Taking Care of Our Home

Few Americans spend more time in the outdoors than Scouts and Venturers. Whenever you camp, hike, or go boating, you are surrounded by nature. If you're lucky, you may catch a glimpse of a bald eagle soaring high overhead or a days-old fawn skittering through the trees. But even if the rarest creature you see is a squirrel, you'll still enjoy the whisper of the wind through the trees and the endless array of colors and scents all around you.

This month's activities will help you learn more about the outdoors. You will learn about birds, animals, plants, and other living things—and you'll discover your responsibility to care for the planet we all share. When you have tried these activities, you will want to learn more, experience more, and care more for the natural world, until you feel truly at home in outdoor environments.

Objectives

This month's activities should:

- Help Scouts learn how to identify the living and nonliving components of the natural world.
- Illustrate how human beings interact with living and nonliving things.
- Help Scouts develop respect for the natural world as the home we share with other people and other creatures.
- Teach Scouts to appreciate the resources and beauty of the natural world.
- Help Scouts develop the skills they need to enjoy experiences in the outdoors.
- Introduce Scouts to naturalists and other people working to care for the environment.

RELATED ADVANCEMENT AND AWARDS

- Nature-related merit badges, including Bird Study, Environmental Science, Fish and Wildlife Management, Fishing, Fly-Fishing, Forestry, Geology, Insect Study, Mammal Study, Nature, Plant Science, Reptile and Amphibian Study, Soil and Water Conservation, and Sustainability
- Nature-related requirements for Tenderfoot, Second Class, and First Class
- Ranger: Ecology and Plants and Wildlife electives
- World Conservation Award
- Conservation Good Turn Award
- William T. Hornaday Awards

Leadership Planning

As a leadership team, you may want to discuss the following items during your planning meetings when choosing nature and environment as your program feature.

1. What are the interests of our Scouts (service projects, earning badges and other awards, experiencing new places, exploring careers, etc.)?
2. Who and what are the naturalist resources in our community?
3. What expertise do we have in our unit?
4. How far do we have to travel to experience habitats most of us have never seen?
5. What supplies and technology will we need, and what are the costs?
6. What is the best time of year to plan for the activities we want to do outdoors?
7. Are any of our members studying these topics in school? What might they contribute in terms of leadership? How can we enrich their studies?
8. To meet our needs, what should we change in the sample meeting plans?

PARENTS CAN HELP WITH THE NATURE AND ENVIRONMENT PROGRAM FEATURE BY:

1. Recruiting environmentalists or naturalists as speakers for the month's meetings
2. Providing transportation for the main event
3. Sharing their expertise about nature
4. Helping youth explore real-life applications and careers
5. Learning to model curiosity, observation, and passion about the natural world with the youth
6. Maintaining current Youth Protection certification, which is required of all adults providing transportation for or participating in outings

NATURE AND ENVIRONMENT INFORMATION

Exploring Nature and the Environment

People have always been curious about the natural world, studying it in order to survive. Early humans learned which plants were good to eat and which ones made them sick. They learned the habits of animals they hunted for food and learned how to avoid those animals that preyed upon humans.

The natural development of a living thing over time is its natural history. People who study natural history are naturalists. Because many people over time have studied nature closely, much is known today about the natural history of plants and animals. Today, many people observe plants and animals in the wild as a hobby. Some go hiking to find rare wildflowers. Others keep binoculars and field guides near a window so they can identify the birds that visit backyard bird feeders.

Plants and animals, however, do not live alone in the environment. They interact with one another and with the nonliving parts of their environment. A living thing's environment is made up of all of the living and nonliving materials around it, including plants, animals, air, soil, heat, light, food, water, and anything else that plays any role in its life. Living things depend upon the materials found in their environment to survive. Anything that disturbs the environment may affect the living things found there.

Animals, Plants, and Birds

Every living thing—from plants and animals to birds and fungi—supports a healthy, balanced environment. Without one element of that balance, the others could not exist. Without the oxygen produced by plants, humans would not exist. Without animals consuming plants, forests and marshland would

become overgrown and choke out species. The delicate balance that exists on Earth is dependent on all species doing their part in the circle of life.

Birds

Birds provide many benefits to humans and the environment. Birds such as hummingbirds and warblers aid in pollination, while barn owls and hawks help control rodent populations. In certain areas, birds consume enough insects to allow farmers to cut down on the pesticides used in their fields.

