



Backyard Wildlife

Your schoolyard may just be a lesson in wildlife and nature waiting to happen. Whether your school is in a rural community or in the middle of a major urban center, creating a wildlife habitat with your students offers many benefits—not just for the environment and native species, but for the entire school community.

Outdoor play and nature based habitats have been slowly taken away from children in several different ways. Cars clog roads in suburban and urban areas, while children can no longer walk to school. Stopping to watch local wildlife at the pond on the way to school has been replaced by a ride in a car with a quick drop-off at the door. Here is an opportunity to teach and help children understand the importance of natural environments, and provide them with a living classroom, just outside your windows.

Creating an outdoor classroom is also a terrific way to teach lessons in many different subject areas, meet your state and local standards, as well as help native species in your area thrive. Your habitat can be a living science laboratory where students will learn all about the natural world. Outdoor gardens, with their beautiful plants and living creatures (insects, squirrels, birds), delight the student's senses and offers them a quiet place to reflect and become inspired to write poetry, read a great book or just let their imaginations soar.

Is access to natural spaces good for children? When children do not play in natural habitats, they tend not to know about plants and animals that live there (Nabhan & St. Antoinn, 1993). Children are multisensory beings. The variety and richness of natural settings can provide a more enriched learning environment than any manufactured indoor play environment. The wind on the skin, the sky with its changing clouds, the movement of animals, the changing leaves and flowers, hardness of rocks and wet coolness of water, all contribute to children's physical, cognitive and emotional development (Rivkin, 1997)



Your students can and should be involved in the planning and the maintenance of the school's outdoor habitat. From planning and designing the space and eliminating non-native vegetation to researching native species of plants and learning which animals and insects will thrive in your garden, there are opportunities for important lessons for students of all ages. A terrific math project might include measuring the plot of available land, calculating the amount of plants to include in the space, and working a budget. Science lessons abound as you create your living laboratory—the life cycle of plants, insects and animals will be on view for your students, right outside their classroom. Flowers can be pulled apart, studied, sketched and catalogued. Hopefully, birds will nest and lay eggs, and students can be treated to the sight of baby birds in the spring! Schoolyard gardens can be as big or as small as necessary. The National Wildlife Federation (NWF) can help your school plan and organize a natural space through its Schoolyard Habitat® program. You can apply to the NWF to have your habitat approved as a Certified Wildlife Habitat®.

School administrations across the country, in rural, suburban or urban settings, are starting to understand the benefits of providing these outdoor natural spaces for students. They provide an opportunity to get creative in presenting subjects in new, fun ways to reinforce concepts.

Perhaps your school setting doesn't offer extra outdoor space to create a wildlife habitat—you may still be able to enjoy nature, albeit on a smaller scale. Encourage students to create bird feeders to hang on fences or trees on the school grounds. Like finding native vegetation to plant, students can research native bird species and their diets. Different foods will attract different birds to your feeders. Certain birds, such as finches, love thistle seed. Blue jays prefer corn. Hummingbirds love nectar, a simple



sugar-and-water mix. Mixed seeds attracts many birds. Black oil sunflower seeds are favored by many seed-eating species, including cardinals. Feeders can be designed and built in different shapes to attract a variety of birds. Students can research creating feeders and build them as a class project. Recycled materials such as empty milk cartons and plastic soda bottles may be used to create them.

Bird feeders should be hung close to cover, such as tree branches or roof lines. Try to keep the feeders high off the ground, so curious squirrels won't eat the food and stray or feral cats won't be tempted to hunt the birds. It may take several weeks for local birds to discover your feeders. Start with small amounts of food in your feeder until it's being used regularly. It's also important to keep a source of water nearby. A small bird bath can attract as many birds to your schoolyard as a feeding station! Students should be responsible for keeping the feeders supplied and clean-up duty. Birds can be messy—they tend to scatter seeds and

nuts on the ground under the feeders, which may attract rats and mice to your schoolyard. It is important to note, that when feeders are provided for birds, there is a responsibility to keep them filled with food since birds will come to depend on them—even on weekends and holidays.

