

Project **WILD**

Let's get WILD,
Maryland!



Project WILD Facilitator Resource Guide

Last Updated: January 2023



Welcome To Project WILD

Project WILD is one of the most widely-used conservation and environmental education programs among educators of students in kindergarten through high school. It is based on the premise that young people and educators have a vital interest in learning about our natural world. A national network of State Wildlife Agency Sponsors ensures that Project WILD is available nationwide --training educators in the many facets of the program. Emphasizing wildlife because of its intrinsic value, Project WILD addresses the need for human beings to develop as responsible citizens of our planet.

Project WILD is a program designed by the Council for Environmental Education (CEE), and now is part of the Association of Fish and Wildlife Agencies (AFWA). In Maryland, Project WILD is sponsored by the Maryland Department of Natural Resources. This guide is designed to assist you as a facilitator with the Project WILD program.

Wes Moore, Governor
Josh Kurtz, Secretary
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410-260-8566

Toll Free in Maryland: 1-877-620-8DNR, ext.8566



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Facilitator Roles and Responsibilities

As a Project WILD facilitator, you are certified to conduct educator workshops for others who are interested in the Project WILD program. During workshops, you should model Project WILD activities and share your enthusiasm and knowledge about wildlife and conservation education.

Why Be a Facilitator?

Workshop facilitators are the frontline of our program. Without the time and energy provided by facilitators such as you, Project WILD would not be able to reach so many educators and classrooms in Maryland.

Project WILD Facilitator Roles

The facilitator will:

- Aid participants in developing their own observations, interpretations and conclusions about Project WILD
- Demonstrate how to use Project WILD activities as a tool to connect young children with nature
- Assist educators in finding ways to utilize Project WILD activities in a specific subject area or in an interdisciplinary manner
- Demonstrate to non-formal educators how to utilize Project WILD activities to enhance or compliment their work with students
- Model effective teaching strategies and encourage educators to explore new ways of teaching
- Use hands-on instructional methods to aid participants in solving any problems they may foresee using new methods with their students

A Place for Opinions

It is the facilitator's role to ensure that the integrity of the program remains intact as educators learn how to use the materials. By no means should a Project WILD or any of Maryland Department of Natural Resource's educational programs be used to promote political agendas by the facilitators or educators who use this program. As a facilitator, you are representing the Maryland Department of Natural Resources (MD DNR).

Note: To maintain your facilitator certification, you will be required to conduct or cofacilitate one training with at least 15 people per year.



National and Maryland Contact Hour Requirements for Conducting Project WILD Workshops

The following are contact hour recommendations for all Project WILD curriculums. These are set forth by the national Project WILD office and are also conditions that have to be met for the Maryland Department of Natural Resources to continue offering Project WILD books at no cost to facilitators. The following list includes combination workshop requirements, which are always encouraged. In particular, we strongly recommend combining Project WILD and Aquatic WILD in your workshops.

Project WILD (Terrestrial) Workshops-minimum of 5 contact hours; participants only receive the *(Terrestrial) Project WILD* guide.

Aquatic WILD Workshops-minimum of 4 contact hours; participants only receive the *Aquatic WILD* guide.

Combined Project WILD Workshops-minimum of 6 contact hours; participants receive both the *(Terrestrial) Project WILD* and *Aquatic WILD* guides. This is the preferred workshop format, and agendas should include activities from both guides as well at least 1 field investigation.

Combination Workshops-any combination of Project WILD, Growing Up WILD, Project WET and/or Project Learning Tree requires a minimum of 8 contact hours; participants will receive two guides (ex: Project WET and Project WILD or Project WET and Project Learning Tree).

- Note: If participants will be receiving three different Projects' guides, contact hours should be at least 12.