Additionally, bird populations and their migratory patterns can be indicators of a quality environment or of bigger problems on the horizon. Each year, the National Audubon Society conducts a Christmas Bird Count using information gathered by thousands of amateur birders. After more than 100 years, the data collected during the Christmas Bird Count has informed hundreds of research studies and has helped guide important conservation work.

Animals

Millions of different species of animals inhabit Earth, with some 10,000 new species being discovered each year. Highly advanced life-forms such as apes and dolphins interact with miniscule invertebrates not even visible to the human eye. Scientists organize these creatures into nine major (and numerous minor) phyla—a type of taxonomic group—of the animal kingdom.

Many Scouts and their families have pets, which are domesticated animals that are kept as companions. Some animals, such as horses and oxen, supported early farming and are still widely used today. While certain animals are raised as a major food source, animal welfare groups are increasingly promoting humane treatment of animals raised for food.

Each species of animal that inhabits Earth has a need for a clean, healthy environment. As Scouts, it is our duty to respect nature and wild animals when we venture into the backwoods of our hometowns.

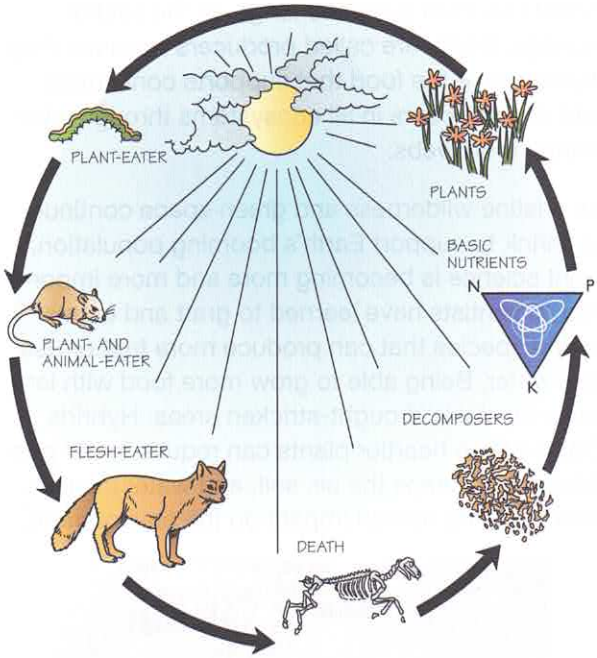
Plants

Plants play a major role in supporting all other life-forms. All plants and animals need energy to keep them alive. Most plants absorb energy from sunlight, which they use to convert carbon dioxide, water, and minerals from the soil into plant food. Chlorophyll, a chemical compound that makes most plants appear green to the human eye, uses the sun's energy to convert water and carbon dioxide into simple sugars called carbohydrates. This chemical process, called photosynthesis, also returns oxygen to the atmosphere, producing the oxygen we breathe and tying up carbon from Earth's atmosphere in plant fibers, thus helping to protect us from climate change. In the field of ecology, plants are called producers because they manufacture the food that supports consumers and decomposers in all ecosystems through intertwined food webs.

As pristine wilderness and green space continue to shrink to support Earth's booming population, plant science is becoming more and more important. Scientists have learned to graft and create hybrid species that can produce more fruit or use less water. Being able to grow more food with less water is vital in drought-stricken areas. Hybrids that produce heartier plants can require fewer pesticides; this keeps the air, soil, and water cleaner, thus reducing human impact on the environment.

Circle of Life

Imagine what life would be like without plants and animals. Every living thing on Earth depends on something else to survive, with each organism playing a role in the global food chain and serving as a link in keeping our environment healthy. As we look at life on Earth, we must be attentive to the impact humans can have on our environment. Delicate ecosystems that have existed for millions of years are in jeopardy because of the actions of humans. We are one small part of nature that must respect every other part and work to support and continue the circle of life for future generations.



Scouting and the Environment

In the early 1900s, as the conservation movement grew, two separate organizations for boys that focused on nature and the environment were founded. In 1902, the Woodcraft Indians was started in Connecticut by the naturalist Ernest Thompson Seton to preserve the wilderness knowledge of American Indians. As one of the foremost naturalists of his time, Seton spoke before the U.S. Congress in 1904 in support of legislation written by William T. Hornaday to protect migratory birds.

