WILD
School Sites ™

Improving Wildlife Habitat on School Grounds

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ASSOCIATION *of* **FISH** & **WILDLIFE AGENCIES**

Project**WILD**®

Project WILD is a program of the Association of Fish & Wildlife Agencies, which serves as the collective voice of North America's state, provincial, and territorial fish and wildlife agencies. Project WILD is administered through its 501(c)(3) affiliate AWARE (America's Wildlife Association for Resource Education).

All contributions to AWARE are tax deductible to the maximum extent allowed by law.

The Association's Mission: To advocate for the roles, responsibilities, and authorities of our member agencies to manage fish and wildlife as public trust resources for current and future generations.

The Association's Vision: Providing conservation leadership for a sustainable, publicly supported future for fish and wildlife.

Support for Project WILD comes from the Association's state, provincial, and territorial members.

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Introduction

Ms. Bowles, the fourth grade science teacher, was walking down the hall early one morning when a first grade teacher stopped her. "A student brought a caterpillar on a plant into class yesterday," she said. "Oh, really? What kind was it?" replied Ms. Bowles. "A monarch, I think," said the first grade teacher. "Would it be possible to plant food for those caterpillars here at the school?" she asked. That simple question prompted the beginning of Kit Carson Elementary School's pollinator gardens and the beginning of their WILD School Site. Throughout that year, students in different grades were able to research, plan, and install several different pollinator gardens to provide habitat for a variety of species with the help of a local nursery and the expertise of the local garden club.

Students at Kit Carson Elementary School—and at schools across the world—will face many environmental challenges at different scales as they learn about the myriad, complex issues humans have created over the years. A WILD School Site can help them understand these challenges and demonstrate how they can make a positive impact on the world. As our climate changes and as shifts in land use intensify, wildlife habitat loss and the resulting lack of biodiversity increase as well. When middle school students at the Albuquerque Academy learned about the alarming rate of habitat loss, they decided to research ways to do something about it. They learned that "it's not the size of the wildlife garden you plant but what you plant to provide wildlife with the most food and nectar" that makes a difference (CAVU, 2023). With the help of school personnel and the Albuquerque Backyard Refuge program, they inventoried all the plants in their schoolyard and catalogued the sources of water for wildlife. They discovered that adding a second water source would enhance the value of their schoolyard for wildlife. This was their first step in creating a WILD School Site. Their next project was to build a hive to attract and support the 500 species of bees native to New Mexico.

Students' actions to benefit wildlife also benefit their own learning and development. Students plan, implement, and sustain a project that produces results beyond the immediate goals of the project itself. These projects can increase confidence; build self-esteem; and enhance decision-making, critical thinking, and cooperative learning skills. Involving students in a WILD School Site project involves challenges, and the projects do not always turn out as expected. Nonetheless, they do make a difference in how students feel and think about their school, their community, and their relationship with the environment, which makes the undertaking well worth the effort. When students are encouraged to take on projects they care about, educators can help them create positive changes—for their school, the community, the earth we all share with wildlife, and for themselves.

If all of this sounds worthwhile, then you are ready to take the first step. While initially the idea of an outdoor classroom or a WILD School Site may seem complicated, a realistic beginning can be quite easy. A single berry-producing shrub planted with thoughtful application of its role as habitat, or one animal feeder placed where students can observe its function, are easy, effective ways to start. With this simple beginning, a WILD School Site is likely to develop piece by piece. These new ideas and new learning experiences often result in more help and enthusiasm. Open the door, venture out, and choose a corner to explore and discover how your school site can be WILD!
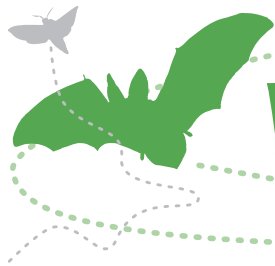
Why School Sites: A Rationale

A **WILD School Site** is any area of land that is used by students, teachers, and the school community as a place to learn about and benefit wildlife and the local environment.

A **WILD School Site project** is any action, small or large, that improves habitat for wildlife and people. A variety of projects small and large will comprise a WILD School Site.

The WILD School Site Concept

Schools are places of hope and learning. School sites are often the heart of community activity. They serve as playgrounds for our youth and outdoor classrooms for environmental education.

And yet, what do most school sites look like? Often there is little vegetation. Grass, a few shrubs, and flowering plants may border the grounds and public pathways. Playgrounds may be cement or asphalt. Even when lush and attractive, the outdoors at school sites are not typically places where students apply concepts from classroom instruction. While school grounds are typically not designed with wildlife in mind, they can be modified or transformed into health habitats for people and wildlife. They become places in which students realize their ability to make a difference through hands-on environmental stewardship.

The purpose of this publication from Project WILD is to help students and teachers take constructive action to improve their communities for people and wildlife, beginning on their school grounds.

Constructive action must be grounded in accurate information with a basis of scientific understanding about how the environment works. Creating an ecologically sound, functional WILD School Site begins with you and your students designing and implementing one project at a time.

Project WILD provides the foundation for getting started. Through participation in an introductory Project WILD professional development training, teachers learn more about wildlife and ecological systems. The introductory training will equip you with the knowledge and resources to integrate Project WILD activities into your curricula. After participating in these learning experiences, you and your students may begin to ask, "What can we do for wildlife? What can we do to improve the environment?" A WILD School Site project is a great place to begin.

Considering Benefits

Interest in education about the environment has never been greater or more important. The world needs young people who will grow up prepared to make informed, responsible decisions to conserve and protect the environment. Successful WILD School Site projects will help to meet that need, providing benefits for wildlife as well as the entire school community.

Living systems within a WILD School Site are dynamic. They exemplify concepts of connection, interaction, and diversity and are constantly changing, like all of nature. These complex living systems provide the potential for virtually unlimited learning opportunities. Understanding ecosystems helps all people make better decisions about our world. Exploring these living systems up close within the WILD School Site may help point the way to new solutions for old problems.

For Students

The most effective instruction, appealing to the broadest spectrum of learning styles and the widest range of personalities, takes place in diverse settings and makes use of a variety of approaches. WILD School Site projects are part of that variety. Their appeal derives not just from the excitement or novelty of going outdoors during class time but from the availability of dynamic learning environments that easily link to teaching strategies and curricula. Consequently, there are significant benefits for students when educators open the door and go outside to use the school site as a classroom. Findings from many research studies (Adrion, Bowers, Roth & Halthius, 2018) show that learning outdoors can result in the following:

- Students' interest, motivation to learn, and academic achievement across school subjects increases for ALL learners through the opportunity to apply knowledge and do something real.

- Critical thinking, collaboration and leadership skills are enhanced.

- Outdoor experiences refuel students for learning when they return to their indoor classroom.

- Self-esteem is enhanced when they choose a project of importance to them and succeed in accomplishing it.

- Social-emotional learning is nurtured by including more differentiated instruction, project-based learning, and time for student voice and choice.

- Experiences outdoors can reduce stress as well as improve mental and physical health.

For Wildlife

The presence and type of wildlife found in an area provide clues to the overall environmental health of that area. Where wildlife abounds, clean air, water, and soil typically do too. Using a Project WILD activity like "Environmental Barometer" is a good way to introduce students to this concept. When students learn about the needs of wildlife, they learn more about the needs of people. Both people and wildlife need a home. When learners begin looking for clean water, fresh air, healthy soil, and plants that provide food to support wild animals, they reinforce their own understanding of the similarities between humans and wildlife. "What's That, Habitat?" a Project WILD instructional activity, facilitates this understanding.

When students undertake projects to improve a school site for wildlife, they apply a variety of academic concepts in a tangible way. This hands-on experience connects students with the needs of wildlife throughout the world. Most schoolyards were designed and are maintained without consideration for the needs of wildlife, so there are limits to how much and what kinds of wildlife the average school sites can support. Consequently, the simplest decision made with the needs of wildlife in mind can have dramatic results in improving the biodiversity of your schoolyard. Projects like setting up bird baths that provide water or planting trees that enhance food and shelter are examples of simple actions. Others can be more complex. Whether large or small, simple or complex, wildlife benefits. By collecting data before, during, and after projects, students can observe and measure these benefits.
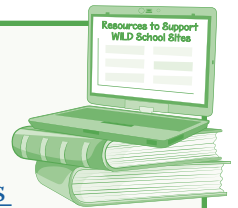
For Teachers

While improving the wildlife habitat and enhancing student learning, WILD School Sites also provide a rich diversity for teaching experiences. They are a place to experiment, take appropriate risks, apply knowledge, hone skills, and increase self-confidence. WILD School Site projects provide teachers with places to grow as well as to lead. Below is a list of documented benefits for teachers from using outdoor spaces as learning sites (Barker, C., Chisholm, N., & Foran, A., 2024; OutClass, May 9, 2024):

■ Enhances the teachers' opportunities to incorporate a variety of strategies, approaches, topics, and experiences within the curriculum, including hands-on investigations and field studies.

■ Teacher competency can improve through increased knowledge, skills, attitudes, and behaviors.

■ Increases teaching efficacy by improving student achievement in skills, concept mastery, retention, and self-esteem through applying and reinforcing learning in a setting students help to create and sustain.

■ Increases teaching time--studies show that students pay better attention outdoors, requiring less time for redirection.

■ Boosts teacher satisfaction since students' enjoyment of learning and their achievement increases.

■ Enhances emotional balance, sense of purpose, mental toughness, and physical endurance.

Classrooms are traditionally the essential location for learning. But taking learning outside in a WILD School Site brings learning to life in the real world. By building Project WILD instructional experiences into the curriculum, educators cultivate student awareness, knowledge, skills, and inspiration to create valuable, visible change in their community. The idea of guiding learners outside of a conventional classroom setting may be uncomfortable at first. Classrooms tend to be safe and structured. Opening the classroom door can make things less predictable; however, planning, preparation, and practice will help. See the resources listed in the text box below, as well as those in Appendix F. See also "Teach Outside" in the front section of the *Project WILD Curriculum and Activity Guide*.

Resources: Taking Students Outdoors

The following resources provide practical ideas for successfully taking your students outdoors:

■ Beetles Project (2017). Engaging and Managing Students in Outdoors Science - Beetles Project Lawrence Hall of Science.

■ The Cornell Lab, K-12 Education, Outdoor Teaching Tips

■ Council of Outdoor Learning; https://www.eealliance.org/cool-toolkit-methods.html

■ Edutopia. 7 Tips for Moving Learning Outside

■ Giroux, P and Hightower, J. Tips and Tricks for Teaching Outdoors, EE Alliance

■ Green Schoolyards America, Outdoor Classroom Culture and Management

■ McCutcheon, N. & Swanson, A. Tips and Tricks for Taking Kids Outdoors

■ Little Bluestem Architecture. (2020) landED: A Brief Introduction to Outdoor Learning: Teachers Guide

■ Provenzano, N. (May 15, 2023) How to Facilitate Outdoor Learning. Edutopia

For Community

The WILD School Site experience can make a compelling contribution to the wider community. The goal of Project WILD is to develop awareness, knowledge, skills, and commitment resulting in informed decisions, responsible behavior, and constructive actions concerning wildlife and the environment. WILD School Site projects enable students to witness firsthand the difference they can make

in a world with complex challenges that can seem overwhelming. Rather than focusing on individual achievement, the collective action of a WILD School Site project affords students an exciting opportunity to apply their learning for the benefit of others in addition to themselves. Experiencing success (and even failure) as they work to improve their school grounds can lay the foundation for similar endeavors in the future. The requisites for taking action are:

- Awareness of the need to act;
- Knowledge of the topic;
- Skills to do something effectively;
- A willingness to try; and
- A belief that the action will make a difference.

