







Extension



IMN Advisory Council

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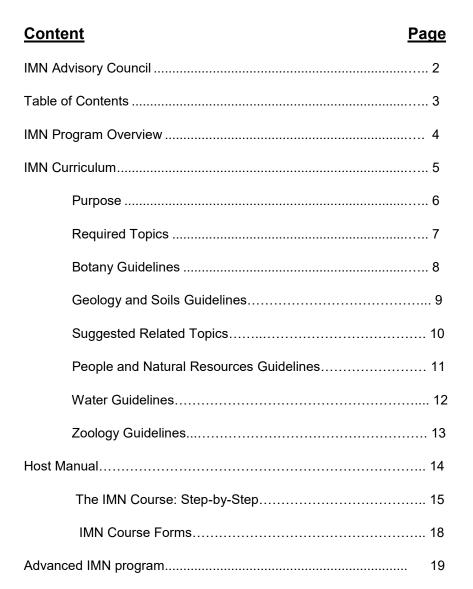


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Let children walk with Nature, let them see the beautiful blendings and communions of death and life, their joyous inseparable unity, as taught in woods and meadows, plains and mountains and streams of our blessed star, and they will learn that death is stingless indeed, and as beautiful as life.

- John Muir

Table of Contents





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"The care of the Earth is our most ancient and most worthy, and after all our most pleasing responsibility. To cherish what remains of it and to foster its renewal is our hope."

-Wendell Berry

IMN Program Overview

The Purpose

The Indiana Master Naturalist (IMN) Program provides participants with many hands-on opportunities to learn about our Hoosier natural resources. It also provides a way for you to share knowledge, along with your life experiences, through volunteer service to land trusts, soil and water conservation districts, state and local parks, or other natural resource and conservation organizations. The purpose of IMN includes:

- Providing an introduction to Hoosier natural resources through the eyes of resource professionals and experts in the field to individuals 18 years or older.
- Providing an opportunity for course participants to establish a short or long-term partnership with a natural resources agency or local organization involved in natural resource management by volunteering as a part of the course.
- · Providing a financially self-supporting program.

The Mission

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The Audience

Open to any adult, but in general, course participants are Hoosiers with a genuine love for the out-of-doors, but limited formal science/natural resources training. Participants take the course to expand their knowledge of plants, wildlife, soils and other natural resources in Indiana. Participants are expected to volunteer in some capacity after they begin the coursework. Some workshops have included individuals who own landscaping or outdoor adventure/ teaching businesses; these individuals may be supplementing their knowledge or planning to use the certification in support of their work. Class sizes vary, but usually will not exceed 30 students.



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Nature is man's teacher. She unfolds her treasures to his search, unseals his eye, illumes his mind, and purifies his heart; an influence breathes from all the sights and sounds of her existence.

- Alfred Billings Street

IMN Curriculum



Purpose

IMN Curriculum

The Curriculum in this manual is intended to serve as a guideline for hosts and speakers. The guidelines contained in the curriculum represent the basic level of knowledge that any person certified as an Indiana Master Naturalist should possess. The guidelines are crafted to be broad enough to allow hosts and speakers to tailor their classes to their needs, geography, and interests, but specific enough to target those attributes that make the natural resources of Indiana unique.



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"Study nature, love nature, stay close to nature. It will never fail you."

-Frank Lloyd Wright

Required Topics

The minimum number of 24 hours class time for an approved Indiana Master Naturalist course is distributed among the following topic areas for the 8 required sessions:

Botany (2 sessions)

Geology and Soils (1 session)

Suggested Elective Topics (1 session)

People and Natural Resources (1 session)

Water (1 session)

Zoology (2 sessions)



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Climb up on some hill at sunrise. Everybody needs perspective once in a while, and you'll find it there.

- Robb Sagendorph

Botany Guidelines

- 1. Discuss the differences and meanings of endangered, threatened, rare, and extirpated.
- 2. Discuss taxonomic principles, including the importance of Latin naming convention.
- Discuss the 12 natural regions of Indiana and their characteristics.
- 4. Become familiar with and describe the major parts of herbaceous and woody plants.
- 5. Discuss the stages of succession in ecosystems.
- 6. Explain what an invasive plant is and give some examples.
- 7. Identify at least ten native plants and ten native trees of Indiana.
- 8. Describe the classes of plants in Indiana (vascular and non-vascular).
- 9. Paraphrase the benefits of plants and trees (such as urban forests, plant uses, timber uses, etc.) and their management.
- 10. Differentiate the strata of the forest (forest floor, herbaceous layer, shrub layer, understory, and upper canopy).
- 11. Summarize the functions of fungi.