About the same time, Daniel Carter Beard, a former surveyor and engineer who became an author and illustrator, wrote a book titled *The American Boy's Handy Book*. In 1905, Beard founded a club called Sons of Daniel Boone to teach boys about nature, conservation, and outdoorsmanship.

On February 8, 1910, Seton and Beard merged their separate boys' clubs into the Boy Scouts of America. Publisher William D. Boyce founded this new organization. From its beginnings, the Boy Scouts of America had a strong foundation of woodcraft, nature study, and conservation. Many activities in Scouting come from activities of American Indians. Many of the principles that Scouts uphold come from the conservation ethics of Seton and Beard. The BSA has taught more than 45 million young environmentalists throughout its history. Currently, with more than 2 million active members, the BSA continues to train American youth in principles of conservation and environmental science.

NATURE AND ENVIRONMENT GAMES

Bird Art Gallery

Equipment: Twenty pictures, each depicting a different kind of bird, numbered but not identified; pencil and a sheet of paper for each player

How to play: Divide into teams. Post the pictures on the walls around the room. Allow the participants to move about with their pencils and papers and try to identify the birds in the pictures. Without consulting each other, they write down the names on their sheets. After a certain time limit, all sheets are turned in for judging.

Scoring: Add the number of correct identifications made by each team and divide by the number of members to get the average. The team with the highest average wins.

Notes: Depending on the challenge presented by the birds you've selected and the expertise of the players, you may want to allow players to use field guides.

Edible Plants Who's Who

Equipment: Twenty (or more) edible plants, each in a numbered No. 10 can; a card at each can that gives the name of the plant and the part that is edible (for instance, "Cattail: pollen for flour, shoot for greens, root (rhizome) for starch"); pencil and paper for each player

How to play: The group members walk silently around the cans as they read the descriptive cards and try to learn about the plants and their edible parts. All of the identifying cards are then removed. The group again walks around the cans. Participants try to identify and list all the plants and their edible parts. Each team goes into a huddle and makes a list of plant names and edible parts.

Scoring: Score 5 points for each plant correctly identified. The team with the most points wins.

Animal Crackers

Equipment: Hat or basket; a small piece of paper with an animal name or picture for each participant (two copies per animal). Pairs of small plastic or wooden animals could also be used.

How to play: From the hat or basket, each participant draws a slip of paper at random that bears the name of an animal. Participants then silently act out their animals without revealing the names to anyone else. Since each animal has a pair, the object of the game is to find the other participant with the same animal. Play several rounds as time allows.

Scoring: Give 5 points each to the participants who are first to match their animals, 4 points for second, 3 points for third, etc. After several rounds, have players total their scores. The player with the highest score wins.

Notes: To make the game easier, you could allow players to add sound.

Circle of Life

Equipment: Twenty or more pictures of different producers, consumers, predators, prey, and decomposers

How to play: Place all pictures face down on the table. Small teams of players take turns flipping two cards and trying to make matching pairs of a category. (For example, lichens and worms would match because they are both decomposers.) If a matching pair is made, the team keeps those two cards. If the pair is not a match, the pictures are turned back over.

Scoring: The team to make the most matching pairs wins.

E.D.G.E. Ideas

***E**xplain* how it is done—Tell them.
***D**emonstrate* the steps—Show them.
***G**uide* learners as they practice—Watch them do it.
***E**nable* them to succeed on their own—Have them practice/teach it.

EXPLAIN

- Discuss what an environment is and how nature and environment are related.
- Talk about what types of animals can be found at your local park or Scout camp.
- Explain how humans can impact the environment in both good and bad ways.
- Discuss how living things impact each other.
- Discuss the Outdoor Code and the Leave No Trace and Tread Lightly! principles.

DEMONSTRATE

- Demonstrate how to identify birds by their features.
- Show how to use a pair of binoculars.
- Show nature videos during meeting preopenings.
- Work with Scouts to create a simple food-chain diagram.
- Demonstrate how to handle an encounter with a wild animal.

GUIDE

- Have Scouts identify plants native to your area.
- Provide Scouts with the opportunity to create a local bird count.
- Have older Scouts gather edible plants for a future meeting activity.
- Invite a birder to help Scouts identify birds by sight and sound.
- Provide an opportunity for Scouts to visit a natural environment in your area.