There are some great resources to help you get started. The US Fish & Wildlife Service is a good place to begin (www.fws.gov/). There is a wealth of information about local wildlife and conservation education resources for both teachers and students. The National Wildlife



Federation (www.nwf.org/schoolyard/) is another wonderful resource for teachers and students. Through its interactive web pages, you can learn all about creating a Schoolyard

Habitat® as well as lesson ideas for students on several different grade levels.

Children love animals—seeing them, touching them, reading about them and taking care of them. While many classrooms include terrariums and class pets, viewing wild plants and animals up close in their natural setting—outdoors—is a wonderful opportunity to give students. You may be surprised at the variety of wildlife who show up at your schoolyard; birds, small mammals, amphibians and insects may just call your schoolyard habitat home.

Rivkin, M. 1997. The Schoolyard Habitat Movement: What It Is and Why Children Need It. Early Childhood Education Journal, 25 (1).

Nabhan, G. P. and St. Antoine, S. 1993. The loss of foloral and faunal story: The Extinction of Experience. in S.R. Kellert & E.O. Wilson (Eds.), The Biophilia Hypothesis. Washington, DC: Island Press/Shearwater.



Activity Sheet 1 Grades K-2

Students will learn about the wildlife that live in their community through observation and practice their basic counting and graphing skills.

Individually or as a class, read the book *Each Living Thing* by Joanne Ryder or *Bears Barge In* by Joni Sensei. Both books illustrate the importance of observing animals in their natural environment.

Before, during and after the reading discuss with students issues about animals and the environment that arise in the story. It is important to discuss with your students respect for wildlife, observing wildlife in their natural habitat and keeping the environment clean.

Next, you will take your students on a trip to the local community park or schoolyard to observe the local wildlife who live in the community. Working in groups your students will write down the types of animals they see and then count the total amount for each type of animal. Individually, your students will take the number amounts for each type of animal and they will create a bar graph.

Students will answer the following questions as a class, based on their individual graphs. You can create additional questions.

Which wild animals are commonly found in your community?

How many wild animals did you see?

Which types of animals are not very common?



STANDARDS:

NCTM Data Analysis & Probability #1:
Formulate questions that can be addressed with data and collect, organize, and display relevant data to answer

NCTE Language Arts #1:
Reading for Perspective

Activity Sheet 2 Grades 3-5

When presenting lessons or material about your own state's special characteristics, natural resources and indigenous species, ask students to research the living symbols of the state.

Information about a variety of these symbols can be found at www.statesymbolsusa.org/index.html. Teach your students how to make a research log that includes a listing of what they are searching for and a system for recording the number of examples they find. Ask them to include national and state symbols. Once the log is set up, it is time to take or send students on a supervised research safari. Remind them to bring their logs and a sketch pad or camera to document their findings. Also remind them to "step lightly" on their safari. That is, remind them to leave with everything they came with, including their garbage, and not to disturb or harm any plants or wildlife they find along the way.

After the safari assignment, ask students to report which examples they found and which they did not. Discuss reasons why it was difficult or impossible to find some of the living symbols of your state. Some potential reasons include the time of year, the area of the state in which your students live and the threatened or endangered status of the animal or plant in question.

Create a classroom or hallway display of the results of the students' research safari that features pictures of the living state symbols, which were documented and reasons why others were not able to be documented.



STANDARDS:

NSTA Science #1:
Science as Inquiry

NSTA Science #3:
Life Science

NSTA Science #6:
Personal and Social Perspectives

NCSS Social Sciences #2:
US History: The History of Students' Own State or Region

NETS Technology #5:
Technology Research Tools



Activity Sheet 3 Grades 6-8



In this activity, your students will be inspired to go out into the world—their world—and photograph the species native to—or at least making a temporary home in—their local environment. Using their investigative skills, the students can track down backyard creatures such as birds, squirrels, and chipmunks, and depending on where they live, possibly deer, raccoons, owls, rabbits, lizards, possums, armadillos and other amazing animals with whom they share the neighborhood or community.

While the photos are the key piece in this lesson, your students will need to use their knowledge of animal habits and habitats and their investigative skills to know where to find them. Further, the students can apply their observation and writing skills to write a brief caption about each of the animals they photographed, including details like where they found the animal, whether the animal was eating, whether the animal, was alone, in a pair or group, time of day they saw the animal, etc. In the case of birds, of which there are hundreds of species, have students research the type of bird they photographed, and include some background about that type of bird in the journal.