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Look at the trees, look at the birds, look at the clouds, look at the stars... and if you have eyes you will be able to see that the whole existence is joyful. Everything is simply happy. Trees are happy for no reason; they are not going to become prime ministers or presidents and they are not going to become rich and they will never have any bank balance. Look at the flowers for no reason. It is simply unbelievable how happy flowers are.

- Osho

Geology and Soils Guidelines

- 1. Recall the geologic history of Indiana (Precambrian to today).
- 2. Compare the important features of Indiana Geology (lithology / stratigraphy, glaciation, faulting and earthquakes, karst features, fossils, economic reserves, and local stratigraphy / collecting).
- 3. Describe the various landform regions of Indiana and their formation.
- 4. Discuss healthy soils and soil biology.
- 5. Explain the physical and chemical properties of soil.
- 6. Summarize ways to prevent soil erosion.



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Nature will bear the closest inspection. She invites us to lay our eye level with her smallest leaf, and take an insect view of its plain.

- Henry David Thoreau

Suggested Elective Topics

This is your elective class. Below is a list of potential topics for your consideration. The elective must relate to Indiana natural resources but you are not limited to this list:

- Survival
- Meteorology
- Astronomy
- Environmental education/interpretation *
- Orienteering
- Folklore
- Volunteerism
- Photography
- Outdoor skills and hobbies
- Wildlife rehabilitation
- Local or regional topics of interest
- Energy (and the difference between renewable and nonrenewable natural resources)
- Beekeeping and pollinator conservation
- Landscaping with native plants
- Hunting and/or trapping
- Urban ecology



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There is not a sprig of grass that shoots uninteresting to me.

- Thomas Jefferson

^{*} The IMN Advisory Council highly recommends Interpretation to be the Elective or People and Natural Resources topic. For more information on Interpretation see www.in.gov/dnr/parklake/6329.htm .

People and Natural Resources Guidelines

- 1. Explain the differences and meanings of, restoration, preservation, conservation and management of natural resources, including management tools (identifying indicator species, prescribed burns, timber stand improvement, etc.).
- 2. Discuss natural resource agencies at the local, state, and federal levels and their area of responsibility.
- 3. Describe and define archeology and the Indiana antiquities law.
- 4. Discuss how people have benefited from and impacted natural resources in historical and modern times.
- 5. Identify Indiana's early naturalists and their accomplishments.
- 6. Compare important naturalist authors (e.g. Leopold, Thoreau, Carson, Louv, Sanders, Porter, etc.).
- 7. Discuss environmental ethics, philosophy, and stewardship.
- 8. Discuss the art and science of interpretation.
- 9. Discuss natural resources related occupations and careers.
- Discuss health and wellness benefits of spending time in nature.
- 11. Environmental education/interpretation *



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Look deep into nature, and then you will understand everything better.

- Albert Einstein

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Water Guidelines

- 1. Describe the hydrologic cycle and all possible sources of water.
- Contrast Indiana's aquatic systems (rivers, lakes, ponds, streams).
- 3. Explain what a watershed is and its characteristics.
- 4. Discuss land use effects on water quality.
- 5. Summarize the threats and management to Indiana aquatic systems.
- 6. Define what a wetland is and their value and functions.
- 7. Compare the types of wetlands (natural and constructed) found in Indiana.
- 8. Relate water and wetland conservation efforts in Indiana.



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I go to nature to be soothed and healed, and to have my senses put in order.

- John Burroughs

Zoology Guidelines

- Describe the differences and meanings of endangered, threatened, species of special concern, and extirpated.
- 2. Summarize the principles of, and threats to, biodiversity (benefits, health, economics) in Indiana.
- 3. Explain taxonomic principles, including the importance of the Latin naming convention.
- 4. List characteristics of major vertebrate and invertebrate animal groups.
- 5. Understand and describe the ecological niche and energy flow of animals (food chain, food web, and food pyramid).
- 6. Define what an invasive animal is and give some examples.
- 7. Identify at least 5 species from each vertebrate group (birds, mammals, fish, reptiles, amphibian) and ten invertebrates (mollusks, arachnids, insects) of Indiana.
- 8. Discuss habitats and habitat components (food, water, shelter, and special factors) and how change in these components effects the ecosystem.
- 9. State animal behavioral characteristics and their adaptations to environments and environmental changes (hibernation, migration, coexistence).