ENABLE

- Encourage Scouts to participate in an event with a local environmental agency or the National Audubon Society.
- Challenge Scouts to examine the future outlook for a local natural area that is being impacted by development or industry.
- Encourage older Scouts to plan events for the group at a local environmental area they haven't visited in the past.
- Have older Scouts help younger Scouts identify plant and animal species in the area.

MAIN EVENT SUMMARIES

ESSENTIAL	CHALLENGING	ADVANCED
Day Activity	Overnight Activity	Weekend or Multiday Activity
Birding field trip—Go birding with a National Audubon Society chapter, a nature center staffer, or a guide at a park, wildlife refuge, or aviary. Work on the Bird Study merit badge and other nature-related badges.	Nature campout—Camp overnight in an environment that is new to your unit, and learn about its particular natural characteristics. Help Scouts work on a nature-related merit badge or one of the Hornaday Awards.	The trail of the naturalist—Go into the field with a naturalist and participate in his or her research. This could involve bird banding, wildlife counts, or habitat restoration. Complete a service project that will benefit the species the naturalist studies. Look for opportunities to use what you've learned in science fair projects or other outlets.

NATURE AND ENVIRONMENT
Meeting Plan: Birds

Week 1 Date_____

ACTIVITY	DESCRIPTION	RUN BY	TIME*
Preopening 15 minutes before meeting	Set up laptops or tablets so Scouts can go virtual birding as they enter the meeting.		6:45 p.m.
Opening Ceremony 10 minutes	Flag presentation Oath and Law Outdoor Code		7 p.m.
Group Instruction 5 minutes	Lead a brief discussion about the need for bird study and the ways in which birds are indicators of the quality of the environment.		7:10 p.m.
Skills Instruction 45 minutes	• Discuss bird features and learn how to identify species. • Learn how to use binoculars. • Create a matching activity or game to help participants identify bird features.		7:15 p.m.
	• Explore a field guide to see what information it includes to help identify birds. • Learn how to care for binoculars. • Bird ecology: Prepare a set of questions for participants to answer by examining Christmas Bird Count results.		
	• Bird ecology: Discuss how the Christmas Bird Count is carried out, and let participants browse through a copy of the results. • Practice focusing and using binoculars. • Discuss the importance of bird counts.		
Breakout Groups 15 minutes	• New members work on nature-related rank advancement requirements. • Older members review the requirements of the Bird Study merit badge and plan for future completion of the badge. • Review and debrief the last main event.		8 p.m.
Game 10 minutes	Play Bird Art Gallery (described earlier).		8:15 p.m.
Closing 5 minutes	Announcements Leader's minute Closing		8:25 p.m.
Total 90 minutes of meeting			
After the Meeting 15 minutes	Leadership team reviews plans for the next meeting and for the main event.		

*All times are suggested.

NATURE AND ENVIRONMENT

Meeting Plan: Animals

Week 2 Date_____

ACTIVITY	DESCRIPTION	RUN BY	TIME*
Preopening 15 minutes before meeting	New members: Divide into small groups and conduct a scavenger hunt using small plastic animal figurines or animal crackers. Older members: Divide members into small groups and distribute pictures of animals. Have groups identify which animals are native to their hometown.		6:45 p.m.
Opening Ceremony 10 minutes	Flag presentation Oath and Law Principles of Leave No Trace and Tread Lightly!		7 p.m.
Group Instruction 5 minutes	Discuss animals and how they are impacted by their environment. Discuss ways for Scouts to interact with animals in the wild without disturbing them.		7:10 p.m.
Skills Instruction 45 minutes	• Describe the difference between "wild" and "domesticated" animals. • Help Scouts name various pets and identify the animals that are their wild counterparts. • Discuss human impact on animals in the wild.		7:15 p.m.
	• Discuss animals Scouts may encounter on an outing. • Learn proper ways to deal with animals both on the trail and in camp. • Describe responsible hunting and fishing and how those sports can impact the environment.		
	• Explain the meaning of "animal," "invertebrate," "vertebrate," and "mammal." • Describe three characteristics that distinguish mammals from all other animals. • Review how the animal kingdom is classified. Explain where mammals fit in the classification of animals. Classify three mammals from phylum through species.		
Breakout Groups 15 minutes	• Continue to work on advancement or electives. • Make plans for participation in the main event; outline start and end times, and coordinate transportation.		8 p.m.
Game 10 minutes	Play Animal Crackers (described earlier).		8:15 p.m.
Closing 5 minutes	Announcements Leader's minute Closing		8:25 p.m.
Total 90 minutes of meeting			
After the Meeting 15 minutes	Leadership team reviews plans for the next meeting and for the main event.		