When all of this is combined with a measure of success, the result is a commitment to action. This commitment is at the heart of participatory democracy. In this way, simple projects such as improving habitats for people and wildlife on school grounds can contribute to a lifelong ethic of responsible community action.

For the Environment

Enhancing wildlife habitat on a school site can also lead to improving overall health of the local ecosystem. As the diversity of your schoolyard increases, so will the health of the overall ecosystem; high biodiversity is an indicator of overall ecosystem health and resilience. In addition, WILD School Site projects can help improve ecosystem health in other ways such as:

- Improving water quality by controlling surface-water runoff;
- Reduce school energy consumption through strategic vegetative plantings; and
- Reducing a heat island effect with ground cover.

WILD School Sites also provide a dynamic example of resource conservation and land stewardship. As you immerse students in nature through a WILD School Site project, they learn to take care of the place where they live. Research (Android, Bowers & Gaillard, 2020; Van De Wetering, Leijten, Spitzer, & Thomaes, 2022) shows that this can directly increase conservation behaviors and pro-environmental attitudes for years to come.

Principles of Project WILD and Wildlife Habitat

Project WILD curricula and activity guides use a conceptual framework consistent with concepts and principles of WILD School Site projects. Just as the Project WILD Conceptual Framework is the foundation for the Project WILD curricula and activity guides, it is also a useful foundation for WILD School Sites projects.

This framework is organized into three sections: Ecological Knowledge, Social and Political Knowledge, and Sustaining Fish and Wildlife Resources. WILD School Site participants may want to refer to Project WILD's website (https://projectwild.org/) for a detailed version of the framework.

Ecological Knowledge

This area focuses on an understanding of the characteristics of environments and how they function. There are five areas of study included: 1) *wildlife populations*, addressing characteristics and population dynamics; 2) *habitats, ecosystems and niches*, addressing distribution and importance of these concepts; 3) *interdependence*, addressing commonalities and interactions among living things; 4) *changes and adaptations*, addressing environmental changes and organism adaptations; and 5) *biodiversity*, addressing types of biodiversity, human influence, and the importance of habitat.

Social and Political Knowledge

This section concentrates on the way human cultures, economics, and politics affect people's attitudes toward natural resources. There are four areas of study: 1) *cultural perspectives*, addressing cultural development, expressions, and appreciation of wildlife and natural resources; 2) *economic, commercial, and recreational considerations*; 3) *historical and geographic development*, addressing the development of society and commerce as related to natural resources; and 4) *political and legislative frameworks*, both domestic and international.

Sustaining Fish and Wildlife Resources

This section encourages students to recognize, evaluate, and make responsible choices in their own lives regarding natural resources. The five study areas include: 1) *attitudes and awareness*, including human perspectives and values; 2) *human impacts*, both positive and negative; 3) *issues and trends in global perspectives*, including land use, consumptive and nonconsumptive uses of wildlife, and wildlife populations; 4) *wildlife management*, addressing basic concepts related to management considerations and practices; and 5) *responsible action and service*, focusing on how students and others can take action on behalf of the wildlife and the environment.

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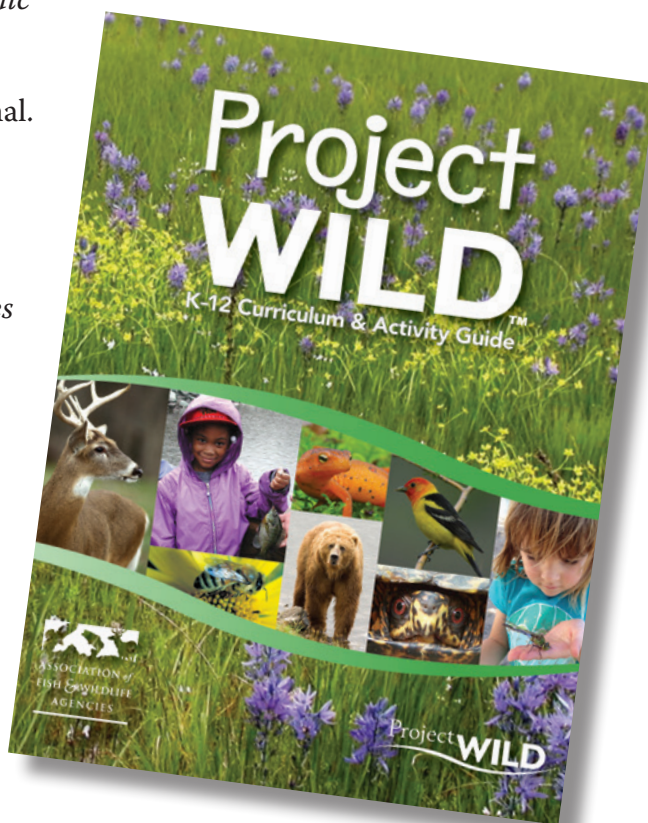
WILDLIFE HABITAT BASICS

All animals—humans, wildlife, and domesticated animals such as pets—have similar basic needs for survival: food, water, shelter, and space in the proper arrangement. Together, these resources make up an animal's habitat. When planning WILD School Site projects, students will be working with one or more components of habitat. The amount and variety of food, water, shelter, available space, and the overall quality of the habitat reflected in the arrangement are major factors in determining what kinds of wildlife can suitably live at the WILD School Site.

1. **FOOD:** Food is required by all animals, including wildlife. If you provide the right kind of food supply, you might attract a new resident species or occasional visitor. Students can choose what kind of native species they might want to attract, learn what these animals need, and then determine how they can provide for their needs successfully.

2. **WATER:** Water is essential throughout the year. A pond or stream may be impractical to establish on some WILD School Sites projects. Damp soil, a bird bath, and a seasonal pool are all examples of ways to include water sources for wildlife. Some wildlife get water from food sources, including vegetation. Water can accomplish more for a small site project for wildlife than any other component of habitat. Providing a variety of water sources is one of the most effective to meet the Project WILD School Site goal of bringing wildlife into the view of students for study and appreciation.

3. **SHELTER:** Shelter is sometimes more difficult to provide than food or water. Think of shelter as protection and critical cover. A nest box, brush pile, or shrub plantings may be compatible with your WILD School Site project. Regardless of how shelter is provided, it should help support one or more of the necessary life functions of wildlife: breeding, nesting, hiding, resting, sleeping, feeding, and traveling.

4. **SPACE:** Space needs, often referred to as territory, vary from species to species. Every population of animals needs enough room in which to live, whether that consists of tens of thousands of square miles or a square foot. Social interactions and the resources within an area will help determine the amount of space needed.

5. **ARRANGEMENT:** The correct arrangement of food, water, shelter, and space is essential to making a WILD School Site attractive to wildlife. It is important that the food, water, and shelter be arranged in such a way so they are available to the animal. For example, a planted tree can provide shelter, and a shrub planting can provide food. A tree planted next to a food source can provide shelter and a safe place to wait for food.

The first three habitat components are fairly easy to influence. Space and the arrangement of these factors may be a bit more challenging. As mentioned earlier, these habitat components also affect the diversity of wild animals that can live in an area. Diversity is perhaps the single most significant element to plan

for in a successful WILD School Site project. The greater the diversity of habitat, the greater the variety of wildlife. In most cases, vegetation is the key to that diversity. The type and variety of plants at your WILD School Site will define the kind of habitat you provide and the species of wildlife that will use it. Check out the Resources section for learning experiences to help students understand more about biodiversity.

Remember that living systems are dynamic and changing. Your WILD School Site will change. The tree seedling will grow, and what it provides for wildlife will change as it grows. How to sustain the wildlife habitat that is provided through the WILD School Site should be basic to your planning. Plan for the short term and the long haul!

Resources: Activities Connecting to Biodiversity

These activities in the *Project WILD K-12 Curriculum and Activity Guide*, as well as the World Wildlife Fund's *Biodiversity Basics*, address the concept of biodiversity:
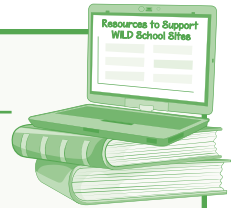
- ◼ "Bird Song Survey" (Middle School, High School)
- ◼ "Bottleneck Genes" (Middle School, High School)
- ◼ "Eco-Enrichers" (Middle School, High School)
- ◼ "Graphananimal" (Lower Elementary)
- ◼ "Time Lapse" (Upper Elementary, Middle School)
- ◼ "Urban Nature Search" (Upper Elementary, Middle School)

A Bottom Line

When working on a WILD School Site project, an indoor classroom can provide a setting for many related activities. Outdoors, on the site, students will do a variety of things that connect to learning in the classroom. You may find yourselves going back and forth from the indoor classroom to the WILD School Site project as you work on the project throughout the year. The process helps to make learning real for students. They can see the connection between what they study in the classroom and how it works in the world. Classroom work is directly tied to what they learn and do to improve their own communities.

Planning and undertaking a WILD School Site project requires some skill and knowledge. If the task of supporting students in creating a WILD School Site feels challenging, consider starting small. Incorporate simple steps that make sense to you in your teaching setting and for your school grounds. Many educators and their students have successfully started where you are now and have gone on to complete a project. You can find many examples throughout the country. Also, many individuals, organizations, and resources exist to help you succeed! Your Project WILD state coordinator and state wildlife professionals are committed to making these types of projects a reality. Lastly, this journey will undoubtedly lead you to discover new things about your students, yourself, your community, and the natural environment. Enjoy the adventure!

Figure 1: Examples of WILD School Site Habitat Study and Improvement Projects

Physical

- build feeding stations for birds and small mammals like squirrels
- build swales to harvest rainwater runoff and redirect it to watering trees and shrubs
- establish an animal tracking plot
- clean and revegetate a stream or creek
- develop a pond or wetland
- begin an erosion control demonstration area to stabilize soil and vegetation
- plant and maintain a fence row for shelter and food
- start wildlife brush piles for shelter
- plant windbreaks of trees and shrub plantings
- conduct geologic studies on a rock pile
- establish a fossil path and rock garden

Biological

- increase the quantity and diversity of native plants
- plant wildlife food plots including berry-producing shrubs
- compost
- mulch for schoolyard plants
- establish native herbaceous wildlife plantings
- develop a horticulture demonstration and test plot with native plants
- care for existing trees
- restore a native prairie
- set aside an area for natural plant succession
- plant food beds using native species
- erect nest boxes and plant shrubs and trees for perch areas
- establish a wildflower plot
- establish butterfly and hummingbird gardens

Cultural

- recycle cardboard, paper, plastic, and glass and show how this can benefit wildlife
- use archeological techniques to study specific site characteristics
- construct a habitat study area with Native American themes represented
- design and develop an educational trail
- build an outdoor seating area for educational uses
- start a community garden and composting project
- establish a wildlife viewing blind
- create a wildlife viewer's guide to the WILD School Site
- report wildlife observations at the site to local media

Creating a WILD School Site

This section provides an overview and outline for steps in designing and implementing a WILD School Site project with your student.

Initial Steps: Finding a Starting Place

Teachers and other school personnel are busy taking care of their students, planning for lessons, and all the other myriad of activities required as an educator. Starting a project such as a WILD School Site may not lessen your workload, but it can change the nature of the work by putting the joy and excitement of learning back in. The project can involve your classroom, a school club, or an interest group such as an ecology club or energy team. For example, Ms. Doerr's 7th grade students at Old Kentucky Home Middle School decided the area of their schoolyard right outside their classroom needed some kind of habitat to attract additional kinds of wildlife. They already had several kinds of bird feeders. After doing some research, they agreed that adding some small rock piles and cover boards would help attract small mammals, amphibians and a variety of invertebrates. Over the next several weeks, each of her classes spent one class period a week working on the project.