This lesson, while both fun and interactive, will also help foster the understanding that we share this planet with other species, and will hopefully engender compassion and respect for the backyard wildlife that some may view as a nuisance or pests.

Note: Eco-friendly, inexpensive disposable cameras are a great alternative for students who do not have or cannot borrow a digital camera. They can be found in most drug stores. However, in cases where even a disposable camera cannot be obtained, this activity can be easily adapted by asking the students to draw the animals they observe.

STANDARDS:

NCTE English Language Arts #4:

Communication Skills

NCTE English Language Arts #5:

Communication Strategies

NETS Technology #4:

Technology Communication Tools

Activity Sheet 4 Grades 5-8



There are many animals scampering around in trees and on the ground in backyards, playgrounds, parks, city streets, streams, ponds, deserts and woods. Backyard wildlife includes raccoons, squirrels, various species of birds, possums, armadillos, lizards, rabbits and woodchucks. Learning about these animals and their habits can make for a more peaceful coexistence.

This is an exercise that will teach your students about native wildlife in a particular community as well as the needs of these animals. Show pictures to determine your students' familiarity with different wildlife species native to the community. For information on backyard wildlife contact the U.S. Fish and Wildlife Service at www.fws.gov or your state branch of U.S. Fish and Wildlife.

Divide your students into groups and assign a particular wild animal to each group. Each group will get to know their wild neighbors by contacting a wildlife rehabilitator or wildlife rehabilitation center and interviewing a wildlife expert. Students will ask questions about the particular animal they were assigned. Encourage your students to also ask the experts about the type of requests they receive, what type of animals they rescue, how many animals they rescue in a week, a month, etc. Invite an expert into the classroom for a presentation and Q&A session with the students as an alternative to asking each group to interview a wildlife expert.

Instruct each group to research their assigned wild animal. Research may include information about the animal's characteristics and behavior. Create a classroom blog, and ask your students to post their findings and their interviews in the blog. There are many free teacher-and student-friendly websites for creating classroom blogs (e.g., Edublog at <http://edublogs.org/>).

Each group should have an assigned page on the blog. Encourage groups to be creative and upload videos or pictures, bird or animal sounds or any other graphic when building their pages. Students should also reflect on and respond to each other's findings. Responses should be posted on each group's blog page.

STANDARDS:

NCTE English Language Arts # 4: Communication Skills

NCTE English Language Arts # 5: Communication Strategies

NCTE English Language Arts # 8: Developing Research Skills

NETS Technology # 3: Technology Productivity Tools

NETS Technology #4 Technology Communication Tools

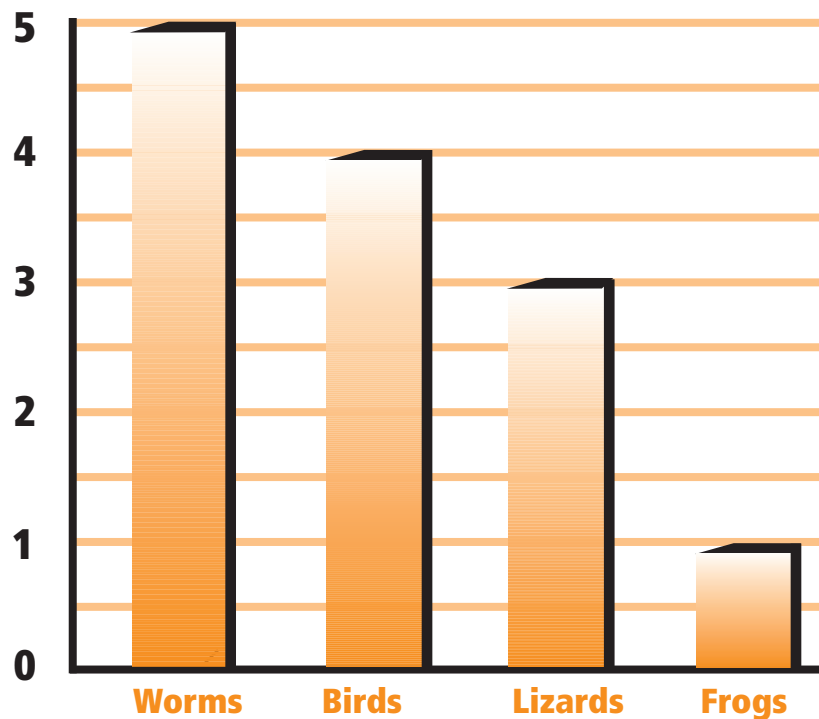


How Many Animals Do You See?