****In select cases, the minimum # of contact hours may be met by completing an assignment approved by the State Coordinator. ****

Workshop Planning Checklist

4-8 weeks in advance

- Choose the type of workshop you want to conduct i.e. WILD, Aq. WILD, etc.
- Consider working with a co-facilitator.
- Choose your target audience.
- Consult school systems and other interested agencies to determine there are no major scheduling conflicts (conferences, testing, etc.) that would limit attendance in your area.
- Set date, time, and location.
- Set a maximum number of participants, based on presenter comfort and facility limitations. The minimum should be around 15 to make it worth your while.
- Determine fees for supplies and facility; please remember that you cannot charge a fee for your time or the books.
- Select activities and draft your agenda. Consider using a theme. Take into consideration:
 - Time, budget, space, location constraints, etc
 - Audience
 - Available supplies and materials
- Set up registration process. Note: online forms like Google Forms are easy to use and are customizable. The **Appendix** contains a sample registration form.
- Create promotional materials, i.e. flyers, emails, posters & articles; consider advertising via social media outlets. Send out advertisements at least once a week and seek out sources other than your center's email list for advertising. The Project WILD coordinator can assist with advertising.

3-4 weeks in advance

- Send in the workshop proposal and tentative agenda to the state coordinator.
- Gather workshop supplies and plan for backup activities (just in case!). Consider reserving an education trunk to showcase at the workshop. If you need something, then ask your state coordinator.
- Order snacks and meals if necessary.
- Send confirmations to registered participants.

Week of workshop

- Send workshop reminder.
- Check in with facility and/or host for final details.
- Conduct your workshop and *have fun!*
- After your workshop is completed, send in the workshop sign in sheet, evaluations, and the Facilitator Reporting Form to the state Project WILD office within 2 weeks of the completion of your workshop. It is also recommended to follow up with participants after the workshop ends.

Factoring in Your Audience

Project WILD workshops should not be conducted in a one-size fits all manner. To ensure your participants will use the material, it is important to tailor the workshop to your audience. In the registration process before the workshop, try to get a feel for the people who will be attending your workshop. Are they formal or non-formal educators? What grade levels to they primarily teach? What is their motivation for taking the course?

Even if you do not know the specific needs of your audience before you begin planning, try to imagine what the audience would want from the workshop. Furthermore, consider whether there are any local issues or current movements in education or natural resources that the participants might be concerned about or interested in discussing. If you identify possible issues or trends, think about how you could address these during the workshop so that each person has an opportunity to participate.

For a diverse group of educators, select activities that demonstrate the interdisciplinary nature of the materials, their usefulness in many subject areas, and applicability to several grade levels. If you know that your audience has a special interest or age group, select activities to meet their needs. If the workshop focuses on a particular theme, choose activities connected with that theme. If you are working with primarily formal educators, then be sure to show how the different activities connect with state and national learning standards.

Be sure to provide a variety of activities- both indoor and outdoor- which tap into different learning styles from creative to kinesthetic. Include activities that foster individual learning as well as ones associated with group learning. Also, be sure to select activities that YOU are enthusiastic about as your energy level will be passed on to your audience.



Planning the Agenda

After you have considered your audience and have begun selecting activities to present, you are ready to plan the workshop agenda. The following sections will give you some ideas. Workshops should follow these steps to lead the participant from an *awareness* of the project to *knowledge* on the specifics of the program to an opportunity to *learn* about environmental concepts presented in activities and then, finally, to *action* — to use project materials in their teaching. See the Appendix for a sample agenda.

The most important workshop elements to include in an agenda are

- Welcome, agenda overview, and goals
- Getting acquainted/icebreakers
- Project information/history
- Activities experienced by participants
- Tour the Guide (book review)
- Individual classroom planning
- Workshop wrap-up and evaluation
- Certificates and feedback

Welcome, Agenda Overview, and Workshop Goals

Plan how you will welcome the participants, introduce yourself and other presenters, and give a brief overview of the agenda. Allow 15–20 minutes to do this. Provide supplies for name tags such as markers, stamps, and stickers.

Getting Acquainted/Icebreakers

Plan how you will have participants introduce themselves. They are coming together for the workshop as learners and, especially if they do not know each other beforehand, creating a friendly and informal atmosphere at the beginning of the workshop can enhance the learning environment. Even if participants know each other, this is an opportunity for you to learn something about them, for their friends to learn something new about them, and for some general learning to begin. An icebreaker can also be used to begin teaching your environmental topic or could include an activity from the project guide. Although icebreakers can go on for 30 minutes, you may want to cut it short to allow time for other activities. Check out the **Appendix** for sample icebreaker activities.