Create Interest

Since a WILD School Site project is a collaboration with students, teachers, and community members, an appropriate way to initiate a project is to introduce your students to wildlife and the concept of habitat by taking your students outdoors to investigate. The following explorations from the *Project WILD K-12 Curriculum and Activity Guide* are effective ways to do that. (**NOTE:** Throughout this guide, a variety of Project WILD learning experiences will be referenced along with the target grade levels. The grade levels are not definitive. Activities can always be adapted for different ages.)

- "Carrying Capacity," (Middle School, High School)
- "Habicache," (Upper Elementary, Middle School)
- "Learning to Look, Looking to See," (Lower Elementary, Upper Elementary)
- "My Kingdom for a Shelter," (Lower & Upper Elementary, Middle School)
- "Oh, Deer," (Upper Elementary, Middle School & High School)
- "What's That Habitat?" (Lower & Upper Elementary)
- "What's Wild?" (Lower & Upper Elementary)

Creating a WILD School Site
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After your students participate in one or more of these activities, lead a discussion to help students refine their understanding of the basic needs of wildlife and the components of a healthy habitat. Once your students understand these basics, introduce the idea of a WILD School Site project. Have students brainstorm what kind of project could be developed in your schoolyard and what it might include. Use their ideas to create a master list as you move through the initial steps. This is also a good time to set up an online location for sharing documents and other resources between you, your students, and others that may become members of your working team.

Ms. Biggins, a teacher at the George Washington Academy (an elementary school) outside of Chicago, wanted her students to be able to see and appreciate some of the native plants and wildlife. They lived in an urban area and did not have the opportunity for that experience. To introduce the idea, she engaged her students in a neighborhood wildlife scavenger hunt. Students discovered that there were very few wildlife species or native plants there. Then Ms. Biggins' students researched species of plants and animals native to Illinois and their requirements for survival. Her 5th and 6th grade classes used this information to plan and develop a native plant garden area between their elementary school and the junior high school next door. The goal of the garden was to showcase native plants and to attract wildlife. The students drew up plans and chose the appropriate plant species. Then with the help of families, friends, the Wildlife Habitat Council and a local utility company, they were able to complete the wildlife garden.

Root the Project in Student Leadership

No matter the size of the group, age of the students, or the complexity of the project, the strength of the project is with the students. WILD School Site projects can and should represent opportunities for students to make real-world connections. Approaching the project with student-centered planning and decision making will help with students' sense of ownership and motivation to learn. When possible, students should choose the project, plan the details of the project, and conduct each step. You can counsel and guide, but as much as possible, try to allow students to develop their own ideas. Learning that lasts happens when students recognize and meet a need to improve their school and community. You may not have much experience or feel comfortable with student-driven instruction. The Resources section below provides links to further explore incorporating student leadership and voice throughout your WILD School Site project. As always, start small.

Mr. Scholl changed careers from a park ranger to a middle school math and science teacher. He enjoyed being outside and thought his students would too. So, he began taking his students out for a variety of learning activities in both subject areas. One of the places they often went was a courtyard in the middle of the U-shaped school. When his 6th grade students were finishing up a habitat lesson there, a couple of them were talking about how the mowed grassed area did not have many different animals at all. This prompted a class discussion about if and how they could change that. Mr. Scholl decided to prompt the same discussions with each of the 6th-grade classes. Overall, the 6th graders seemed very excited about the idea of doing something to attract more wildlife. After receiving tentative permission from the principal to explore the idea, each class brainstormed, researched, and proposed several appropriate projects for habitat improvement. Then each class ranked their choices, voted, and adopted one project to plan and implement. With the help of the Parent Teacher Association and the local conservation district for funding and some labor, a small pond, wildlife plot, pollinator garden, and a native tree area became part of the courtyard over the course of a year.

Promoting Student Leadership and Student-led Instruction
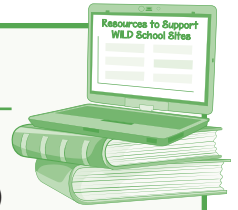
- Advocates for Youth. (March, 2023). *Youth Adult Partnerships*
- *Creating Youth - Adult Partnerships: Mae Thompson at TEDxCrestmoorParkED* (video)
- Fester, J. (July 31, 2024). *5 Tips for Helping Students Adjust to PBL*. Edutopia
- Institute of Youth Success, *Creating Inclusive and Effective Environments for Young People: Exploring Youth Voice and Youth-Adult Partnership*, pp. 4-9
- Fletcher, A. F. C. (Sept. 23, 2013). 32 Resources on Meaningful Student Involvement.
- Novak, K. & Tucker, C. (2022) *Shift to Student Led*. Impress
- OSU Extension Professionals · Apr 13, 2020. *Benefits of Youth-Adult Partnerships*. (video)
- Texas Network of Youth Services and the Prevention and Early Intervention/ Community Youth Development Division of the Texas Department of Protective and Regulatory Services. (2002). *Making it Work: A Guide to Successful Youth-Adult Partnerships*, pp. 1-5
- *Youth Adult Partnership Resource Kit: Tools and Inspiration for Organizations and Communities*

Communicate

Throughout the process of creating a WILD School Site, it is essential that you and your students communicate with all stakeholders, such as school faculty, administrators, maintenance staff, and community members. In most cases, students can take responsibility for this communication with your help. The knowledge and skills to do this will help build the English Language Arts and Literacy connections to your project. For example, students can design presentations, posters, or electronic bulletins to inform the school community about their WILD School Site project. Remember the importance of communication at every step of the way, and build it into your plan. For ideas, check out the Action Tips.

Action Tips

These activities from the Project WILD K-12 Curriculum and Activity Guide build communication skills

- "Animal Poetry," (Upper Elementary, Middle School)
- "Wild Words," (Upper Elementary, Middle and High School)

Figure 2: Examples of Communication Strategies

Community meetings provide educators and students an opportunity to build relationships and foster support. Plan to announce what the project is all about. Describe your needs for materials and funding. Stress the values of the project: educational, ecological, civic. This is an excellent way to get people involved. build feeding stations for birds and small mammals like squirrels.

Word of mouth is your best advertisement. When students are excited about the project, they will carry that enthusiasm home. This in turn will increase involvement by parents and community members.

Visual and sound media provide many opportunities to advertise the project. Options include electronic bulletins, listservs, social media, school bulletins, radio, and TV. On a slow news day, local television stations often run videos that have been taken by amateurs. Students can video record their peers in action: planting trees, erecting nest boxes. Public service announcements (PSAs) can be provided to public radio stations for airing. Positive action to benefit wildlife and the environment can be newsworthy and appealing!

Next Steps: Developing a Plan

Once you and your students have decided to do a project, begin developing a plan of action. You can work on a WILD School Site one small project at a time or consider a master plan to turn the whole school into a WILD School Site.

Figure 3: WILD School Site Student Planning Checklist

1. Inventory Your School Site
2. Research the Past
3. Determine Your Desired Native Wildlife Species
4. Identify Other Needs (e.g., Community or Administrative Considerations)
5. Complete the Project Proposal
6. Build a Support Team
7. Complete your Project Plan
8. Monitor and Evaluate

What follows next in this guide is a Student Planning Checklist (Figure 3) for organizing a WILD School Site project. On pages 17-30, additional details are provided to explain each step in the planning checklist. The checklist can help you and your students organize your thoughts and get started. Tailor this checklist to your situation. You may want to rearrange and modify some of the steps. Note that time spent on the front end typically pays off in more efficient and effective implementation. Things may change, so be flexible. Revise and update the written plans as necessary. Above all, the planning process must be one of team building and ownership for everyone involved, beginning with students.

Keep these considerations in mind: 1) The project can be as small or as detailed as you and your students choose. From a simple bird house outside a preschool classroom or shelters such as toad houses for amphibians to wildlife food plots, projects of all sizes and scopes can all add value if the planning and execution is thoughtful. There are only two required components: benefits for wildlife and students and shared student leadership.

1. Inventory Your School Site

The first step is to identify and record the major existing natural and cultural features on the school site. This includes components of wildlife habitat as well as any wildlife present. This inventory can involve taking photographs, making a map, and identifying the characteristics of the area. Doing an inventory is an educational experience in itself. Have your students choose the area that they want to improve for wildlife. It may be a small courtyard or a corner of a playground. It might be away from the school ground--a nearby park, fields, wetlands, or woods. A WILD School Site does not have to be located on the school grounds, as long you can obtain the appropriate permissions for whatever areastudents want to improve for wildlife. Sketch a simple border map of the area. Your students can also use existing area maps to help, such as a school site plan or topographic map. Aerial photographs and satellite-derived images can be powerful and interesting tools!

Action Tips

The success of the projects you choose will depend upon many things. As you work with students to develop plans, encourage students to use their judgement about the following:

- Location and natural history of the site
- Amount of work required
- Available resources
- Neighboring land characteristics
- Scale of the project–start small
- Realistic capacity to make changes in the environment
- Provisions for long-term sustainability of the habitat
- Cost
- Time–do not expect things to happen overnight. Time is an important component for success in planning and sustaining a WILD School Site project.
- School and community support

Assign individuals or small groups of students to map and inventory specific features on the site. If the WILD School Site is large and complex, several groups of students and adults may divide the responsibilities and pool their findings. The complexity of this process will be determined by the size of the land area, the diversity of ecosystems present, and the types of habitat enhancement projects your students are considering.

As the students conduct this inventory, ask them to make notes of the surrounding area as well. The reason for this is that habitats have no distinct borders. Wildlife may use the WILD School Site to meet some of the needs and will meet still other needs in surrounding areas. To the extent that there are community considerations involved, considering how the WILD School Site fits into the larger geographical system will be important. In those cases, it will be especially important to identify all the human resources that will be needed.

Conducting a detailed site inventory may not be necessary for all WILD School Site projects, but inventories are helpful for expanding awareness. In all cases, however, students need to begin with at least a basic inventory of the area and a clear understanding of the needs of the wildlife that will be affected. The type and depth of the inventory will depend on the complexity of your project, the age of your students, and the time you can allocate to this project. Consider some of the basic elements below.

- **Physical Characteristics** – Record the size of the area, soil, topography, geology, climate, natural water sources.

- **Biological Characteristics** – Identify plant and animal species that are present on the site; document wildlife signs and sightings; identify habitat needs of wildlife that are present: locate food, water, shelter, space and the arrangement. (Remember to think in terms of the whole year and not just the time of year in which you conduct the inventory.)

- **Cultural Characteristics** – Note educational, utilitarian, sociocultural and other human features (features may include safety fences, utility lights, sidewalks, pipes, and buildings); record personal reflections about the area such as aesthetic appreciation and historic influences; use visual and poetic forms to record some of these observations.