Your class is going on a trip! Take a walk outdoors, with your teacher and class to your local park or in your schoolyard. Which animals do you see? Keep a count of each type of animal you see.

After you count how many animals you have of each, you will create a graph. If you saw five worms, four birds, three lizards and one frog, those are the numbers you will put on the graph.

THIS IS WHAT YOUR GRAPH SHOULD LOOK LIKE:

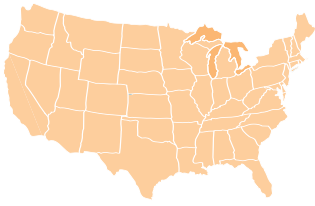




What Is Your State Symbol?

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here are flags and songs. There are seals and mottos (a short saying that expresses something about the place). There are many symbols of our nation and the states that make up our nation. Two living symbols of the United States are the rose and the American bald eagle.



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ach of our 50 states has a state bird and a state animal. Some have an official state fish, reptile, dog or insect. States also have official state flowers, bushes and plants. Go to www.statesymbolsusa.org/index.html to find all of the living symbols of your state. Find out when and why these were chosen. Try to determine if any of these symbols are important to your state's history or culture. Now, with adult supervision, go on a research safari!

How many of these national and state living symbols can you find?

Take a log and a sketch book or a camera to document (record information) your findings. Remember to "step lightly," during your safari. Leave with everything you brought with you, including your garbage and do not disturb or harm any plants or wildlife you find along the way.

If you can't find one or more symbols, try to figure out why. Are there very few of them because the species is threatened or endangered (in danger of becoming extinct)? Do you live downstate and the species can only be found upstate? Do you not live by a body of water in which your state fish or amphibian lives? Is it the right season to find the symbol? Why else might you not find them?

After you and your classmates complete your research safaris, make a classroom or hallway display showing which symbols were found, and which ones were not.

Include some of the reasons why certain symbols were easy to find, while others were not.