Project Information/History

Plan to present the following information—5 minutes is usually sufficient.

- When, why, and by whom was the idea for the project initiated
- An explanation of the project's national and/or state sponsors
- What materials are offered
- How the project materials were developed, tested, and evaluated
- Relevant curriculum alignments and how to find them online

Activities Experienced by Participants

Plan to present activities in a way that engages the participants as learners first, then allows them to reflect on the activities from their perspective as educators.

Be sure to always be prepared. Be sure to have backup plans for outdoor activities in case the weather is unfavorable. Sometimes, you will run through activities faster than you plan, so be sure to have an extra activity or two ready just in case. By carefully preparing ahead of time, you can make your workshop run smoothly no matter what comes up.

After conducting each activity, make sure to debrief the educators. Many of the discussion questions in the activities are excellent and demonstrate how the activities teach higher order thinking skills. Go over concepts that the activity was supposed to teach, offer ideas on ways to change the activity to teach different concepts and ask for ideas on how to enhance the activities. Be sure to record suggestions from the educators and incorporate them into your next training session. After each activity, consider asking the following prompts:

- What skills did you use in this lesson?
- What standards were addressed?
- How could you modify this activity for [grade level, summer camp, scouts, etc]?

Consider making a resource list as you go through the workshop and provide the list to educators as a workshop follow up.

Tour the Guide

Plan how you will help participants become familiar with the contents of the activity guide. You may choose to conduct a walk-through, pointing out important elements along the way. Or, you might prefer to use questions in a competition between small groups. One way to go through the guide includes asking questions about specific content found throughout. Examples of this activity, formerly titled A Walk on the Wild Side (terrestrial guide) and Swim Through the Guide (aquatic) can be found in the Appendix.

Consider handing out the activity guides and doing the hike after lunch or at the end of the workshop to keep participants in attendance. Otherwise, if guides are given out before lunch then you may lose some of the participants during lunch. Remember, participants must take the full 6-hour workshop in order to receive the activity guides.

Individual Classroom Planning

One of the initial questions participants are most likely to ask when they attend the workshop is —*How can I use the projects in my classroom?* Individual classroom planning is an important component to include if working with a group of formal educators. Once your workshop participants have become familiar with the project and some of the activities, they need time to directly connect these new materials to the needs of their students and to their own teaching goals.

Plan adequate time for this component, even if you have to shorten something else. You might lead a brainstorming session and ask everyone to share their ideas. You could have participants form groups and devise plans for implementing the project in their classrooms, and then come together for discussion with the whole group at the end. Clustering participants by grades or subject areas is often helpful here. You might also consider asking them to select lessons that they might use in the next week, month, or school term. This strategy helps to emphasize that the projects are not something extra for them to do, but actually can help participants teach what they already are planning to cover. A sample planning activity can be found in the **Appendix**.

Workshop Wrap-up and Evaluation

Workshop endings are just as important as workshop beginnings. Plan at least 15 minutes to wrap up the material and relevant resources. Consider using one of the wrap-up activities presented below.

- Memory circle. Have participants share something they learned or experienced at the workshop.
- Complete the sentence —I plan to use this guide to...
- Postcards. Have participants address postcards to themselves and then write a goal on the back on how they plan to use the guide. Project coordinators then send these postcards to participants approximately six months later as a reminder of the goal they set.

In addition, make sure attendees fill out a workshop evaluation form. These forms are important for assessing the workshop and must be submitted to the state coordinator following the workshop. Have enough copies of the evaluations for all participants, plus a few extra.

Certificates and Feedback

If you have the names of participants ahead of time, consider creating certificates acknowledging completion of the workshop. Alternatively, you can print blank certificates before the workshop and then add the names during the workshop. If you would like a certificate template, then contact the State Coordinator. Many educators can use their certificates for their portfolios.

Using the Conceptual Framework for Project WILD

The Conceptual Framework serves as the conceptual basis for the activities in the Project WILD and Aquatic Project WILD. In other words, it is the science behind every activity. The framework is broken down into 3 main sections:

Ecological Knowledge—Activities found in this section are generally introductory lessons that focus on awareness of wildlife issues and habitat. These lessons are great ones to begin using in your workshop to spark awareness.