If a detailed site inventory is needed due to the scope of the project selected, be sure to include or at least consider the elements in Appendix B: Site Inventory Outline for Detailed Projects.
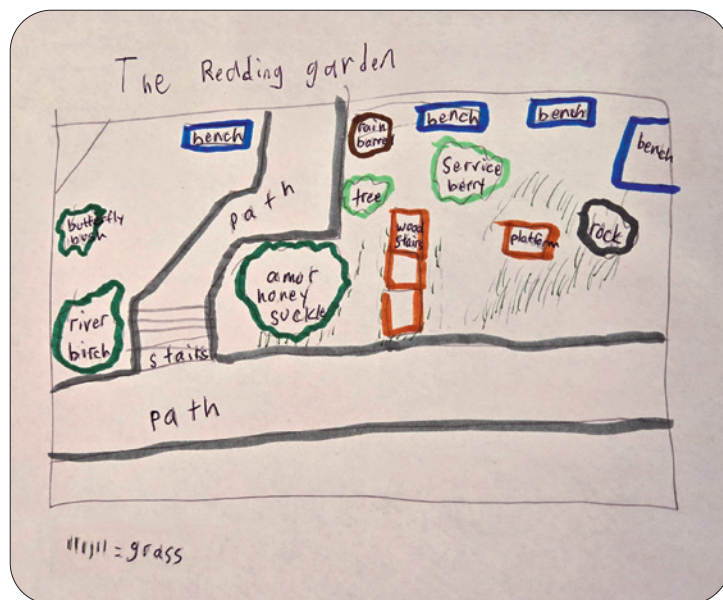
Action Tips

Use one or more of the learning experiences below to help you and your students begin the site inventory:

- "HabiCache" (Upper Elementary, Middle School)
- "Environmental Barometer," (Upper Elementary, Middle& High School)
- "Insect Inspection," (Lower Elementary)
- "Learning to Look, Looking to See," (Lower & Upper Elementary)
- "Map That Habitat," (Upper Elementary, Middle School)
- "Urban Nature Search," (Upper Elementary, Middle School)

All the information from the site inventory should be organized and analyzed. Work with the students to develop a composite base map that shows the main visible features. For a complex project, they might use digital layers like those in Google Earth to illustrate less visible features such as soil types, traffic patterns, and temperature ranges. These layers can show the features of possible projects such as establishing study areas, controlling erosion, constructing wetlands, planting windbreaks, and putting out nest boxes. This step of compiling and analyzing the data is critical. It gives you and your students the scientific and technical grounding to serve as a foundation for decisions and choices you will make later. The Action Tips and Relevant Resources provide appropriate activities to help your students complete their inventory.

Resources: Schoolyard Site Inventory

These resources provide detailed lesson plans to help students complete a comprehensive site inventory:
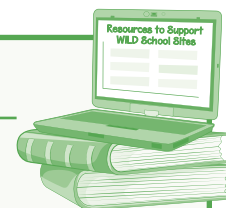
- Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide "Complete a Master Plan Assessment" U. S. Fish and Wildlife. pp. 24-31.
- Soper, E., Ward, S. & Elena, M (2021). Schoolyard Habitat Planning Guide, pp. 36-48

2. Research the Past

A geological and historical perspective of the site characteristics can provide great enrichment and insight for students. They may gain an understanding of habitat characteristics the site can support, as well as a deeper appreciation for the human relationship to the site and the surrounding region.

Students should take the lead for researching information about what used to be at the site. Some of the information they could investigate includes:

- Learning what plants and animals were there before the school was built.
- Geologic, hydrologic, and climate records for information on abiotic factors.
- Consider human use—how use has changed over time in the area; find out if people have used the site in different ways throughout the years.
- Information about the number of people in the area—in the past, now, and what is projected for the future.

Some of this information can be gathered from city, county, or state records. Long-time residents of the community are also an invaluable source of information to assist with this research. By interviewing long-time community residents and teachers, students will be more aware of some of the historic uses and influences that may impact their site plan. In addition, this can be an opportune time to enlist the help of your school librarian.

3. Determine Your Desired Native Wildlife Species

After all the information from your site inventory and historical research has been organized and analyzed, your students can brainstorm a list of desired native wildlife species. It may include animals that presently use the property that they would like to increase and support more adequately. It might be other native species that they want to attract. Once a decision is made, you and your students should identify all the essential components of habitat for the species selected, including what vegetation is needed to provide food, other nutrients, and shelter. See the Resources below for leading students through this decision-making process.

Resources: Resource: Community Involvement

Earth Force, Environmental Action Civics, Resources. You can get a free account to log in and access the resources. The resources that will be helpful for this step include:
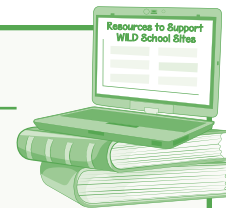
- Step 2: Issue Selection: Democratic Decision Making
- Step 4: Goal and Strategy Selection

4. Identify Other Needs (e.g., Community or Administrative Considerations)

Since you and your students have analyzed the baseline data—current and historic—it is time to consider the intersection of the needs of the students, wildlife, school, and community. This is a good place in the process to limit the scope of your project if necessary. You may want to pick a small project that meets some of the needs of a specific species. For example, you may want to make a bat house or plant a food source for a specific kind of butterfly. In that case, you prioritize the needs of that species. Or you might create a small project that serves several species. A feeding station would benefit a variety of bird species. In this case, considering the needs of the school means not putting the feeder in a place where it will be disruptive and hard to maintain. This station is a small project that may benefit both students and wildlife. Indirectly, the school and community benefit as well. If the project is large in scale, such as installing hedgerows around your school site, then you must be more detailed in determining the needs and impacts of your choices. Assessing needs usually requires identifying potential benefits. Be sure to identify benefits to people as well as to wildlife. If clear benefits cannot be identified and described, then students should reassess the overall worth of the project.

Also, consider possible negative consequences. For example, some species might be attracted that would be detrimental. Will the birds attract neighborhood cats? Will rats infest the rock and brush piles? Will bees, wasps, and mosquitos become problems because of your project? Be as specific as possible on all these items. The simplest part may be to determine the needs of the wildlife to be affected. The difficulty lies in weighing this against other needs. This is also a good time to check in with the requirements and concerns of the school administration, the school maintenance staff, after-school care providers, parents, and the community. "Wildlife and the Environment: Community Survey" in the Project WILD K-12 Curriculum and Activity Guide designed for middle and high school students can be used or adapted to clarify those needs.

5. Complete the Project Proposal

Once you and the students have determined what species of wildlife you want to support with your WILD School Site project, the students should develop a project proposal that includes clear goals. The project proposal can also provide curriculum connections as identified by the educator.

Goals

Help students set realistic goals. Start small and success will follow. Students have already brainstormed a list of possible projects. At this point, have students work together either in small groups or as a class to agree on a specific achievable goal. A goal should be a clear, concise statement that defines the desired results or outcome. The goal may be to simply attract a few additional reptile species to the school grounds. A mid-range project goal would be to develop a small pond or wetland area on your school site. An example of a more elaborate plan would be to develop an interpretive trail throughout the school site. This step is essential to develop a formal plan for your WILD School Site project.

Curriculum Connections

This part of the project proposal will be determined by educators. Make sure to connect your WILD School Site project to the school curriculum in a meaningful way. Typically, it will be the individual

classroom teacher who decides what learning experiences will be needed to prepare and support the students to undertake their project. You may also get some help from other teachers, a district curriculum coordinator, or an instructional supervisor. Be prepared to present lesson plans that show cross references of Project WILD activities to district adopted e-books, textbooks, children's literature, state guidelines, local curriculum plans, and learner outcomes. WILD School Site projects provide opportunities to integrate across the curriculum using a thematic approach. Figure 4 and Appendix D include examples of Project WILD activities that help to support interdisciplinary instructional connections.

Diana Oliver of Hogsett Primary School in Danville, KY, told us the story of how she, her colleagues, and their larger community gradually rewilded Hogsett School grounds in ways that support their K-2 curriculum. In spring 2022, students planted trees and installed an Eastern Bluebird trail; then, in 2023, Hogsett families planted native flowers and grasses along a stormwater drain beside the new trail. These plantings not only stabilized the drain's banks but also provided food and shelter for insects and birds. To complement these improvements, each Kindergarten class plants a tree when they study trees in their literacy time. First grade students study birds in their literacy time and put up birdhouses, checking often for nests, eggs, and birds. Across all grade levels, students continue to relate nature to their daily lessons in class.

According to Ms. Oliver, "Being able to physically see the plants, trees, and birdhouses in conjunction with classroom lessons . . . provides great connections and discussions."

In addition, the Hogsett community created a natural playground for student use as they play and learn outside. These changes, made step-by-step over several years, illustrate how a school community can work together to transform their school grounds into a WILD School Site.

6. Build A Support Team

Have you seen examples of great projects at school that quickly fizzled and died? Perhaps a key teacher left or access to important instructional resources disappeared. Perhaps it was a teacher's idea that was imposed upon students instead of created and supported by the students.

The next step in the process is to build a strong support base so that the projects your students choose to undertake will have the greatest chance of lasting over time. These suggestions are designed so that the projects will flourish, continue, and become a source of empowerment for the long-term benefit of students as well as wildlife and the community. The following outline provides suggestions to begin.

Teachers

Once students have identified a project that you and they believe to be worthwhile, visit other teachers. Share this guide and enlist a group of allies to collaborate with you and your students in accomplishing this project. At this point, it is important to emphasize the interdisciplinary curriculum connections for such a project. Refer to Figure 4.

Administrators

Take the ideas and interest to your school administrator. What approvals will be needed from the school or district administration? What funding might be available? Be prepared to discuss how the WILD School Site will help meet learning needs. Consider having your students present their own thoughts to administration. If students have done their homework in planning and presenting their

project, they will usually have no trouble convincing the administration to approve the project. Also, when the project is straightforward, low-cost, and backed by other educators, approval is easier to obtain. Success on a small project will almost ensure support the next time.

Maintenance

Remember to involve the custodial and grounds staff. Invite them into your classroom to give advice to the students, and consult with them often. What space requirements will be needed for mowers? How far from the school building are plants allowed to be planted? Maintenance division personnel can make or break the project!

Board of Education

Approach the Board of Education. You may not need their approval, but their endorsement is important. They will typically be interested in hearing about such good things happening at a school, and they often do not get a chance to be involved. Again, students should make this presentation. **Stress that the WILD School Site project supports the goals of education and that this project is tied to instruction.** The whole process of planning, implementing, monitoring, and evaluating the project is designed to help meet existing academic standards and other curriculum mandates. Students will utilize science, social studies, mathematics, art, technology, language arts, communication skills, and a variety of other subjects while they are researching, planning, and implementing their project.

After-school care providers

Is there programming offered by after-school care providers that connects to how the Wild School Site can be developed or used?

Parent teacher association/organization (PTA/PTO)

Is funding or networking support available? PTA leaders may be able to assist with funding support, networking, material donations, and getting the word out to the community.

Garner community and parent support for the project

Enlisting community support may begin with a student presentation at a parent-teacher organization or association, a civic meeting, or even a note or email sent home to parents and community members. (Take a look at the sample in the back of this Guide.) If students are excited about the project, hopefully their parents already have some news about it. Students could develop their own WILD School Site newsletter to inform parents, local politicians, businesses, and the school board about the great things happening at their school. Letters or fact sheets from students to adjacent landowners can explain the purpose of the project, describe the plan, and invite participation. This approach can be used to help identify people who might be interested in providing time, money, knowledge, and other resources. See Figure 5 for more examples of community support.

Be sure to coach the students on appropriate courtesies. Be aware of the inappropriateness of many students contacting people individually for assistance. Help the students organize any contacts they make with the press, businesses, and other community representatives. Students gain self-confidence and public speaking skills when working with adults. Adults, in turn, benefit from seeing young people in positive roles. Providing the opportunity for students to make presentations, write articles, and contact local businesses gives students meaningful communications experience that nurtures self-esteem. As momentum builds and community involvement increases, you may decide to establish a formal working group or advisory committee as part of your support team. Refer to Appendix C for resources to effectively develop such a group.