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Nature chose for a tool, not the earth-quake or lightning to rend and split asunder, not the stormy torrent or eroding rain, but the tender snow-flowers noiselessly falling through unnumbered centuries.

- John Muir

Host Manual



The IMN Course: Step-by-Step

- 1. Review the "Sponsor a Class" link on the Indiana Master Naturalist website at https://www.in.gov/dnr/parklake/6321.htm to make sure your natural resources agency is ready to sponsor a workshop.
- 2. Talk with local residents and other natural resources agencies to find out if a workshop is already in the planning stages in your area. Gauge how much interest there might be in a workshop if none has been sponsored. Check with the IMN state coordinator (260)824-0926 or jheaston@dnr.in.gov or check the website for other upcoming classes at www.in.gov/dnr/parklake/6321.htm .
- 3. Select a time frame (most classes are held weekly in the evenings from 6-9 p.m. or 7-10 p.m., but Saturday mornings or a daytime class may be effective as well).
- 4. Select a convenient location for the workshop. Be sure to find out any meeting room usage fees so you can reflect those in your workshop cost.
- 5. Tentatively schedule speakers for the sessions, and determine any fees they may charge. These will impact your final course cost. Speaker topics should be within the framework established by the IMN Advisory Council and should include sessions as follows: 2 Botany, 2 Zoology, 1 Geology/Soils, 1 Water, 1 People and Natural Resources and 1 Elective topic that you choose to fit your agency/location.
- 6. Establish a budget for the workshop. Be sure to include any building rental costs, speaker fees, funds for resource materials to be purchased, refreshments if appropriate, and the \$10/person administrative fee that is submitted after the workshop to the IMN state coordinator.
- 7. Based on the total costs and the number of individuals you can manage in the class (generally no more than 30 for effective teaching), establish a course fee. This may vary with speaker/material costs, but usually ranges from \$50 -150.
- 8. Submit a workshop application form to the IMN state coordinator. This should include your course cost, dates, topics for each session and speakers (if possible).
- 9. After the workshop has been approved by the IMN Advisory Council, begin publicizing it. The IMN state coordinator will ensure that your workshop is posted on the IMN website and can send an e-mail notification to all those who have contacted the coordinator about workshops in their area.



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Climb the mountains and get their good tidings. Nature's peace will flow into you as sunshine flows into trees. The winds will blow their own freshness into you, and the storms their energy, while cares will drop off like autumn leaves.

- John Muir

The IMN Course: Step-by-Step

- 10. Ensure that your staff are informed about the program and are available to handle workshop registrations. General information about the program is available on the website.
- 11. When the class is full, establish a waiting list for future workshops and contact the IMN state coordinator, who will post a notice on the website that the class is full.
- 12. Provide speakers with a copy of the "IMN Program Guidelines for Speakers," and the "IMN Curriculum Guide". Both are available on the website. Ensure that each speaker knows the meeting date, time, location and expected topic. Ensure that each speaker will provide appropriate handouts or will give you a single copy so you can provide handouts. Be sure to ask speakers about their audiovisual equipment and space needs for their sessions.
- 13. Put together participant notebooks with handouts and good resource materials. Purchase field guides or other resource books as budgeted. The IMN logo is on the website for your use as needed.
- 14. Plan for room setup to provide convenience for speakers and comfort/friendly atmosphere for participants. Parking, easy access to restrooms, comfortable chairs and tables to write on, ease of visibility of visuals such as slides, flip charts, etc. are some things to consider. Don't forget to use nametags or name "tents" on tables at each session—remember, each speaker is new even if the students aren't!
- 15. Plan for refreshments and breaks during each session.
- 16. Ensure that someone from your agency will be on hand throughout each session to serve as the host, timekeeper and speaker assistant. This individual should also keep track of attendance, since participants must complete at least 80% of the classes. After each session, ask participants to complete a speaker evaluation form. You will keep these on file and provide copies to each speaker if they request them. This will help you evaluate speakers for future workshops.
- 17. At the first session, provide a quick overview of the program and ensure that they sign and keep the IMN Creed that is found at www.in.gov/dnr/parklake/6329.htm. Remind participants what is required to obtain certification as an Indiana Master Naturalist including certificate, pin, and newsletter subscription.
- 18. Plan an icebreaker/get acquainted activity for the first session to help participants learn about each other and prepare for working together.