Social and Political Knowledge—Activities found in this section build on awareness and move the student toward knowledge and understanding; by examining human cultures, economics and politics and their effects on people’s attitudes towards natural resources. After sparking awareness of wildlife, consider using these lessons as a next step in your workshop.

Sustaining Fish and Wildlife Resources—Activities found in this final section are generally higher level lessons that take the students from understanding to action. The activities are designed to serve as a way for students to recognize, evaluate, and make responsible choices in their own lives regarding natural resources that reflect the knowledge and skills they’ve acquired in earlier activities. These are great lessons to add to the end of your workshop to go full circle from awareness to action.

The following alignments can be accessed from the MD DNR webpage:

dnr.maryland.gov/wildlife/Pages/Education/PW_alignments_mels.aspx

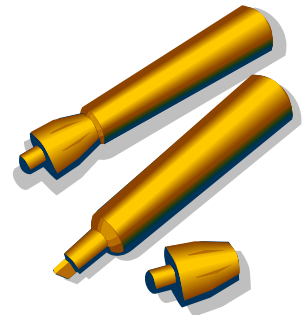
- **Common Core- English Language Arts alignments (Aquatic WILD, 2013-present)**
- **Maryland Environmental Literacy alignments (all guides)**
- **Next Generation Science Standards (Terrestrial WILD)**



Facilitator Resource Kit

In addition to the materials the project coordinator will send, you may want to bring the following supplies as well as any other props for specific activities you are planning. If you conduct workshops often, then you may wish to keep a resource trunk full of items useful to conducting workshops such as the following:

- Bandannas, flagging tape, or other material to mark participants
- Cones or other ways to mark field boundaries
- Construction paper and/or computer paper of different sizes
- Crayons
- Flip chart, easel, and markers, or white board and dry erase markers
- Glue and tape
- Handouts, masters, and copies
- Name tags
- Markers (permanent and non-permanent)
- Paper bags
- Paper plates
- Pens or pencils
- Poker chips or some kind of counting chip
- Post-it notes
- Receipt book for workshop payments, if needed
- Resource materials like children's books that supplement activities and related environmental education curricula
- Rulers
- Scissors
- String or yarn
- Supplies and props needed for specific activities
- Sandwich and gallon sized bags



Consider reserving an education trunk or two from MD DNR to enhance your activities. These trunks are free to borrow for 1-2 weeks at a time and contain components for related Project WILD activities.

- [Aquatic Invasive Species Trunk](#)
- [Bat Trunk \(limited locations\)](#)
- [Black Bear Trunk](#)
- [Furbearer Trunk](#)
- [White-Tailed Deer Trunk](#)
- [Wild Turkey Trunk](#)

For more information, then please visit the following website:
dnr.maryland.gov/wildlife/Pages/Education/education_trunks.aspx

Facilitator Resources

National Project WILD site

<https://www.fishwildlife.org/projectwild>

Maryland Project WILD site

- dnr.maryland.gov/wildlife/Pages/Education/ProjectWILD.aspx *Contains facilitator page with workshop forms as well as supplemental material to run activities*
- State Coordinator Contact:
 - Sarah Witcher
Wildlife and Heritage Service
580 Taylor Ave, E-1
Annapolis, MD 21401
sarah.witcher1@maryland.gov
Phone: 410-260-8566
Fax: 410-260-8596

Maryland Wildlife Lists and Information

- *Contains lists of animals found in Maryland as well as associated fact sheets*
- dnr.maryland.gov/wildlife/Pages/plants_wildlife/mdwllists.aspx

Maryland's Wild Acres

- *Provides information sheets on common wildlife species and ways to attract them to your backyard or schoolyard*
- dnr.maryland.gov/wildlife/Pages/habitat/wildacres.aspx

Maryland Wildlife Education Resources

- *Contains a list of professional development workshops, printable education resources, and information about wildlife education trunks:*
- dnr.maryland.gov/Wildlife/Pages/Education/home.aspx

Google Drive

- *Free resource that allows you to store and edit documents between groups as well as set up registration forms online. To store documents and create forms, then you need a Google Account, however, participants which access the documents and forms do not need a Google account.*
- <https://drive.google.com/>
- *A facilitator resource drive can be found here: <https://drive.google.com/drive/folders/1uxABWDAIMjOzsFBIV8zpQv2QcC4UB1sx?usp=sharing>. You will need to request permission to access.*