Figure 4: Project WILD Curriculum Connections

Activities from the suite of Project WILD guides have been correlated to a variety of national and statewide standards. Visit fishwildlife.org/projectwild/project-wild-resources for a full list of national correlations. To see what correlations are available for statewide standards, contact your Project WILD state coordinator. A selection of activities below from the *Project WILD K-12 Curriculum and Activity Guide* and the *Aquatic WILD K-12 Curriculum and Activity Guide* show a sample of correlations to some of these national standards. Those from the *Aquatic WILD K-12 Curriculum and Activity Guide* are designated with the abbreviation "AW."

NGSS – Next Generation Science Standards
CCSS – Common Core State Standards
C3 Framework – College, Career, and Civic Life (C3) Framework for Social Studies State Standards
NCAS – National Core Arts Standards

LIFE SCIENCE

"Carrying Capacity"

NGSS: HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.

"Insect Inspection"

NGSS: 1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

NGSS: 4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

EARTH SCIENCE

"Lights Out!"

NGSS: MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

"The Power of Planning"

NGSS: HS-ESS3-2. Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on benefit ratios.

MATHEMATICS

"Where Does Water Run?" (AW)

CCSS Mathematics: 6th grade: Number Systems, Compute fluently with multi-digit numbers and find common factors and multiples.

"Dropping in on Deer"

CCSS Mathematics: 7th grade: Ratios and Proportional Relationships, Analyze proportional relationships and use them to solve real-world and mathematical problems.

LANGUAGE ARTS

"Aquatic Times" (AW)

CCSS English/Language Arts: Grades 3-5, Writing Standard #1 (W 1)

"Facts and Falsehoods" (AW)

CCSS English/Language Arts: Grades 6-8, Reading Standard for Informational Text #4 (RI 4)

SOCIAL STUDIES

"Map That Habitat"

C3 Framework: D2.Geo.1.3-5. Construct maps and other graphic representations of both familiar and unfamiliar places.

"Wild Bill's Fate"

C3 Framework: D2.Civ.12.6-8. Assess specific rules and laws (both actual and proposed) as means of addressing public problems.

Figure 4: Project WILD Curriculum Connections (continued)

ART

"Adaptation Artistry"

NCAS: VA:Pr5.1.8.a - Collaboratively prepare and present selected theme-based artwork for display, and formulate exhibition narratives for the viewer.

"Power of a Song"

NCAS: MU:Re7.1.6.a - Select or choose music to listen to and explain the connections to specific interests or experiences for a specific purpose.

ENGINEERING

"A Home Away from Home"

NGSS: MS-ETS1-1. Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.

"Designing a Habitat" (AW)

NGSS: 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.

Action Tips: Community Support

Adoption. Let people know the project is up for adoption. Garden clubs and other organizations respond readily to this kind of community enhancement project. They in turn can provide invaluable expertise and assistance.

Develop a mentoring program. Mentorship is an excellent way to educate students while they are at work on the WILD School Site. Match groups of students with willing volunteers. A garden club member or retired teacher may have a wealth of knowledge and time they are willing to share with eager young people. This teamwork also builds strong community connections. Consider cross-age teaching and learning where older and younger students work together on aspects of the project. This is a strategy that benefits everyone. For example, older students can teach younger students some of the basic concepts associated with wildlife habitat. This gives the older students an opportunity to demonstrate what they have learned. Teachers are given a tangible verification of what the older students have learned by observing the students' mastery of the concepts. The younger students benefit as well. Cross-age learning and peer teaching are strategies that have powerful benefits.

Approach businesses, civic groups, and other organizations with the opportunity to contribute. Tell contributors how their donations will be used and how they benefit students, wildlife, and the community. Recognize the groups and individuals who help. Their names might be included in news articles, presentations by students, or even signs in your WILD School Site.

Give parents a variety of opportunities to donate time, materials, expertise, and encouragement, then recognize their contributions. Consider developing a wish list so that others will know what you need

Figure 5: Examples of Community Support

A. Businesses:

Remember that some businesses may prefer to give materials and labor rather than dollars. Be resourceful and cooperative. Businesses may not be able to promise long-term involvement. Having students report back on how materials or equipment have been used will hone their communications skills and also may lead to further donations down the road. Consider these types of businesses and the materials they might be able to provide:

- Nursery–trees, shrubs, other plants
- Hardware Store–shovels, hand trowels, rakes
- Garden Shop/Feed Store–seed, bird seed for feeders
- Lumber Company–scraps to build bird feeders, houses, and other shelters
- Utility Company–wood chips for trails, poles for posts and trail borders
- Concrete Company–sand and cement for a wildlife tracking area
- Office Supply Store–paper for a WILD School Site newsletter
- Landscape Company–soil, plants, rocks, design assistance

B. Clubs, Youth Groups, Environment, and Service Organizations

Think of organizations that might be interested and contact them. Service organizations often are looking for projects and innovative programs. Partnerships can be appealing and powerful!

- 4-H groups
- Scouts
- Church groups
- After-school clubs
- Environmental organizations

C. Community Members

- Retired community members could provide a living history lesson to social studies students as they take a walking tour of the neighborhood and talk about plants and animals that once lived in the area.

- Civic groups are often looking for worthwhile projects to support. Those involving youth and community improvement are typically difficult to resist.

- Business leaders, politicians, and policymakers in public agencies. There may be a variety of appropriate informational contacts.

- Local television, radio stations, and newspapers. Your school in action interests viewers and listeners. Students could write a regular column to report on the progress they are making with their WILD School Site project.

7. Complete Your Project Plan

The goals of the project are in mind and clearly stated. The species your students want to benefit have been identified. Now it is time for you and your students to develop the steps of the action plan. A written action plan for your proposed WILD School Site project will be a focal point for identifying and gathering the resources needed to successfully accomplish your project. The plan can bring allies to your side as well as serve as a road map to action. If you have a formal working group, this is a good time for students to check in with them. Listen and weigh the alternatives and their advice. Incorporate the suggestions that serve the needs of wildlife and the scope of your project. Compromise may be necessary to meet the diverse needs of the students, school, wildlife, and community, depending on the scope of the project.

The project plan should include three major sections–

A) A working timeline and calendar which identifies the priorities and includes all major steps. Create a calendar that shows who will do what and when. The success of the project will be greatly enhanced if students prioritize the stages and develop a specific timeline. This will help them carry out their project through a clearly sequenced set of steps. Sometimes, the students can attract and incorporate additional resources along the way. The working timeline includes all aspects of the project, dates for completion, steps in the process, and the people who will take responsibility for each part.

B) A comprehensive resource list and related budget which should identify what people, materials, equipment, and funds are needed. Now that students know generally what is needed and how to get

Action Tips: Working Timeline and Calendar

Break projects into small steps.
Use 30- to 45-minute mini-tasks where students can see improvement and change in a short period of time. This will whet their appetite for more complex and detailed projects. The time that it takes for the planning will result in rich rewards when students realize they can impact their environment in a positive manner.

Plan a workday or days on the site. This could center around a calendar event like Arbor Day, Earth Day, or National Wildlife Week. Students, teachers, parents, and other volunteers can work together on activities such as planting trees, erecting feeding stations, building and placing nest boxes, spreading wood chips, or a variety of other hands-on and team-building efforts. People may not be accustomed to responding to a call for help like this. A good publicity committee composed of students is important to get the word out. It is also wise to inform the media beforehand. A news release should be prepared and sent at least two weeks prior to the release date.

there, they need to identify who can help. Identify the people who will be involved, their roles, and any additional expertise you may need. Include a process for getting community support--from time and money to advice and encouragement. Have students develop a detailed project budget. What funds and non-cash needs are already available? Help students create a list of possible sources of assistance. Refer to the Action Tips and Resources text boxes. If it becomes clear that the students lack key resources to successfully accomplish their project, help them to develop a smaller project and plan.

C) Lastly, include a comprehensive maintenance plan. This crucial step should be taken seriously. To truly improve the community for people and wildlife, steps must be taken to maintain the site for the long term. Custodial staff may carry out long-term maintenance for some projects, but there are many ways that students, parents, teachers, and community members can help. Think creatively and cooperatively. Allowing everyone to pitch in and help leads to ownership and pride in a project. One method involves having teacher aides and community volunteers work with small groups of students outside on the site on a regularly scheduled basis. In this way, the entire class or whole school can be given the opportunity to help maintain the site and learn in the process!
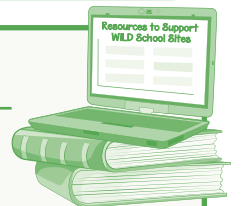
Action Tips: Resource List and Budget

Organize fundraisers. Garage sales, bake sales, car washes, recycling programs, plant sales, bird feed sales, and a variety of other approaches can work. If people know where their money is going and that it will be used for a worthwhile purpose, they are often ready and willing to support such a cause.

Think creatively. Less conventional approaches include a "sponsor a plant" program in which community members purchase a tree, shrub, or other plant for the school site. Think ecologically and emphasize native plants. Consider requesting donations from the gardens and homes of friends and neighbors.

Consider writing grant proposals. Many state and federal agencies, foundations, and non-profit organizations provide grants for educational projects. Civic groups and parent-teacher organizations may also be a source of funds. Check with your state Project WILD Coordinator or state department of education for ideas about what funds might be available in your state. Your state may have a Project WILD grant program to assist with small grants for such projects. See the resources in the back of this guide for more information.

Resources: Resources, Budgeting, and Fundraising

- Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide "Money Matters" U. S. Fish and Wildlife. pp. 69-76.
- Nature Explore, Fundraising Resources.
- The Outdoor Learning School and Store, Looking for Funding?
- The School District of Philadelphia and Philadelphia Water Department, Transforming Philadelphia's Schoolyards Guide. p. 22.
- TD Friends of the Environment Foundation, Building Outdoor Classrooms: A Guide for Successful Fundraising, p. 6.
- University of Kentucky, Taking the Indoors Out: Creating Outdoor Learning Environments, p. 17
- The University of Tennessee Agricultural Extension Service. W113-Developing an Outdoor Classroom to Provide Education Naturally, pp. 4, 18-19

There are several Project WILD learning experiences that can be used to help your students understand and write their action plan.

- ◼ "Changing the Land," (Middle School)
- ◼ "Check and Balances," (Middle School)
- ◼ "Deer Dilemma," (High School)
- ◼ "Ecosystem Architects," (Middle & High School)
- ◼ "Habitat Heroes," (Upper Elementary, Middle & High School) This activity guides the students through all the steps of developing a formal plan.

8. Monitor and Evaluate

Once, the goals, objectives, and steps to implement the project plan have been developed, you and your students will also need to build in a way to measure the project's progress from the beginning. One way to help is to document the whole project from beginning to end with sketches, maps, photographs, videos, and other tools that will record the dynamic development of the site. These forms of documentation also serve to measure a plan's success.

Help the students decide which key features, events, and measurable changes to use in their evaluation. These might include measures of a specific population level of a species, the arrival of a species the site attracted, annual long-term species occurrence lists, the level of student and community involvement in the project, increases in student standardized test scores, and other academic measures.

Use clearly established criteria and measurable outcomes to assess and report the successes of the project. Keeping records and reporting the results is good for the short term and the long term. Tracking progress helps students see clearly what they have accomplished. It also helps parents and community members see the value of the project, which can result in more support in the future.

