



Standards Correlations

Wonderful Wetlands 3rd - 12th

Program Synopsis

Immerse students in a wetland ecosystem by putting on waders to dip for small animals, identifying these critters and hiking around the wetland. Throughout each activity and game, students recognize physical and biological components of each wetland type and the important functions of wetlands.

Indiana Academic Standards for Science

3rd Grade

LS2.A | **Interdependent Relationships in Ecosystems:** Populations live in a variety of habitats, and change in those habitats affects the organisms living there (3-LS4-4)

4th Grade

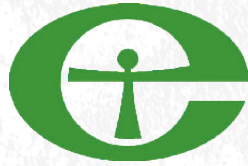
LS1.A | **Structure and Function:** Plants and animals have both internal and external structures that serve various functions in growth, survival, behavior, and reproduction. (4-LS1-1)

5th Grade

LS2.A | **Interdependent Relationships in Ecosystems:** The food of almost any kind of animal can be traced back to plants. Organisms are related in food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plants parts and animals) and therefore operate as "decomposers." Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem. (5-LS2-1)

ESS3.C | **Human Impacts on Earth Systems:** Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)

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Middle School

LS2.B

Cycles of Matter and Energy Transfer in Ecosystems: Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem. Transfers of matter into and out of the physical environment occur at every level. Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments. The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem. (MS-LS2-3)

LS2.C

Ecosystem Dynamics, Functioning, and Resilience: Ecosystems are dynamic in nature; their characteristics can vary over time. Disruptions to any physical or biological component of an ecosystem can lead to shifts in all its populations. (MS-LS2-4)

LS2.C

Ecosystem Dynamics, Functioning, and Resilience: Biodiversity describes the variety of species found in Earth's terrestrial and oceanic ecosystems. The completeness or integrity of an ecosystem's biodiversity is often used as a measure of its health. (MS-LS2-5)

High School

ESS3.C

Human Impacts on Earth Systems: The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources. (HS-ESS3-3)

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Indiana Environmental Literacy Guidelines

for up to 8th Grade

Questioning, Analysis and Interpretation

Identify specific environmental questions, problems, or situations related to local, national and global environmental issues.

Classify, organize, and display data and information in ways that help others be able to understand, analyze and interpret the data.

Design focused environmental investigations using appropriate measurements, observations and tools.

Knowledge of Environmental Process and Systems

Explain how humans' use of our resources can impact the environment and deplete resources.

Explain the difference between point and nonpoint source pollution.

Describe major ecosystems of Indiana.

Skills for Understanding and Addressing Environmental Issues

Identify different forms of action that citizens can take: actions in the economic, political, and legal spheres; actions designed to directly improve or maintain the environment; or actions that persuade others to take action.

Describe and explain specific environmental issues, including the history and origins of an issue, actions that have been taken to address the issue, the effects of these actions, and the current situation.

Personal and Community Action

Create and put into action a personal plan for themselves and their families for effective environmental stewardship.

Develop a sense of place and understand their unique position in the global environment.

Expand their personal connections with their local environment.

Document prepared by Merry Lea according to current [Indiana Academic Standards](#) from the Indiana Department of Education website and according to [Indiana Environmental Literacy Guidelines](#) from the Environmental Education Association of Indiana.



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Indiana Environmental Literacy Guidelines

for up to 12th Grade

Questioning, Analysis and Interpretation

Develop, modify, clarify, and explain questions about important environmental issues, and describe why and how they arrived at those questions.

Organize and display data and information using a variety of technology and media, always paying attention to accuracy and scale.

Use appropriate problem solving methods, tools, and technology to do the investigations.

Knowledge of Environmental Process and Systems

Assess how changes in the availability and use of natural resources (especially water and energy sources) will affect society and human activities such as transportation, agricultural systems, and manufacturing.

Analyze the factors that determine carrying capacity (the number of organisms that can exist in a given area).

Predict how changes in the environment will impact populations.

Skills for Understanding and Addressing Environmental Issues

Define and clearly articulate environmental issues, taking into consideration connections to other issues, how widespread its effects are, and whether it is unique to a particular area.

Compare the effects of natural and human-caused activities that contribute to or challenge an ecologically and economically sustainable environment.

Design and conduct a field investigation to gather information and data on an environmental issue in order to guide decisions on action steps.

Personal and Community Action

Articulate their personal beliefs regarding their relationship to the environment and how they arrived there by citing personal experiences, alternative viewpoints, and the research of scientifically-relevant sources.

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