Appendix

Table of Contents:

- Sample Advertising Blurbs
- Sample Registration Form
- Sample Agendas
 - Terrestrial WILD Workshop
 - Aquatic WILD Workshop
 - Combined WILD Workshop
- Sample Project WILD Introduction
- Sample Icebreaker Activity
 - Wild Bingo
 - Nature-based Classroom Icebreakers
 - Talk Turkey To Me
- Field Investigations
- Lesson Plan Exercise
- Tour the Guide (Terrestrial Guide)
- Tour the Aquatic Guide (Aquatic WILD Guide)
- Workshop Day Checklist



Sample Advertising Blurbs

Combined WILD/Aquatic WILD workshop:

Engage in hands-on, inter-disciplinary activities focusing on wildlife, the environment, and conservation. Throughout the workshop, participants will experience and model activities from the popular Project WILD Activity Guides. Activities will focus on content that boosts science and inquiry skills while enhancing participant's knowledge about local wildlife and educational resources. This professional development workshop is appropriate for informal and formal educators of K–12 students. Participants who complete the workshop will receive copies of both the Project WILD and Aquatic WILD curriculum supplement guides.

The recently updated guides contain STEM connections, field investigations, and career connections. All participants who complete the workshop will receive the two guides upon workshop completion. *Participants may be eligible to receive 1 MSDE Professional Development Credit when combined with other workshops. (if you are an eligible facilitator).*

Project WILD (Terrestrial) only:

Bears, bats, and climate change- *oh my!* Get WILD about learning! Join us in discovering how to teach students about wildlife and conservation using hands-on, interdisciplinary lessons from Project WILD. Lesson plans have been aligned with national and state learning standards. Throughout the workshop, educators will have a chance to model lessons and to learn about local education resources. Upon workshop completion, all educators will receive the recently updated Project WILD guide.

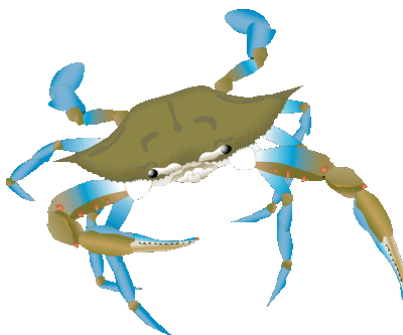
Aquatic WILD only:

Get WILD about learning! Join us in discovering outdoor and indoor wildlife activities through an active, hands-on workshop. This workshop includes the updated Aquatic WILD guide which includes field investigations, STEM connections, and career links for all activities. Upon workshop completion, all educators will receive the updated Aquatic WILD guide.

Sample Registration Questions

Registration forms are a great way to get to know a little more about your participants to assist with planning workshop activities. Below are some suggested questions:

- Name (to appear on certificate)
- Email Address
- Phone Number (just in case for the day of the workshop)
- School/Affiliation
- Grade Level(s) typically work with (please select all that apply):
 - K-2
 - 3-5
 - 6-8
 - 9-12
 - Adults
 - All Ages
- Primary Subject(s) Taught
- There are some outdoor experiences included with this workshop. Do you have any physical limitations we should be aware of?
- How Did You Hear About This Workshop? (optional)
 - Email
 - ListServe
 - Social Media
 - Website
 - Word of Mouth
 - Other: _____
- What Do You Hope to Obtain from this Workshop? (optional)
- Do you have any dietary restrictions or allergies? (optional if serving food)



Project **WILD**
Let's get **WILD**,
Maryland!



Project WILD Terrestrial Workshop Agenda

1:00 pm: Icebreaker Activity
Intro to Project WILD
Agenda Overview

1:30 pm: *Let's get WILD!*

- First Impressions, K-5
- Busy Bees, Busy Blooms, K-5
- Phenology at Play, G 6-12

3:30 pm: Break

3:45 pm: *Let's get WILD again!*

- A Dire Diet, G 6-12
- Keeping Cool, G 3-5 w/ upper level extensions

5:30 pm: A Walk on the Wild Side

5:50pm: Wrap-up/Evaluations



Thanks for Coming and Have a Great Day!