Action Tips: Maintenance and Safety

Think seasonally and long term. Development of a WILD School Site is not a one-step, short-term effort. Summer maintenance is an important consideration. It can, in fact, turn an apparent success into a substantial setback. Newly planted trees and other vegetation need water and care. One approach is to select vegetation that does not require extensive maintenance. Another is to plan and schedule community caretakers in the summer. Individuals and groups of students can take one day a week or several days as waterers and watchers. Class representatives can be responsible for one or more weeks of telephoning and reminding others when their caretaking days are approaching.

Think safety. Watch for any potential hazards for students and wildlife. Before you dig in the ground, you may want to consult with a municipal office that can help you identify buried pipes or cables.

Bird feeders should be cleaned periodically to remove potentially harmful bacteria. Take down the feeders about every two weeks, empty them out, and scrub any debris out with soap and water. After scrubbing, soak the bird feeders for ten minutes in hydrogen peroxide or a solution of four parts water to one part distilled white vinegar. Then rinse the feeders and let them dry thoroughly before refilling.

For hummingbird feeders, empty them out a few times per week in cooler weather and daily in warmer weather. Clean hummingbird feeders with hot tap water and hydrogen peroxide, or use a weak vinegar solution. Avoid dish soap since it can leave a residue that may harm hummingbirds.

As part of the evaluation process, ask students to consider what else is possible. Is there a need for an additional project or a continuation of the one they accomplished? Ask the students to clearly focus on how well the project brought together the needs of students, the school, wildlife, and the community. Did the project make a difference? If it were done again, what could be improved? Use a balance of

quantitative and qualitative measures to assess what was accomplished. Some things that are important are difficult to capture with numbers. Use the same kind of thinking to begin to make choices about where to go next.

Putting the Plan into Action

This is the most exciting and rewarding stage of the project—helping your students put the plan into action. The wildlife species have been chosen, the habitat improvements reviewed, the steps outlined to install the project, and the timeline and budget developed. While there are many details to remember, simply review the steps that were outlined in the project timeline. Use the Action Tips and the Resources for more direction if needed, then let the project begin!

Reflect and Celebrate

Ultimately, you and your students did it—you completed your WILD School Site project! Take time to reflect and celebrate the end of the project either formally or informally. This is important even if the project did not turn out as planned. This step is frequently neglected, since it often takes place at the end of the school year when testing and other school activities take priority. It is important to recognize students' achievement and hard work, as well as reflect on the impact of their project on student learning, wildlife goals, and community involvement. Some ways to do this include having students write the project's story or give a presentation to the school and to your community. Of course, having a party outside on the WILD School Site is a great way to celebrate!
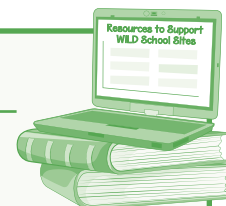
Action Tips:

Complete projects over an extended time. Funds and resources can be used as they become available. A longer time span allows for modifications as circumstances change.

Emphasize early success. Build interest and momentum with students and the community. Get the word out!

Another way to recognize the accomplishment is to certify your WILD School Site. Contact your Project WILD Coordinator to see if there is a state Project WILD School Site Certification Program. In addition, it is possible for your school to apply to become a certified wildlife habitat through the National Wildlife Federation. There is an online application at certifiedwildlifehabitat.nwf.org. This certification process gives wonderful recognition for the accomplishments of everyone involved and students' learning.

See the Action Tips and Resources for more ideas.

Resources: Schoolyard Habitat Planning

- Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide "Install Project" U. S. Fish and Wildlife. pp. 77-85.
- Soper, E., Ward, S. & Elena, M (2021). "Step 5: Build the Habitat" Schoolyard Habitat Planning Guide, pp. 60-63

Action Tips: Connecting and Sharing

Recruit parents and other community volunteers. A student committee might develop a tabletop or poster display of plans, models, photos, and sign-up sheets indicating what needs to be done as well as the materials needed. Display these in a local business, bank, school lobby, or other public place on a highly visible day.

A local media person or celebrity can be involved in a tour, field day, or other function. These folks will help get the word out about the project.

Prepare students to give presentations to groups as well as tours of the WILD School Site. This will increase self-confidence, give more visibility to the project, and allow for ownership of the good work they have initiated. Encourage students to send thank-you notes to groups where they speak in appreciation for the opportunity. Always acknowledge those who make contributions to the project. They will remember the courtesies.

Resources: Resources, Budgeting, and Fundraising
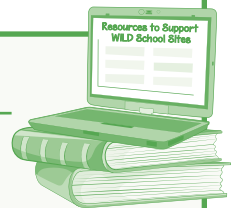
- Larmer, J. (April 12, 2019). 6 Ways to Celebrate at the End of a Project. PBLWORKS. https://www.pblworks.org/blog/6-ways-celebrate-end-project
- Petrie State School, PBL Celebration Day, www.facebook.com/watch/?v=1082804906712163
- Earth Force, Step 6: Reflect and Celebrate, earthforceresources.org/showcase-step-6-reflection/
- Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide, "Share Your Story," U. S. Fish and Wildlife. Pp. 103-106.
- National Wildlife Federation. (2025). EcoSchools U.S. https://www.nwf.org/Eco-Schools-US
- Soper, E., Ward, S. & Elena, M (2021). Step 7: Celebrate Success. Schoolyard Habitat Planning Guide, pp. 68

Overcoming Barriers

Even with all the best intentions and careful planning, there still can be problems and barriers to overcome in completing your WILD School Site project. The following are a few examples and suggestions for coping.

Vandalism

Vandalism, if it does occur, will most likely occur when the project is first initiated. Novelty tends to attract vandals. The good news is that the more people who are involved in creating the project and who share ownership for its success, the less likely there will be vandalism. Active and ongoing involvement in the project by students and community members will tend to minimize this problem. In other words, a school site that is regularly visited by a variety of people who are helping to care for it is much less likely to be vandalized.

Poor Communications

Poor communication can be another barrier to success. Keeping the entire student body informed of individual and group projects at the WILD School Site will curb vandalism and contribute to overall success. Communication within your working group or advisory committee as well as your support group is also important. Remember the importance of communicating with the custodial and maintenance staff. For example, allowing fence rows or meadows to grow without mowing them provides shelter for many nesting birds. A community member or maintenance staff person may see these habitats as eyesores. To avoid these kinds of problems, be sure to keep everyone informed about what is happening with the project at the WILD School Site. One way to help is to have students make and post informative signs to explain what is happening for the person walking by. Another idea is to agree in advance with the maintenance staff about who is responsible for what. An agreement ahead of time facilitates teamwork and lets everyone know what to expect.

Safety for Students

Safety is always a concern. It will be a special concern of parents and school administrators as well as teachers. Close supervision of students outside, use of teacher aides and community volunteers, instruction on safety procedures for the students before they go outside—all of these approaches can help to minimize problems and risks. Accidents happen, but they are less likely where there is appropriate supervision and good communication.

Note that if peanut or nut allergies are of concern at your school, consider seeds or seed blends such as safflower and sunflower seeds. Commercial bird seed providers will also offer peanut and nut free bird feed mixes.

If working near tall, uncut grass and vegetation, particularly in warmer temperatures, take caution to avoid tick and mosquito bites. See https://www.cdc.gov.

Risks to Wildlife

Although a WILD School Site project is intended to improve habitat for wildlife, sometimes there can be inadvertent side effects that actually cause harm to individual animals. For example, you may create an attractive area for bird species and small mammals and as a result, unwanted predators like domestic cats may prey upon the wildlife visitors. Cats are particularly hard on bird and small mammal populations. These losses can be minimized if you communicate to local citizens about the importance of keeping

their cats inside or at least putting a collar with a bell on their cat. You should carefully place feeding stations and water sources off the ground where visibility is good and where birds and small mammals can more easily spot a stalking animal.

Student Interest

If students are genuinely involved in all aspects of the project, their enthusiasm will typically be high. If they can see that they are really making a difference for wildlife, they tend to be tireless! Listen to what the students have to say in all aspects of the project. At the same time, the students need the help of a strong team at every step of the way. WILD School Site projects require cooperation and broadbased support.

Concerns from the Community

Attracting wildlife to the community may not please everyone all of the time. For example, your habitat improvement project might attract woodpeckers that drill into wooden eaves and house siding. Songbirds may wake some people in the early dawn. Squirrels may nest in neighborhood attics. Your local wildlife agency or university cooperative extension office can help with some of these problems if neighbors complain. You may also have to contend with negative biases against certain types of wildlife, such as possums, raccoons, snakes, etc. Students should be ready to help educate the community about the values of wildlife.

Last of all, one of the most important parts of a successful WILD School Site is paying attention to the viewpoints of your school community and the community at large. The project your students plan and implement is an example of the civic action process—where each citizen becomes aware, knowledgeable, skilled, and motivated to take action. This process is what characterizes a democratic society. A WILD School Site project expands students' citizenship expertise in a variety of ways, including by experience with conflict resolution and consensus building.

Allowing students the opportunity to develop citizenship awareness, build civic skills, take positive action to benefit the environment, and recognize that they can make important contributions to the well-being of society—all of this serves as practice for a life-long commitment to being responsible citizens.

Resources: Safety Considerations

- Ohio School Safety Center. (2021). Safety Considerations for Outdoor Classrooms
- Thrive Through Outdoor Education. (October 8, 2023). Risk Management for Outdoor Education
- Vermont School Board Insurance Trust. Safety Considerations for Outdoor Learning
- Wisconsin Department of Public Instruction, Taking Education Outdoors: Health and Safety
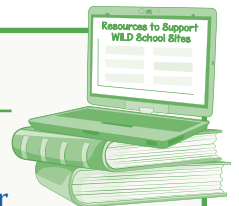
Tying It All Together and Working for the Future
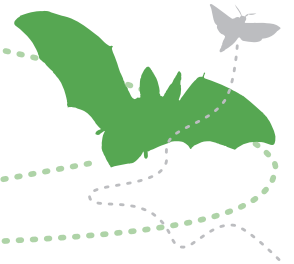
E ach WILD School Site and every individual WILD School Site project can be a success—regardless of its size and scope. Even what may look like a failure can be a valuable source of learning! WILD School Site participants are stewards of their environment. They are making a conscious choice to take informed, responsible action to improve their communities.

Allow the experiences of your students to inspire others. Encourage others to join in your efforts or start their own WILD School Site. Share your successes and failures with others. Once a single WILD School Site project has been established, one of the biggest and most important challenges is to sustain it. Taking responsibility to benefit the environment is not something to do once and then forget about. It is a lifetime commitment. A WILD School Site offers a place for students to learn about making that commitment and to sustain it over time. Individual WILD School Site projects are relatively easy to manage, but turning the entire school grounds into a comprehensive, carefully planned, sustainable WILD School Site is more challenging.

Though establishing a WILD School Site can seem daunting, the benefits it can yield for students, wildlife, and the communities within which they live is well worth it. Students benefit both academically and socially while learning to take responsibility for the quality of the environments where they live and work. Wildlife benefits not only from direct enhancement of the habitat, but also from the life-long awareness and concern that is fostered in learners.

The community also benefits directly and indirectly from WILD School Site projects. Enhancing habitats for wildlife brings community attention to the quality of local vegetation, water, soil, and air resources. What is good for wildlife tends to be good for people too. As with the students, the community also benefits from the ethic of personal responsibility that develops when people work together to improve their schools and neighborhoods. As WILD School Sites mature through the years, they can make a lasting contribution to the quality of life in a community.

