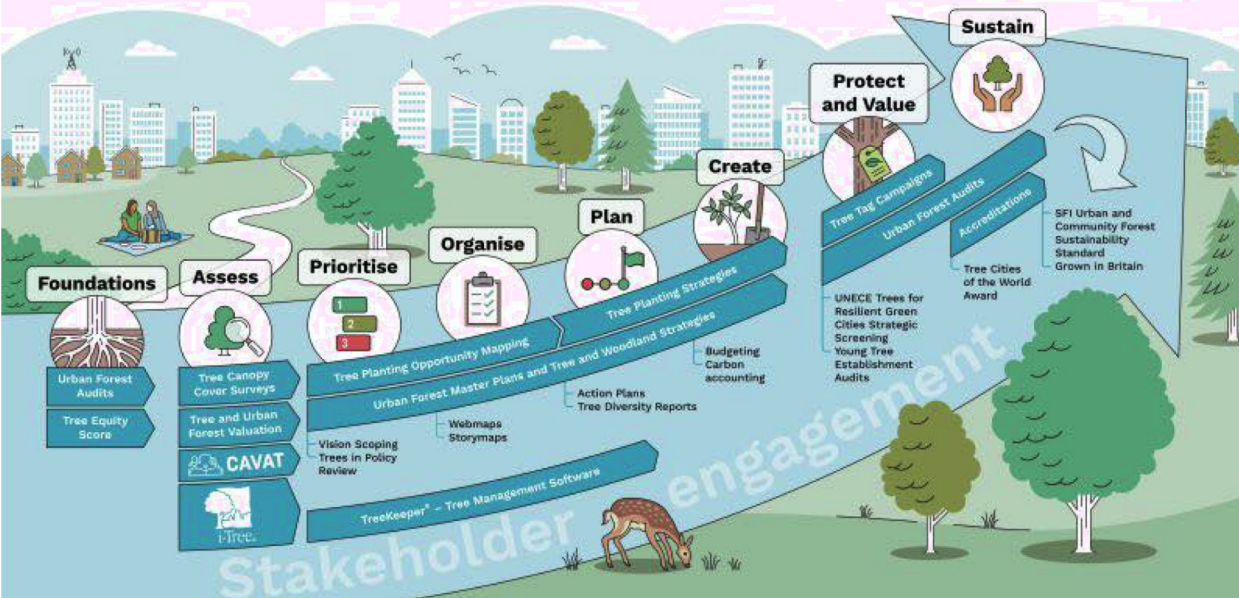
It also helps reduce the risk of large-scale high-severity fires that burn through the forest—from the floor to the canopy—with intense heat. High-severity fires across large landscapes can be devastating for wildlife, habitat and surrounding communities.

High-Severity Fire

Low-Intensity Fire



The Sustainable Urban Forest Journey



NAME _____ DATE _____

A magnificent forest, 400-Acre Wood, has just been donated to your community. You and your team have the job of deciding what to do with this forest. An acre is an area of land equal to a square that is 209 feet or 70 yards on each side, so 400 acres is approximately 0.6 square miles.

400-Acre Wood is made up of pine forest, with about 150 mature pine trees per acre. Because the forest has no roads or trails, few people visit it. A small stream containing trout runs through it. In addition, lots of wildlife live in the forest, including owls, deer, bears, woodpeckers, turkeys, quails, wood rats, and woodland salamanders.

Wildlife biologists focus on **management indicator species** to evaluate the positive and negative effects of people's actions on the environment. The impacts of changes on these species carry over to other species as well. For 400-Acre Wood, the indicator species are barred owls, wood rats, and woodland salamanders. Biologists estimate that eight owls, 400 wood rats, and 10,000 salamanders live in 400-Acre Wood.

In the northeast corner of the wood is a rock outcropping with three petroglyphs on it. These images were chiseled into the rock surface by Indigenous ancestors and are believed to be 600 to 1,000 years old. Your plan should safeguard this cultural site, keeping trails, camping, and exhaust from cars (which can erode the rock) a safe distance away.

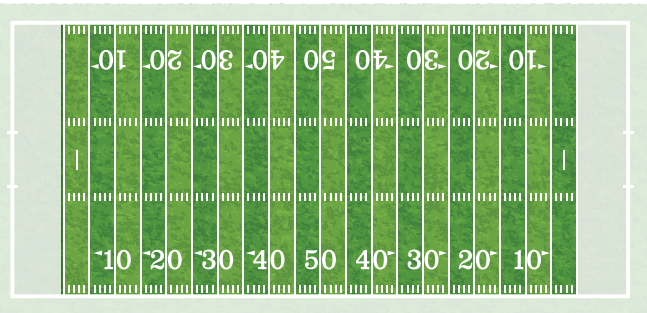
You and your team will develop a management plan for 400-Acre Wood and make a map of it. You may decide to do one thing with the entire forest, such as create a campground. Or you may want to divide the forest and do different things in different areas, such as devoting some portion to wildlife management or hiking, some to a campground, and some to timber or hunting. Your goal is to find what your group thinks is the best balance among five priority interests: 1) number of visitors, 2) wildlife conservation, 3) number of trees, 4) cultural site protection, and 5) costs and revenue.