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In wilderness I sense the miracle of life, and behind it our scientific accomplishments fade to trivia.

- Charles A. Lindbergh, Life, 22 December 1967

The IMN Course: Step-by-Step

- 19. Prepare an on-site "open book" quiz, based on the course content, for the final session. You can ask each speaker to provide you with some appropriate questions, or you can design this final quiz based on what you heard during each session. A grade of 70% or higher is required to pass for certification. This is not to be hard.
- 20. At the last session, make time to remind participants about the requirements for volunteer service and distribute the volunteer hours forms. Also at the last session, ask participants to complete a course evaluation form. Give the final quiz/test. Be sure to let them know about the Indiana Master Naturalist email listserve that is available for all class participants, and about the IMN logo items that are available for those who complete volunteer hours and get certified.
- 21. If possible, provide a list of, or suggestions for, volunteer opportunities both local and statewide to students .
- 22. After the workshop, complete the workshop report form and the student workshop roster (forms on the website), and return them along with copies of the course evaluation forms to the IMN state coordinator with the total administrative fee (\$10/participant). If your agency requires an invoice for submission of payment, please let the IMN state coordinator know. You will receive a receipt letter.
- 23. Enter names and addresses of all course participants in a locally-maintained database so you can contact them in the event we develop advanced courses or other materials in the future. Stay in touch with your class participants as much as your time allows, and if they have an interest in organizing "reunions" or regular meetings, assist as you can with that effort. Keeping them connected with you and with each other can help us link them with future volunteer opportunities as well.
- 24. Send thank you notes to each of your speakers.
- 25. As course participants complete volunteer service, notify by email or mail the IMN state coordinator and provide a copy of volunteer service records for the individual (to include name, address and e-mail). Required volunteer service is a minimum 24 hours including a minimum of 12 hours in Indiana. The IMN state coordinator will then send a pin and email a certificate to each newly certified Indiana Master Naturalist (unless you notify the coordinator that you wish to conduct a graduation ceremony and present the pins and certificates yourself).
- 26. Provide local media with the opportunity to photograph the presentations of pins & certificates—this will be good publicity for future workshops that you might host!
- 27. An FAQ on hosting an IMN workshop can be found at www.in.gov/dnr/parklake/6329.htm. This is a great summary of questions and answers on how to host a class.



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In June as many as a dozen species may burst their buds on a single day. No man can heed all of these anniversaries; no man can ignore all of them.

- Aldo Leopold

IMN Course Forms

The latest version of all forms can be downloaded from the "Indiana Master Naturalist forms" link on the IMN Website at www.in.gov/dnr/parklake/6329.htm .

These forms include:

- FAQ on hosting an IMN workshop—a great summary of questions and answers on how to host a class.
- Workshop Application—to be completed for approval by the IMN Advisory Council if your agency wishes to host an IMN workshop.
- Workshop Roster—to be completed at the end of the class with names, addresses and other contact information for all participants and sent to the IMN Coordinator
- IMN Creed—to be distributed to each student for signature at the introductory class for each workshop. After the host ensures that it is signed, students may keep the form.
- Student Workshop Evaluation—to be completed by each student at the end of the workshop. Copies should be provided to the IMN Coordinator.
- Instructor Evaluation—to be completed by each student after each session. Copies can be kept in your local files for future reference.
- Workshop Review Form—to be completed by the class host and submitted to the IMN Coordinator. This is your review of the overall class and planning process.
- Volunteer Hours Record—have your students use this form to document their volunteer hours and submit it for certification when hours are complete.
- Instructor Guidelines—provide each speaker with a copy of these guidelines to help them tailor their presentation for your group.