There is more to be seen on WILD School Sites projects than trees, birds, and butterflies. You can see students actively engaged in the process of learning. You can see adults working hand in hand with youth. You can see laughter and joy in the process of applying rigorous academic concepts to the real world.

WILD School Sites projects are places to care. They thrive when they are sustained and shared with others. They endure by being passed on, year to year, as a living laboratory for developing for ecological citizenship. Join us in creating and sustaining WILD School Sites.

Project WILD looks forward to working with you and your students as we each take action to improve the environment for people and wildlife—now and in the future.
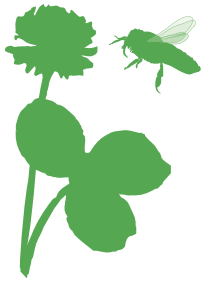
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Ardoin, N. M., Bowers, A. W., & Gaillard, E. (2020). Environmental education outcomes for conservation: A systematic review. *Biological Conservation*, 241, 108224.

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Barker, C., Chisholm, N., & Foran, A. (2024). Discussing mental health benefits for teachers participating in outdoor education in Canada: a conceptual analysis and future research directions. *Journal of Adventure Education and Outdoor Learning*, 1–20.

CAVU (May 10, 2023). Creating Backyard Habitats (Outstanding Entry for Middle School [Video] You Tube. https://www.youtube.com/watch?v=KHk1hqhQnas

OutClass, (May 9 , 2024). The Transformative Power of Outdoor Classrooms for Learning and Teaching

Van De Wetering, J., Leijten, P., Spitzer, J., & Thomas, S. (2022). Does environmental education benefit environmental outcomes in children and adolescents? A meta-analysis. *Journal of Environmental Psychology*, 81, 101782.

Scribbr. (2020, August 20). Develop a theoretical framework in three steps [Video]. YouTube. https://youtu.be/4y1BAqOnhMM
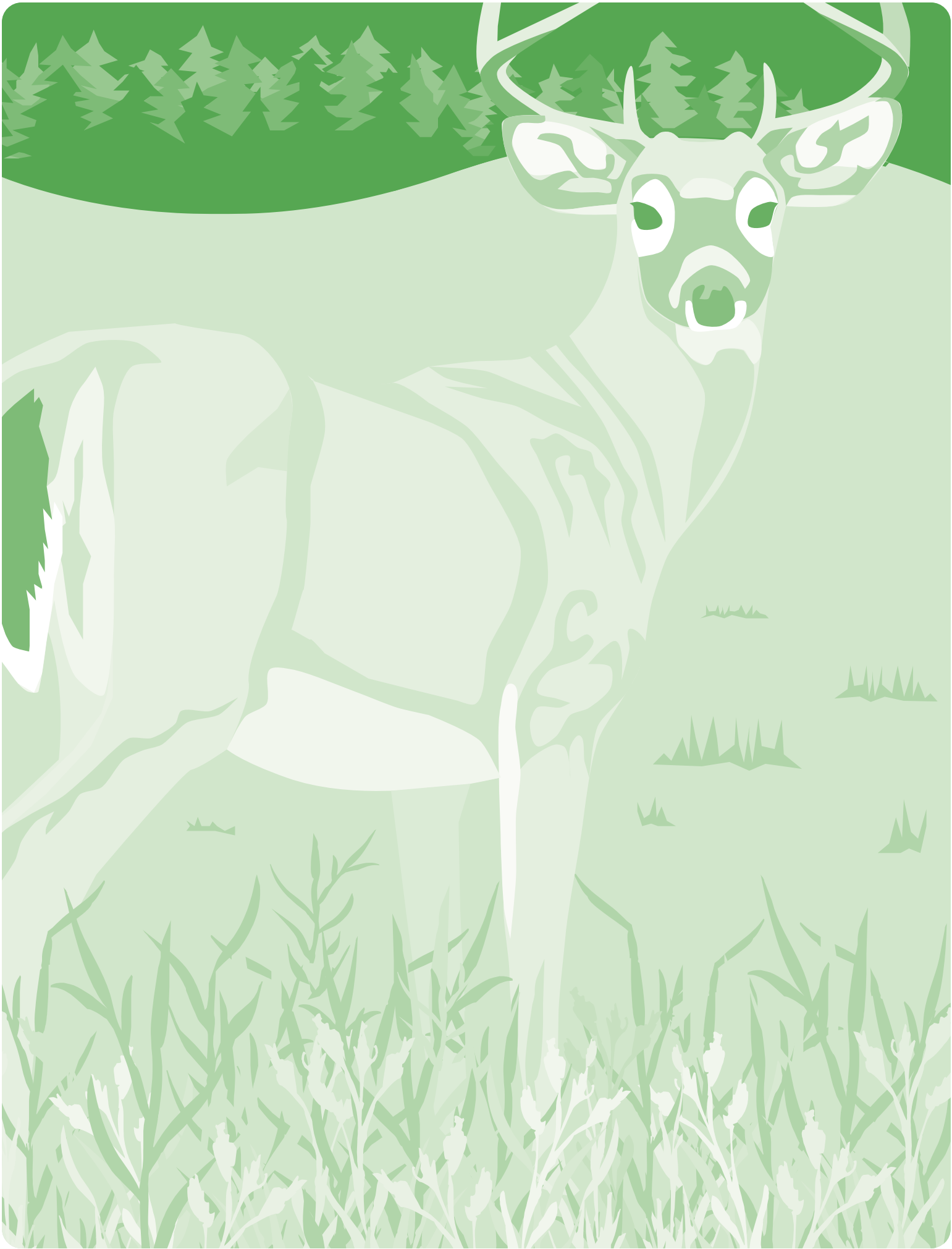
Appendix A: Ideas for WILD School Site Habitat Improvement Projects

Cavities

Standing dead trees and other plants are important providers of food and shelter for birds and other wildlife.

Plantings

Planting native trees, shrubs, and other herbaceous plants is one of the best ways to improve wildlife habitat. Vegetation can provide food and shelter. Flowers support nectar feeders. Hedgerows or living fences provide travel lanes and cover.

Growing, planting, and transplanting—as well as caring for and tending vegetation once it is established—will be important parts of most WILD School Site projects.

Brush and Rock Piles

Shelter from weather and protection from predators can be provided for many species by building simple rock or brush piles.

Food Plots

In addition to planting trees, shrubs, and flowers, some school sites might benefit from planting grains or other annual crops. Butterflies are an example of wildlife that often responds to plantings of certain kinds of vegetation.

Houses and Feeders

Building animal houses and feeders is a popular activity and easier than some larger projects. Providing food and shelter for wildlife through these kinds of artificial changes can be rewarding.

Building animal houses and feeders is a popular activity and easier than some larger projects. Providing food and shelter for wildlife through these kinds of artificial changes can be rewarding. For the long term, in most cases, growing food-bearing shrubs and other plants will be more valuable. Houses and feeders can be constructed for more than birds. Bats and other small mammals can benefit from constructed shelters. There are many books and plans available for building feeders and houses. They often can be tailored to species in your area. It is important to monitor and maintain these houses and feeders once they are established. Note that if peanut or nut allergies are of concern at your school, consider seeds or seed blends such as safflower and sunflower seeds. Commercial bird seed providers will also offer peanut and nut free bird feed mixes.

Water

Whatever water sources you provide or enhance, they are critically important to the success of your project. Your selection of water projects will depend on the characteristics of the site. Regardless of how abundant the food or shelter is, wildlife will be more likely to use a WILD School Site if water is available.

This list is not extensive. It is intended to give a few examples and suggestions of ways to improve school sites as habitats for wildlife.

Appendix B: Site Inventory Outline for Detailed Project

I. Physical Characteristics
    A. Overall site map
        1. General features
        2. Dimensions
        3. Visual overview

    B. Topography and landforms

    C. Human-made structures and current uses
        1. Buildings
        2. Sidewalks
        3. Water sources
        4. Safety hazards
        5. Roads and other features

    D. Climate characteristics
        1. Temperature
        2. Exposure (wind and sun)
        3. Rainfall

    E. Geology

    F. Soils

    G. Water
        1. Sources
        2. Movement
        3. Depth
        4. Dimensions

II. Biological Characteristics—Historic and Current
    A. Terrestrial
        1. Flora
            a) Shrubs: Native and Non-native
            b) Grasses: Native and Non-native
            c) Trees: Native and Non-native
            d) Microflora

        2. Fauna
            a) Insects: Native and Non-native
            b) Birds: Native and Non-native
            c) Mammals: Native and Non-native
            d) Reptiles and Amphibians: Native and
               Non-native
            e) Microfauna

    B. Aquatic
        1. Flora
        2. Fauna

    C. Components of Habitat
        1. Food
        2. Water
        3. Shelter
        4. Space
        5. Arrangement

III. Cultural Characteristics—Historic and Current
    A. Land uses
    B. Safety considerations
    C. Authority and responsibilities
    D. Support groups
    E. Recreation considerations
    F. Educational values
    G. Economic values
    H. Personal reflections
    I. Negative features
    J. Positive features

Appendix C: Establish a Working Group/Advisory Committee

Once the community knows at least a little about your project, the next step is to establish a working group or advisory committee. This committee may begin with only a few members and grow as projects and commitments grow. Or, it may begin large and involve as many people as possible. The size and mixture will depend upon the school, support base, physical site, and a myriad of other factors. Success often hinges on how many groups and individuals feel ownership and pride in the project. Involving students, faculty, administration, maintenance personnel, parents, and community resource people throughout the process gives a strong support base. Strive for diversity when planning the composition of your advisory group. Members representing a variety of interests and expertise will strengthen the overall success of the project. You might be thinking, "How can all these people be involved and this still be a student project?" Here are some tips:

- **You, the Teacher** – You are the mentor and guide who facilitates this process. You are an active participant who respects, supports, and joins the student initiative.

- **Students** – This is where the real leadership begins. Committee development is not about creating a group where students are token participants. Depending on the scale of the project and the number of students involved, a representative approach to an advisory group may work. One or more students from each class or grade level could be on the committee. The students should be true representatives who report back to the rest of the students concerning plans, meetings, and involvement. Ideally, a school site project is planned to proceed from one grade to the next. As students mature, they acquire more responsibility for and increased participation in the WILD School Site.

- **Faculty** – Hopefully, you have already identified allies in this endeavor. Find other educators interested in serving on the committee. They may want to rotate on a scheduled basis. Plan who will be teaching what specific WILD activities. If your school is departmentalized, get the help of other teachers to reinforce concepts and help students learn what they need. All the school subject areas can be involved.

- **Maintenance Staff** – This crew often knows the school grounds better than anyone else. Remind them that good things result from students taking care of the school site. This kind of student leadership may even reduce the staff workload! School site habitat development can often mean less maintenance. On the other hand, a poorly conceived project may be difficult or impossible to maintain. Participation of maintenance personnel on the advisory committee will help give them some ownership for the project and will also give the students access to materials, equipment, and expertise.

- **Administrator** – The principal and other key administrators for your school may not serve as a committee member who attends each meeting, but they should always be kept aware of progress.

- **Parent/Community Representative** – This group helps to instill a sense of pride and continuity. Parent and civic involvement help the community see the value of the project.

When and How to Meet

The advisory committee helps to provide guidance for projects on the WILD School Site. It may be necessary to meet several times a month as a project begins and less often as it matures. These meetings can take place in person or remotely—whatever works best for your group. The committee can also serve year after year to set policy and guide projects for the whole WILD School Site. Individual WILD School Site projects may change each year. The advisory committee can help keep the whole vision intact for the long term. Prior to each meeting, send an agenda to each member outlining topics to

be covered. Topics may include reports from student groups, ideas for new projects, fundraising, publicity, materials, and plans. It helps to have an official photographer and historian to keep notes, take pictures, and keep records for posterity. (This could also be a task for the students.) A project scrapbook (digital or hard copy) or video documentary will be a valuable visual record of progress.