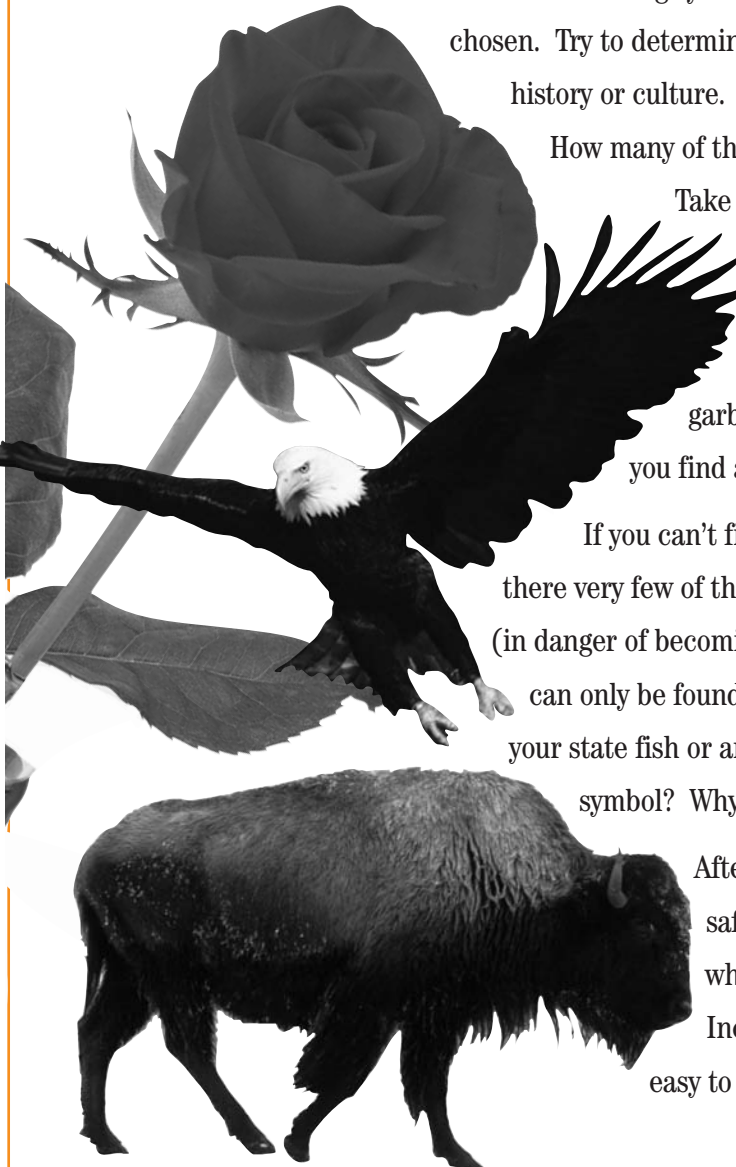




Photo Journal – Backyard Wildlife

Have you ever noticed the wildlife in your neighborhood?

Maybe you've seen the many birds in your community, but never taken note of the species. In most neighborhoods, both in the city and in the country, there are a variety of wild species that live among us—and it's time to meet them!!



In this activity, you will create a photo journal of the different wild species you find in your own backyard. Finding them is easy—just look around! Getting them to stay still for the camera might be more difficult!

Get out your cameras! (Or colored pencils!) You'll also need a notepad and a pencil to keep notes about the animals you photograph.

Take a walk in your backyard or your neighborhood. You might see birds, squirrels or chipmunks, our most common backyard friends. Depending on where you live, you may see other animals like deer, raccoons, owls, rabbits, lizards, etc. Spend some time observing. Think about what you already know about animal habits and habitats. Where are you most likely to find certain types of animals?

Try to photograph as many of the animals you observe as possible. Take a few shots of each animal (if possible). You can go through and choose the best photos later for your journal.



As you're photographing, jot down some quick notes about each animal you photograph. Some things you might want to record are:

- What was the animal doing when photographed?**
- Was the animal eating? If so, what was the animal eating?**
- Was the animal alone? In a pair? In a larger group?**
- Have I seen this type of animal here before, or is this the first time I've noticed one?**

What time of the day or night did I see this animal?

Develop or upload your photos and choose 5-10 of the best shots of different animals to print.

Now, it's time to share!

How you display your photos is up to you. You can create a book, or post your photos on a display board. You may also want to make your journal into a computer presentation. Be sure you include your edited notes as captions for each of the photos you took.



Wild Neighbors

Get to know your wild neighbors! In this activity you will learn how to create a page on a class blog with facts and information about wildlife who live in your community. A blog is a website, usually maintained by an individual, with regular entries of commentary, descriptions of events or other material such as graphics or video.

In backyards, playgrounds, parks, city streets, streams, ponds, deserts and woods there are many animals scampering around in trees and on the ground. Backyard wildlife may include raccoons, squirrels, various species of birds, lizards, woodchucks and many others. Your teacher will assign one such animal that is native to your area for you to research.



Your group will be asked to contact a wildlife rehabilitator or a wildlife rehabilitation center and interview an expert in the field. For a list of wildlife professionals in your area, visit www.tc.umn.edu/~devo0028/contact.htm. Every student in your group should contribute to the interview questions and have an assigned role. For example, one student can be the notetaker, another student can be the interviewer, and so on.



In addition to asking the wildlife expert questions about your assigned animal, ask him or her questions about their job in general. Other topics you can ask about include the animals they get calls about or rescue most often, how many calls are typically received in a week or month, and any other topic you may be curious about.

Research! In your group, search the Internet or library for information about your assigned animal. You will include this information on your group blog page. There is a whole host of information that you can write about, such as a description of the animal, habitat, feeding, migration patterns, and any other cool facts.

Be Creative! Add widgets, color, different fonts or avatars to your page. You can also upload pictures or videos of your assigned animal as well as soundbytes of how these animals sound and communicate.

Feedback! Read the blogs of other classmates and share your thoughts with them. Post your questions and comments to generate some great discussions.

Reflection! On your blog page, write about what you know about local wildlife, what you feel about local wildlife and what you will do for local wildlife.