*All times are suggested.

NATURE AND ENVIRONMENT

Meeting Plan: Plants

Week 3 Date_____

ACTIVITY	DESCRIPTION	RUN BY	TIME*
Preopening 15 minutes before meeting	Have on a table numbered leaves from various plants and trees. Have Scouts write on a piece of paper the name of each plant next to its corresponding number. The Scout with the most correct answers gets a prize at the end of the meeting. New members can work in small groups while older Scouts can participate individually.		6:45 p.m.
Opening Ceremony 10 minutes	Flag presentation Oath and Law Outdoor Code Uniform inspection		7 p.m.
Group Instruction 5 minutes	• Explain photosynthesis and tell why this process is important. • Tell at least five ways that humans depend on plants.		7:10 p.m.
Skills Instruction 45 minutes	• Learn about edible wild plants. • Identify edible wild plants in your area.		7:15 p.m.
	• Discuss the process of growing a plant from a seed, including soil prep, watering, etc. • Using seeds and soils, plant something edible. (Either send seed cups home with Scouts or plant seeds at your meeting location.)		
	• Learn about grafting plants. • Discuss how hybrids and cross-pollination have improved or otherwise affected plants and food.		
Breakout Groups 15 minutes	• Continue to work on advancement or electives. • Continue plans for participation in the main event; assign responsibilities and create a packing list.		8 p.m.
Game 10 minutes	Play Edible Plants Who's Who (described earlier).		8:15 p.m.
Closing 5 minutes	Announcements Leader's minute Closing		8:25 p.m.
Total 90 minutes of meeting			
After the Meeting 15 minutes	Leadership team reviews plans for the next meeting and for the main event.		

*All times are suggested.

NATURE AND ENVIRONMENT

Meeting Plan: The Circle of Life

Week 4 Date_____

ACTIVITY	DESCRIPTION	RUN BY	TIME*
Preopening 15 minutes before meeting	Have materials on hand to help Scouts and adult leaders learn about the William T. Hornaday Awards program.		6:45 p.m.
Opening Ceremony 10 minutes	Flag presentation Oath and Law Principles of Leave No Trace		7 p.m.
Group Instruction 5 minutes	Discuss the concept of the circle of life. Introduce the concept that every living thing depends on another living thing.		7:10 p.m.
Skills Instruction 45 minutes	• Explain the concept of the food chain. • Give examples of typical food chains. • Learn the roles of producer, consumer, predator, prey, and decomposer.		7:15 p.m.
	• Discuss the process of photosynthesis. • Identify ways plants support human and animal life. • Explain how photosynthesis affects the environment.		
	• Identify the five kingdoms and how they support each other. • Discuss the concept of evolution and how life adapts over time. • Discuss the future of Earth and how human activity affects the circle of life.		
Breakout Groups 15 minutes	• Continue to work on advancement or electives. • Finish plans for participation in the main event; confirm final details and walk through the sequence of events.		8 p.m.
Game 10 minutes	Play Circle of Life (described earlier).		8:15 p.m.
Closing 5 minutes	Announcements Leader's minute Closing		8:25 p.m.
Total 90 minutes of meeting			
After the Meeting 15 minutes	Leadership team reviews plans for the next meeting and for the main event.		

*All times are suggested.

NATURE AND ENVIRONMENT

Main Event: Birding Field Trip

Date_____

Logistics

Location: _____

_____

Departure time: _____

Return time: _____

Duration of activity: 4 to 6 hours

Budget: Completed _____ Approved _____

Camping: Duty roster_____ Menu _____

Transportation: Group _____ Self_____

Essential (Tier I)

Go birding with a National Audubon Society chapter, a nature center staffer, or a guide at a park, wildlife refuge, or aviary. Work on the Bird Study merit badge and other nature-related badges.

Equipment List	• Uniform (as decided upon earlier) • Pen and paper for taking notes • Camera or cellphone as appropriate • Lunch (individual or group) • Scout Basic Essentials (Review the list and take what you need.)
Activity	• Find an appropriate location for birding in your area. • Check with the location for hours and availability and for any special coordination required for group visits. • Decide on a date, start and end times, and transportation. • Arrange to have a staff member or other bird expert meet with your group and thank them at the end of the activity. • Coordinate plans for lunch or food. • Have Scouts record any bird sightings and identify possible advancement requirements fulfilled.
Safety	• Always use the buddy system. • Pack an appropriate first-aid kit. • Dress for the weather and conditions. • Identify any other safety concerns. • Two-deep adult leadership is required for all activities.