At some point in the process, it may also be valuable to establish a support group of community members that could meet with students periodically or assist on the project in a special way. They might provide knowledge, funds, materials, and even physical labor. They can be important resources and allies. Such people may serve in initial planning stages. They can also assist when new projects are considered, or existing projects expanded. These people can provide a wealth of valuable technical assistance and expertise:

Environment Professionals – They include representatives of forestry, wildlife, and soil conservation agencies; extension agents; state department of education curriculum consultants; land planners; and landscape architects or designers.

Local Businesses – Many businesses look for ways to foster community pride and involvement. One choice business leader might make is to "adopt" your school. The business might work with you to provide a variety of materials and services. Your Project WILD state coordinator is an excellent and helpful source of information and ideas. See Figure 5 for examples. This list is just a beginning—. brainstorm with your students and committee members. Start with your needs and think of who might be able to help.

Advisory committee members and students could personally visit to see if there are one or several businesses that would adopt your students, school, annual projects, and the whole WILD School Site project. Habitat improvement is community improvement. If the public sees work happening on the school grounds, it might inspire some additional improvements in the community!

Appendix D: Activity Suggestions

Here are some suggestions for activities in Project WILD and Aquatic WILD (AW) tied to major steps in accomplishing a WILD School Site project. There are many other WILD activities that could be usefully incorporated in such a project. You can also adapt and use WILD activities in a variety of ways. Pick those that are most appropriate to your topic and task.

Activities from the *Aquatic WILD K-12 Curriculum and Activity Guide* are indicated with "AW"

Using Communication Tools Throughout the Process
- Animal Poetry
- Aqua Words (AW)
- Conservation Messaging (AW)
- Nature in Art
- Wild Words
- Aquatic Times (AW)

Setting the Stage: Observation
- Ants on a Twig
- HabiCache
- Insect Inspection
- Learning to Look, Looking to See
- What's Wild?

Getting the Basics of Habitat
- A Home Away from Home
- Edge of Home (AW)
- Got Water? (AW)
- Habitat Circles
- Limiting Factors: How Many Bears?
- Map that Habitat
- My Kingdom for a Shelter
- What's That, Habitat?

Understanding Water and Its Importance
- Aqua Words (AW)
- Puddle Wonders (AW)
- Got Water? (AW)
- Raindrops and Ranges

- Water Wings (AW)
- Watershed (AW)
- Where Does Water Run? (AW)

Preparing for a Site Inventory

- Bird Song Survey
- Blue Ribbon Niche (AW)
- Graphananimal
- Environmental Barometer
- Insect Inspection
- Map That Habitat
- Urban Nature Search
- Water Safari (AW)

Building Depth in Understanding Habitats

- A Home Away from Home
- Carrying Capacity
- Changing the Land
- Designing a Habitat
- Ecosystem Architects

Differentiating Between Native and Non-Native Species

- What Bear Goes Wear?
- World Travelers

Considering Issues That Could Affect Your Project's Success

- A Dire Diet
- Eat and Glow (AW)
- Keeping Cool
- Limiting Factors: How Many Bears?
- Migration Headache (AW)
- Oh Deer!
- Quick-Frozen Critters
- What's in the Water? (AW)

Doing Homework in the Community

- Natural Dilemmas
- Wildlife and the Environment: Community Survey

Planning a WILD School Site Project

- Habitat Heroes

WILD THINGS ARE HAPPENING AT SMITH ELEMENTARY!

WHAT: A WILD School Site Habitat Improvement Project

WHO: Sixth Grade Students and Ecology Club

WHY: Students at Smith Elementary are concerned about the quality of the environment. We are thinking globally and acting locally. We can have a positive impact on our environment in big and small ways. To do this, we have decided to improve wildlife habitat on our own school grounds.

HOW: We will initiate several bird feeding stations around the school site, erect bluebird houses, plant a butterfly garden for the spring and summer, and begin a community composting project.

YOU CAN HELP! We hope you will be able to give us assistance in planning, organizing volunteers, helping us build and garden, finding materials, or even donating funds to help.

Let us know if you will be able to assist. Indicate how you can help. Feel free to call or visit our school for more information. A student committee is available to talk with your civic group or business should they wish to sponsor part or all of this project.

© Association of Fish & Wildlife Agencies

Appendix F: Additional Resources

People

Be sure to contact your state Project WILD Coordinator. Find the coordinator in your state here.

Others who may be of help:

- Project Learning Tree State Coordinator
- Project WET State Coordinator
- State Department of Education
- State or District Curriculum Specialists
- State Department of Wildlife
- Agricultural and Natural Resource Extension Agents
- County Soil and Water Conservation Agents
- Local Nursery Association Members
- Local Garden Club Members

Public Agencies

- US Forest Service
- US Soil Conservation Service
- USDA 4-H Program
- US Fish and Wildlife Service
- US Environmental Protection Agency

Organizations

- Cornell Lab of Ornithology
- North American Association for Environmental Education
- National Audubon Society
- National Wildlife Federation
- World Wildlife Fund
- National Fish & Wildlife Foundation

Green School Programs

- EcoSchools
- Green Schoolyards of America
- PLT GreenSchools
- Kansas Green Schools
    - Kentucky Green Schools

WILD School Sites: Improving Wildlife Habitat on School Grounds

Curriculum Programs

- Project WILD
- Project Learning Tree (PLT)
- Project WET (Water Education Today)

Potential Funding Opportunities

- Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide "Money Matters" U. S. Fish and Wildlife. pp. 69-76.
- Nature Explore, Fundraising Resources.
- The Outdoor Learning School and Store, Looking for Funding?
- The School District of Philadelphia and Philadelphia Water Department, Transforming Philadelphia's Schoolyards Guide. p. 22.
- TD Friends of the Environment Foundation, Building Outdoor Classrooms: A Guide for Successful Fundraising, p. 6.
- University of Kentucky, Taking the Indoors Out: Creating Outdoor Learning Environments, p. 17
- The University of Tennessee Agricultural Extension Service. W113-Developing an Outdoor Classroom to Provide Education Naturally, pp. 4, 18-19.

Outdoor Classroom Management Resources

- Beetles Project (2017). Engaging and Managing Students in Outdoors Science- Beetles Project Lawrence Hall of Science.
- The Cornell Lab, K-12 Education, Outdoor Teaching Tips
- Council of Outdoor Learning; https://www.eealliance.org/cool-toolkit-methods.html
- Edutopia. 7 Tips for Moving Learning Outside
- Giroux, P and Hightower, J. Tips and Tricks for Teaching Outdoors, EE Alliance
- Green Schoolyards America, Outdoor Classroom Culture and Management
- McCutcheon, N. & Swanson, A. Tips and Tricks for Taking Kids Outdoors
- Little Bluestem Architecture. (2020) landED: A Brief Introduction to Outdoor Learning: Teachers Guide
- Provenzano, N. (May 15, 2023) How to Facilitate Outdoor Learning. Edutopia

Publications

Kolstad, C., Vollherbst, K. & Mullin, K. K. (2011) Schoolyard Habitat Guide. U. S. Fish and Wildlife.

Soper, E., Ward, S. & Elena, M (2021). "Step 5: Build the Habitat" Schoolyard Habitat Planning Guide, National Wildlife Federation.

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U.S. Fish and Wildlife, Schoolyard Habitat Project Guide. Chesapeake Bay Field Office.

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Project WILD Materials
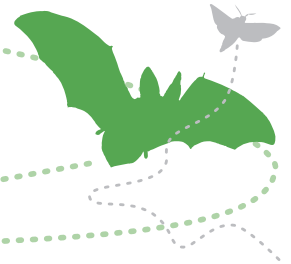
Project WILD's Mission is to provide wildlife-based conservation and environmental education that fosters responsible actions toward wildlife and related natural resources.

Project WILD's Goal is to assist all learners in developing awareness, knowledge, skills, and commitment to result in informed decisions, responsible behavior, and constructive actions concerning wildlife and the environment upon which all life depends.
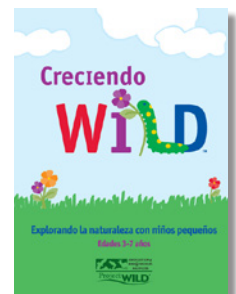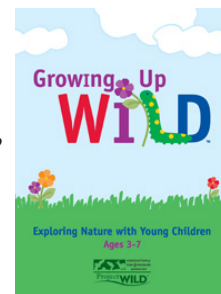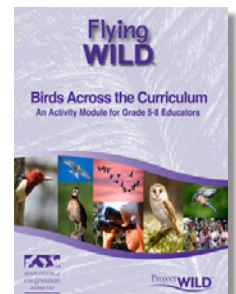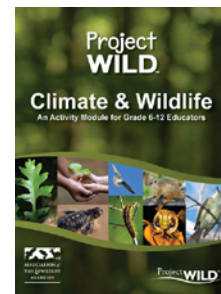
The **Project WILD Website** includes links to many other program resources, including content for climate change education. Visit www.projectwild.org.

Project WILD Curriculum Materials can be acquired by attending a Project WILD professional development training. Publications include . . .

- *Project WILD K-12 Curriculum & Activity Guide*
- *Aquatic WILD K-12 Curriculum & Activity Guide*
- *Project WILD: Climate & Wildlife: An Activity Module for Grade 6-12 Educators*
- *Flying WILD: Birds Across the Curriculum: An Activity Module for Grade 5-8 Educators*
- *Growing Up WILD: Sharing Nature with Young Children Ages 3-7*
- *Creciendo WILD: Explorando la naturaleza con niños pequeños Edades 3-7 años*

Professional Development Training is provided in partnership with Project WILD host organizations. To learn about training opportunities and connect with the Project WILD coordinator in your state, go to www.projectwild.org and follow the "Get Training" link. To lean about *Project WILD Online* self-paced professional development short courses, go to https://www.fishwildlife.org/projectwild/ProjectWILDOnline.
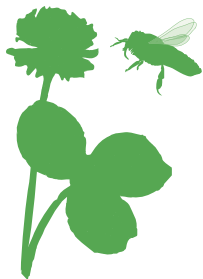
The **Project WILD Online Store** provides additional curriculum resources at www.fishwildlife.org/products.
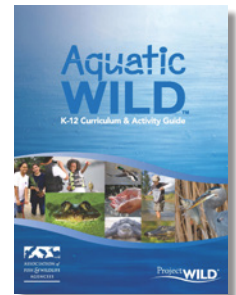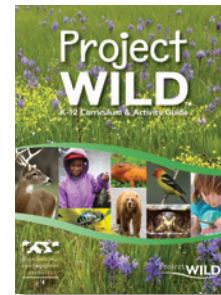
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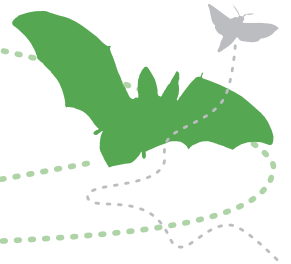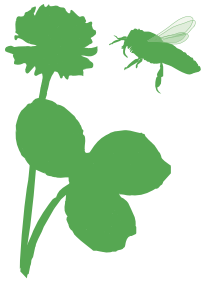
Acknowledgements

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Notes

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