Facilitator Name

Contact info

For printable pages, curriculum alignments, and resources, check out:

dnr.maryland.gov/wildlife/Pages/Education/ProjectWILD.aspx



Aquatic WILD™

Aquatic WILD Workshop Agenda

1:00 pm: Icebreaker Activity
Intro to Project WILD
Agenda Overview

1:30 pm: *Let's get WILD!*

- Fashion a Fish, G K-5
- Migration Headache, G 6-8

3:00 pm: Break

3:10 pm: *Let's get WILD again!*

- Field Investigations and Got Water, all grades
- Planning Exercise

4:30 pm: Swim Through the Guide

4:50pm: Wrap-up/Evaluations



Thanks for Coming and Have a Great Day!

Facilitator Name

Contact info



For printable pages, curriculum alignments, and resources, check out:

dnr.maryland.gov/wildlife/Pages/Education/ProjectWILD.aspx

Project **WILD**
Let's get **WILD**,
Maryland!



Project WILD Workshop Agenda

9:00 am: Icebreaker Activity
Intro to Project WILD
Agenda Overview

9:30 am: *Let's get WILD!*

- First Impressions, K-5
- Fashion a Fish, K-5
- Migration Headache, 6-8
- Oh, Deer!, 6-8 w/ K-5 extensions

12:00 pm: Lunch

12:35 pm: *Let's get WILD again!*

- Food Footprint, 6-12
- Field Investigations & Water Safari, all grades
- Planning Exercise

3:00 pm: A Walk on the Wild Side

3:20pm: Wrap-up/Evaluations

Thanks for Coming and Have a Great Day!

Facilitator Name

Contact info



For printable pages, curriculum alignments, and resources, check out:

dnr.maryland.gov/wildlife/Pages/Education/ProjectWILD.aspx

Project WILD Workshop Introduction

Project WILD began in 1983 through the hard work and dedication of many groups including the Council for Environmental Education, the Western Association of Fish and Wildlife Agencies and state departments of education. Project WILD has been in MD since 1987. Project WILD is an international program that is used throughout much of the United States, the District of Columbia, Puerto Rico, and internationally in countries including Canada, Iceland, India, Japan and Sweden. In 2017, Project WILD became a part of the Association of Fish and Wildlife Agencies (AFWA).

Since its inception in 1983, more than 1.3 million educators have been trained in the Project WILD curriculum. Project WILD curriculum materials adhere to strict efforts for balance and objectivity and are backed by sound educational practices and theory. The Project WILD curriculum has been field tested on multiple occasions, and there are over 40 studies demonstrating its effectiveness in student learning. Materials are frequently updated to keep up with education trends. The Aquatic WILD guide was recently expanded in 2013 to include STEM, career connections, and field investigations. The terrestrial Project WILD guide was expanded in 2018.

Project WILD is an interdisciplinary conservation and environmental education program emphasizing wildlife. The program emphasizes wildlife because of its intrinsic, ecological value, as well as wildlife's role in teaching how ecosystems function. The program is designed for educators of all types (like you!) who work with children from kindergarten through high school age. As you go through today's activities, you will also see that many of our activities are also fun and educational for adults. Project WILD is distributed through a workshop format only.

Project WILD enhances student learning in all skill and subject areas through hands-on activities that fulfill their natural interest in the environment. Project WILD teaches students *how to think, not what to think*.

The conceptual framework for Project WILD includes 3 categories:

1. Ecological Knowledge
2. Social and Political Knowledge
3. Sustaining Fish and Wildlife Populations



Wild Bingo



Directions: Find an individual who meets the requirements described in each box and place his/her name there. Continue to fill all the boxes with names of persons in the group, using each name only once. When you have completed all the squares, show your results to one of the facilitators.