Using a landscape in various ways can have either positive or negative effects. The effects of forest uses described in the box on the following page are specific to this learning activity. Actual forest uses may have very different effects, depending on the geography, species of trees, types of animals, and people involved, as well as other local conditions.

The What's the Score? student page will help you evaluate your plan's total effect on the five priority interests (visitors, wildlife, trees, cultural site, and costs and revenue).

HOW BIG IS AN ACRE?

An acre is a measure of land that is exactly 4840 square yards. It can be any shape, but it is approximately the size of an American football field without the end zones.



1 acre = about the area of a football field

Metric unit conversion:

1 acre = 0.4047 hectare

1 hectare = 1 square kilometer

NAME _____

DATE _____

Forest Use	Effects
Wildlife Management Area	
<p>The purpose of a wildlife management area is to allow wildlife to thrive by preserving important ecosystem features that are critical to maintaining wildlife populations. Typically, areas that are managed for wildlife have few or no roads, timber operations, graded trails, or campsites.</p>	<p>Wildlife management areas will bring some visitors to the forest. The numbers of trees and amount of wildlife will remain the same. This type of management is compatible with protection of the cultural site. It will cost money to monitor the area.</p>
Timber	
<p>Timber harvest and regeneration involves cutting trees and planting new trees. Part of sustainably managing a forest includes determining which areas of the forest to harvest and regenerate. Using sustainable practices based on research, trees are removed in a way that minimizes effects on wildlife and people, while also producing valuable products over the long term. Pine trees take 35 years to reach maturity, but some trees may be removed periodically through “thinnings” to maximize growth and generate products. Trees must also be removed to build the road.</p>	<p>To protect the stream’s water quality, timber production must retain a “buffer” alongside any stream. This is called a streamside management zone.</p> <p>The addition of roads will bring some visitors to this area. The timber harvest and regeneration will have a minimal effect on the three indicator species, since sustainable management will ensure regeneration of the forest. It will cost money to build and maintain the roads and for management, but the harvested trees can be sold to generate revenue.</p>
Trails	
<p>Graded trails allow different types of visitors to enjoy a forest area, including walkers, cyclists, families with strollers, and wheelchair users. Trails should not be built near a cultural site.</p>	<p>Trails will bring more visitors, but they will also disturb the wildlife, particularly the owls and wood salamanders. It costs money to build and maintain trails, and trees will need to be cut to make room for the trails. But you may sell the cut trees and charge an entrance fee to visitors.</p>
Campground	
<p>A campground allows visitors to enjoy a forest area overnight or over the weekend. It typically has campsites, picnic tables, fire pits, parking spaces, and bathrooms. A campground also needs to have a road winding through it. Campgrounds should not be built near a cultural site.</p>	<p>A campground will bring more visitors, but it will cause all three indicator species—owls, wood rats, and salamanders—to disappear from the area. Trees will need to be removed to build the road and campsites. It costs money to build and maintain the campground. But you may sell the cut trees and charge a camping fee.</p>



NAME _____ DATE _____

Forest Use	Effects
Hunting and Foraging	
<p>Some forest areas are managed to encourage game animals (deer, turkey, and quail) for hunters and edible items (medicinal plants, mushrooms, and berries) for foragers.</p>	<p>Hunting and foraging will bring some visitors, but with regulations to keep game populations constant, there should be no effect on the three indicator species—owls, wood rats, and salamanders. It will cost money to manage the area. But you may charge visitors a license fee.</p>
Reservoir	
<p>To supply water to the nearby community, a forest stream can be dammed to form a freshwater reservoir. A reservoir will bring visitors for canoeing, kayaking and other nonmotorized boating. Trees will need to be removed to create the reservoir.</p>	<p>The reservoir will cause all three indicator species—owls, wood rats, and salamanders—to disappear from the flooded area. It will cost money to build the dam and to manage the reservoir. But the cut trees can be sold, and you may charge visitors a recreation fee.</p>
Cultural Sanctuary	
<p>The purpose of a cultural sanctuary is to honor the people who lived there before and to respect the history, culture, and beliefs of Indigenous people today. A cultural sanctuary has no roads, graded trails, or campsites.</p>	<p>A cultural sanctuary will not change the number of visitors, trees, or amount of wildlife. It will cost money to monitor the area.</p>

CAREER CORNER

FORESTERS manage forests for public and private use. They may develop short- and long-term plans for the forest. Their plans may include planting, growing, and monitoring trees for healthy growth, and making sure forest practices are sustainable and meet environmental regulations.