If you have questions or need additional information, please contact:

Jody Heaston Indiana State Parks Volunteer Coordinator Ouabache State Park 4930 E. State Rd 201 Bluffton, IN 46714 Phone: 463-203-6562

Email: jheaston@dnr.in.gov (best way to contact)



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-Alfred Bernhard Nobel

Advanced IMN Program

Current IMN state coordinator Jody Heaston, IDNR State Parks Volunteer Coordinator Ouabache State Park, 4930 E. State Rd 201, Bluffton, IN 46714 Phone: 463-203-6562 Email: jheaston@dnr.in.gov ADVANGED
Indiana Master Naturalist

Keep checking the IMN Graduates site for updates! http://www.in.gov/dnr/parklake/6328.htm

What is the Advanced IMN program?

To achieve Advanced IMN, one needs to complete a minimum of 30 hrs of volunteer time annually and 8 hrs of education time annually (training/workshops presented by IMN Hosts, city/county/state parks, or other natural resources agency).

Payment of an annual \$10 administrative fee of each year, automatically puts you as an Active IMN working toward the Advanced level. To accomplish the Advanced IMN, a minimum of 30 hrs of volunteer time plus 8 hrs of education time has to be turned in by December 22 of that year to receive the advanced certificate and pin. Payment can be made at any time of year but needs to be turned in by December 22.

Where do I submit my volunteer and education hours to achieve Advanced IMN?

Your 30 hours of volunteer time and 8 hours of education time (any type of Naturalist led, IMN class or county, city, state park nature program) need to be submitted by email to Jody Heaston by Dec. 22 of the year you wish to be considered for the Advanced level. All that is needed is to go to the IMN Graduates page and click on Jody Heaston's email. Email her your hours, name, address, host name and class year, a <u>brief description</u> of where you did your volunteer time and education time. It is that simple! We hope to have a database on the website in the future.

Do I need to turn in a volunteer hour sheet with signatures for my Advanced hours? There is no need to turn in a volunteer hours sheet or get signatures. However, your original class host may also want to follow your progress. He/she might want you to send a copy to them for their records. Check in with that individual to see.

Can you explain the education hours?

Any of the Project WET, WILD, Learning Tree, etc. courses are great examples of education time. You may get your 8 hours of time in a variety of ways as long as you are a student advancing your learning and love of the environment. Many nature programs are offered though county, city and state parks too like Eagle days, spring wildflower hikes, lady bug house workshops, archeology days, fossil festivals, etc. Here is a link to the State Parks and Reservoirs special event calendar http://www.in.gov/dnr/parklake/3282.htm. Just contact the county, city, state park in your area for their list of programs and pick your favorites!

You can also sit in on a scheduled IMN class in the area as long as you contact the host to see if there is room for you. (You may be charged a small fee.) Some parks that have many volunteers offer training days, like tree hikes, importance of the park's archeology history, even leading preschool hikes. Those would work too for education time- again you are a student learning.

Webinars (not web videos) conducted by natural resources professionals/educators that are at least one hour in length will be accepted. A limit of 2 hours of webinars can be used for education time.

We do hope in future to offer education programs specific for Advanced IMN's. Those would be sent out over the listserv. Sessions at the IMN Annual Gathering will apply toward Advanced hours.

Does our IMN host have to approve the education choices?

Your education time or program choice does not have to be approved; however, if you have a question regarding whether it applies, please contact the coordinator.

What if I am helping a naturalist with an education program? Does that count for education time or volunteer time?

If you are helping a naturalist/park staff with a workshop, for example you are passing out papers/supplies, keeping track of attendance, showing people to the restroom, etc., then you are doing volunteer time because you are helping.

Where can I do volunteer time?

Volunteer hours apply to the same natural resource agencies or organizations as they always have, your host should have given you a list or some ideas of places in your area.

How do I keep updated on the Advanced Program?

Frequently check the IMN graduates website as it will be updated as the program develops. Make sure you are on the IMN email list (you can sign up from the IMN graduates website). Be a fan of the IMN facebook page. Don't be afraid to email IMN state coordinator questions.

Can I use a credit card to pay the annual \$10 fee?

Yes, the IMN money goes into the Indiana Natural Resources Foundation where it is kept for us. Go to https://www.indiananrf.org/program-fees/ to pay online.

If I took a class this year and became certified, can I still strive for Advanced IMN in the same year?

Yes, if that student thinks they can become advanced by the end of the same calendar year and would like to strive for that then they can continue to volunteer and take education programs as listed above. They would have to pay \$10 Advanced fee when turning in the Advanced hours by the of that calendar year.

Do you have specific questions about the Advance IMN program? Please email IMN state coordinator listed at the top of FAQ.