A person who was born outside of Maryland _____	Someone who rarely eats red meat _____	Someone who likes to photograph wildlife _____	Someone who likes to ride bicycles _____
Someone who jogs regularly _____	Someone who knows what a Nutria is _____	Someone who likes to backpack _____	Someone who likes to go birding _____
Someone who recycles paper or glass _____	Someone who carries a fishing license _____	A native Marylander _____	Someone who knows who Aldo Leopold is _____
Someone who enjoys fishing _____	Someone who has a "heron" license plate _____	Someone who has traveled outside of the US _____	Someone who knows what 'herping' is _____

Wild Bingo was adapted from Idaho Project WILD by Dr. Debra Thatcher.

Nature-based Classroom Ice Breakers

Who Am I?

For this activity tape or pin the name of a wildlife species on the back of each participant and make sure everyone has paper and a pencil. Each person tries to figure out what animal he or she is by walking up to other participants and getting clues from them. For example, Person A gives clues to Person B by briefly describing what Person B is in one to four words. Person B writes down this description and then briefly describes what Person A is in one to four words. Person A writes down this clue and both people move on to other participants for new clues. Be sure to set a time limit before the group begins the activity. Wrap up by asking for three to five volunteers to guess what they think they are, based on the clues they received.

Guess My Name

Ask the participants to make a list of ten words to describe an animal of their choice on a sheet of paper. They then tape the sheet of paper to themselves and move about the room, reading each other's lists. They introduce themselves to each other and try to guess what animal each list describes.

Artistic Introductions

Ask participants to draw or model out of clay an animal they feel represents themselves. Divide the participants into groups and have each explain why (s)he chose the animal (s)he did. Or, put pictures of a variety of animals on a large table and have participants choose one they feel represents themselves. Divide into groups and have each participant explain why (s)he chose a particular animal.

Sound Off

Write out cards with the name of one animal on each. Make two cards for each animal. Hand out a card to each participant, making sure that pairs of animals are distributed. Arrange the participants in a circle. Explain that they are to make the sound of the animal on their card to find the other animal of their species. No talking is allowed. Once they find their partner, they are to stand by them. Participants can also be blind-folded and/or groups of more than two animals can be produced by making more cards for each animal.

Significant Stories

Ask each participant to relate a story about a significant experience involving nature, animals, trees, etc.

Talk Turkey To Me

See website for print out. Have participants make turkey noises to find partners.

Field Investigations

Field investigations are a great way to get students outdoors and conducting science. Field investigations are the systematic collection of data for the purposes of scientific understanding. They are designed to answer an investigative question through the collection of data and communication of results.

Why conduct field investigations with students?

- Students learn scientific inquiry skills
- Students become systems thinkers
- Students obtain firsthand research experience
- Students learn science doesn't only happen inside
- Students participate in outdoor experiences which can increase problem solving abilities & motivation
- It's fun!

Field Investigation Process:

1. Form a researchable question
2. Identify research setting
3. Identify variable(s) of interest
4. Collect data
5. Analyze data
6. Draw conclusions
7. Discuss findings



Types of Field Investigations:

- **Descriptive:** collect data to describe/quantify
 - Question examples: What species of birds can be found in my schoolyard? What plants can be found in my schoolyard?
- **Comparative:** collect data to compare variables
 - Question examples: Are the bird species in my schoolyard different from the bird species in the local park? Is there a difference in the plant species that grow in the sun and plant species that grow in the shade?
- **Correlative:** collect data to examine relationships
 - Question example: Is there a relationship between temperature and plant growth?

For More Information:

Check out our webpage and field investigation resources within the guide.

Lesson Plan Exercise

The guides can be a bit overwhelming once educators first receive them. Consider adding a lesson plan exercise to have educators familiarize themselves with the guide's content. A sample exercise can be found below.

1. Hand out guides.
2. If workshop is mixed, break educators into groups based on grade bands (K-2, 3-5, 6-8, 9-12) or subjects (math, science, etc).
3. Show educators skills and topic index pages and have them go through one of the guides to select an activity that might work for their classroom. As an alternative, you can provide a list of activities for them to explore. Sample lists can be found below.
4. Once an activity has been selected, have educators provide a brief overview of activity and how they may use it to their group.
5. Have educators share what they discovered about the different activities.

Examples of activities for different grade bands:

Lower Elementary Lessons:

- Animal Charades
- Fashion- A- Fish, Aquatic
- Seed Need
- Water Safari, Aquatic
- What Bear Goes Where?