I LOVE MY
GREEN JOB!





NAME _____ DATE _____

Fires need three things to burn: heat, fuel, and oxygen. This is known as the “fire triangle.”

1. Draw a triangle here. You will add to this picture as you conduct your investigation.

2. Attach a birthday candle to the inside of the jar lid with modeling clay. Place the lid and candle on a tabletop and use a match to light the candle. What element of the fire triangle does the match demonstrate?

Label one side of your triangle above with the word and draw a picture that shows this element.



NAME _____ DATE _____

3. Screw the jar onto the lid to cover the lit candle (so the jar is upside down). What happened?

What element of the fire triangle does this demonstrate?

Label another side of your triangle above with the word and draw a picture that shows this element.

4. Open the jar, relight the candle, and put the jar back onto the lid. When the flame starts to go out, reopen the jar. What happened?

What does this show?

5. Take the jar completely off the lid and allow the candle to burn until the flame goes out by itself. What happened?

How long did it take?

What element of the fire triangle does this demonstrate?

Label the last side of your triangle above with the word and draw a picture that shows this element.

6. Fire needs heat to burn. Initially, the heat is provided by a spark or flame, which can be produced by natural causes or generated by humans. Name two natural and two human-caused sources of heat that could start a fire.

Natural

- _____
- _____

Human-caused

- _____
- _____



NAME _____ DATE _____

7. Fires need fuel to burn. Name three possible fuels you might find in a forest.

8. Fires need oxygen, which is available in the air. Hot temperatures and dry winds can create severe fire conditions. How might dry winds increase the chance of wildfires?

9. If you cut off any one of the three elements—heat, fuel, and oxygen—a fire will not burn. What is one way that firefighters might cut off each of the three elements of the fire triangle?

Heat: _____

Fuel: _____

Oxygen: _____

CAREER CORNER

WILDLAND FIREFIGHTERS protect and maintain the health of the forest by preventing, controlling, and putting out forest fires, and lighting and managing prescribed burns. They may also talk to the public about ways they can help prevent fires.

I LOVE MY
GREEN JOB!



NAME _____ DATE _____

Project Location: _____

Project Goal: _____

BACKGROUND INFORMATION

1. What is the area identified for the project?

2. Who uses it?

3. What need will this project address?

THE PROBLEM

1. What site investigations and opinion surveys have you done for the area?

2. What problem did you identify from this information?

3. Where is the problem located?

RECOMMENDATIONS

1. What actions could be taken to solve the problem?

2. Which action do you recommend and why?

3. What are possible future projects?

NAME _____ DATE _____

PROJECT DETAILS

1. Who will be involved?
2. How much will it cost?
3. Who will do the work?
4. How will the project benefit the community?

MAPS

1. What does the project area look like now?
2. How would it look after the project is complete?

EXPECTED RESULTS

1. What results do you hope to achieve?
2. How will you know whether the project was successful?

I LOVE MY
GREEN JOB

CAREER CORNER

PROJECT MANAGERS work with team members to successfully complete projects. They determine a project's scale, plan its budget and schedule, manage communications, and carry out other tasks needed to deliver results.





FOREST FRIENDS URBAN FORESTRY CAMP SCHEDULE

Cuscowilla Nature & Retreat Center

SAMPLE WEEK SCHEDULE



MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
7:30 am	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
7:45 am – 8:00 am	Ice-Breaker	Ice-Breaker	Ice-Breaker	Ice-Breaker	Ice-Breaker
8:00 am – 8:30 am	Guest Speaker & Forestry Activity	Guest Speaker & Forestry Activity	Guest Speaker & Forestry Activity	Guest Speaker & Forestry Activity	Guest Speaker & Forestry Activity
8:30 am – 9:00 am	Game Room Activities	Swimming	Archery	Climbing Wall/ Challenge Course	Hiking
9:00 am – 10:30 am	Lunch with Guests	Lunch with Guests	Lunch with Guests	Lunch with Guests	Lunch with Guests
10:30 am – Noon	Guest Speaker & Forestry Activity	Forestry Activity	Forestry Activity	Guest Speaker & Forestry Activity	Swimming (1-3 pm)
12:00 – 12:30 pm	Forestry Activity	Forestry Activity	Forestry Activity	Forestry Activity	Activity
12:30 pm – 2:30 pm	Forestry Activity	Forestry Activity	Forestry Activity	Forestry Activity	Camp Evaluation & Certificate Presentations
2:30 pm – 3:30 pm	Forestry Activity	Forestry Activity	Forestry Activity	Forestry Activity	
3:30 pm – 4:45 pm	Forestry Activity	Forestry Activity	Forestry Activity	Forestry Activity	
4:45 pm	Sign Out or Bus to Lincoln Middle School				

Bus Pickup at Lincoln Middle School

Bus Drop Off at Camp and Camp Sign-In for All Campers