Notes

Be sure to visit at a time of day that birds are most likely to be active. It's also helpful to have a number of different field guides available, including smartphone apps.

NATURE AND ENVIRONMENT

Main Event: Nature Campout

Date_____

Logistics

Location: _____

_____

Departure time: _____

Return time: _____

Duration of activity: Overnight

Budget: Completed _____ Approved _____

Camping: Duty roster_____ Menu _____

Transportation: Group _____ Self_____

Challenging (Tier II)

Camp overnight in an environment that is new to your unit, and learn about its particular natural characteristics. Help Scouts work on a nature-related merit badge or one of the Hornaday Awards.

Equipment List	• Camping equipment appropriate for the area and environment selected for the event • First-aid kit • Group food • Advancement materials relating to the event program • Scout Basic Essentials (Review the list and take what you need.)
Activity	• Find an appropriate location for the event. • Check availability and the reservation policy. • Decide on a date, start and end times, and transportation. • Ensure adequate adult or older-Scout participation to complete the advancement program desired. • Coordinate meals and necessary group supplies.
Safety	• Always use the buddy system. • Ensure the first-aid kit has adequate supplies. • Secure medical forms for participants. • Identify any other safety concerns with the event location. • Two-deep adult leadership is required for all activities.

Notes

Look for service project opportunities at the location.

NATURE AND ENVIRONMENT

Main Event: The Trail of the Naturalist

Date_____

Logistics

Location: _____

_____

Departure time: _____

Return time: _____

Duration of activity: Weekend or multiple days

Budget: Completed _____ Approved _____

Camping: Duty roster_____ Menu _____

Transportation: Group _____ Self_____

Advanced (Tier III)

Go into the field with a naturalist and participate in his or her research. This could involve bird banding, wildlife counts, or habitat restoration. Complete a service project that will benefit the species the naturalist studies. Look for opportunities to use what you've learned in science fair projects or other outlets.

Equipment List	• Camping equipment appropriate for the area and environment selected for the event • First-aid kit • Group food • Advancement materials relating to the event program • Scout Basic Essentials (Review the list and take what you need.) • Pen and paper for taking notes • Camera or cellphone as appropriate • Work clothes • Tools and equipment (Check to see if tools will be provided.)
Activity	• Identify a naturalist who is doing interesting research in your area, and be sure to thank the naturalist when you have finished the project. • Make arrangements to participate in his or her research. • Decide on a date, start and end times, and transportation. • Plan to camp near the research site. • Document your activities by using photos and notes to create a journal. • Work on advancement requirements related to the research.
Safety	• Always use the buddy system. • Identify any potential risks in the observation areas. • Take appropriate precautions for the selected service projects. • Have a first-aid kit on hand at all times. • Two-deep adult leadership is required for all activities.

Notes

RESOURCES AND REFERENCES

Books

Bird Study, Environmental Science, Fish and Wildlife Management, Fishing, Fly-Fishing, Forestry, Geology, Insect Study, Mammal Study, Nature, Plant Science, Reptile and Amphibian Study, Soil and Water Conservation, and *Sustainability* merit badge pamphlets

Fieldbook

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Websites

American Horticultural Society
Website: www.ahsgardening.org

Association of Zoos and Aquariums
Website: www.aza.org

Center for Plant Conservation
Website: https://saveplants.org

Eartheasy
Website: https://eartheasy.com

eBird
Website: https://ebird.org

Ecological Society of America
Website: www.esa.org

Entomological Society of America
Website: www.entsoc.org

EnviroLink Network
Website: www.envirolink.org

Great Backyard Bird Count
Website: gbbc.birdcount.org

National Audubon Society
Website: www.audubon.org

National Wildlife Federation
Website: www.nwf.org

Society for the Study of Amphibians and Reptiles
Website: www.ssarherps.org

William T. Hornaday Awards
Website: www.scouting.org/awards/hornaday-awards

Related Program Features

Camping, Hiking, Outdoor Ethics, Sustainability, Wildlife Management

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