Upper Elementary Lessons:

- Bat Blitz
- Fashion-A-Fish, Aquatic
- Monarch Marathon
- Nature in Art
- Sockeye Scents, Aquatic

Middle School Lessons:

- A Dire Diet
- Bat Blitz
- Food Footprint
- Migration Headache, Aquatic
- Oh, Deer!

High School Lessons:

- Bottleneck Genes
- Dam Design, Aquatic
- Deer Dilemma
- Food Footprint
- Where Have all the Salmon Gone?
Aquatic

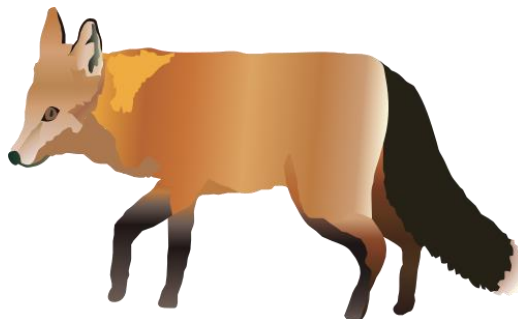


Tour the Guide - Answers



Note: There may be slight page variations in each version of the guide, so be sure to check the pages with the books you are distributing. These questions are for the terrestrial guide.

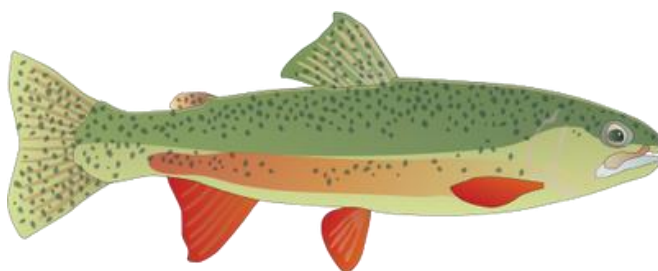
1. **Where would you find a list of Field Investigations?** Pg xix
2. **What is one suggested comparative Question to Investigate for Eco-Enrichers?**
Pg 180- How does the # of species in one soil type compare to other soil type? Open areas vs densely vegetated areas? Rate of decay...?
3. **If you don't use the suggested Questions to Investigate for field investigations, where would you find a student page to assist with forming their question?**
Pg 567 What's My Question
4. **If you wanted to focus on food chains and food webs, where would you find a list of activities that contain this topic?**
Pg 518 Topic Index or pg 522 Expanded Topic Index
5. **Name 1 STEM extension for the Bat Blitz Activity.**
Pg 139; Explore bat detectors, build a bat house, examine wing structure...
6. **If you wanted to conduct a unit on Climate Change, where would you find a unit planning guide?**
Pg. 520 Unit Planning Guide



Tour The Aquatic Guide - Answers

Note: There may be slight page variations in each version of the guide, so be sure to check the pages with the books you are distributing. These questions are for the Aquatic WILD guide.

1. **Where would you find a list of Field Investigations?** Pg xv
2. **What is one suggested Question to Investigate for Got Water?**
Pg 28- Does this study site provide for all of the needs... ?
3. **If you don't use the suggested Questions to Investigate for field investigations, where would you find a student page to assist with forming their question?**
Pg 388 What's My Question
4. **If you wanted to focus on food chains and food webs, where would you find a list of activities that contain this topic?**
Pg 324 Topic Index or pg 329 Expanded Topic Index
5. **Name 1 STEM extension for the Fashion a Fish Activity.**
Pg 99; Diagram the anatomy and internal organs of a fish...
6. **If you wanted to conduct a unit on Ecosystems, where would you find a unit planning guide?**
Pg. 326 Unit Planning Guide



Workshop Day Checklist

Below is a sample checklist to make sure you have everything you need to run a workshop.

- Sign-in Sheet
- Name Badges
- Agendas/ Printed Materials
- Extra Writing Utensils
- Icebreaker Supplies
- Snacks
- Activity Supplies
 - Activity #1 _____
 - Activity #2 _____
 - Activity #3 _____
 - Activity #4 _____
 - Activity #5 _____
 - Activity #6 _____
- Presenter Notes
- Books
- Giveaway Items
- Evaluations
- Certificates