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JCCB EE Programs matched with Iowa Core Curriculum Standards

6th – 8th Grade

Deadly Links

Method:

Students become hawks, shrews, and grasshoppers a physically active game to learn how pesticides enter the food chain. *This program comes from Project WILD.*

Objectives: At the end of this activity, students should be able to:

1. Give examples of ways in which pesticides enter the food webs
2. Describe possible consequences of pesticides entering food webs
3. Describe how regulations attempt to control pesticide use
4. Relate a animal's dietary needs to its place in the food web

Iowa CORE:

- Science
 - Life Science
 - Understand and apply knowledge of Interdependency of organisms, changes in environmental conditions, and survival of individuals and species
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues

Little Red Takes Many Paths

Method:

Students will compare and contrast different versions of the story "Little Red Riding Hood" to develop inferences about how different cultures viewed wolves. After the activity students will examine several wolf items such as a fur, skull, track molds, etc. We will also discuss varying views of wolves today.

Objectives: At the end of this activity, students should be able to:

1. Explain how cultural values and current events/personal experience influence attitudes towards wildlife
2. List several adaptations of a wolf

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop descriptions, explanations, predictions, and model
 - Think critically and logically to make the relationships between evidence and explanations
 - Life Science

- Understand and demonstrate the knowledge of the social and personal implications of environmental issues
- Reading Standards for Informational Text
 - Key Ideas and Details
 - Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text
 - Determine a theme or central ideas of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments
 - Compare and contrast texts in different forms or genres

Skulls

Method:

Students will examine several skulls and compare the dental structure of the skulls. Students will list their observations. Students will compare pictures of the animals and match with the skulls with the pictured animal.

Objectives: At the end of this activity, students should be able to:

1. Describe the differences in dental structure of carnivores, herbivores and omnivores
2. Describe the difference in muzzle structure of members of the felis and canis families

Iowa CORE:

- Science
 - Life Science
 - Understand and demonstrate knowledge of the complementary nature of structure and function and the commonalities among diverse organisms.
 - Science as Inquiry
 - **Use evidence to develop descriptions, explanations, predictions, and models (to do model, we would need to time to have students draw pictures of animal skulls that depict OCH)**

Chain Reactions (formally called Suitcases for Survival)

**Pre-visit activity – we will provide teachers with a *Test Your Wildlife Consumer IQ* to give to your students prior to our visit.

Method:

Students will play a game to recognize ways that species are threatened by the interaction of unregulated wildlife trade with other ecological problems. Real confiscated artifacts will be used during the program.

Objectives: At the end of this activity, students should be able to

1. Identify multiple ways that wildlife trade can affect biodiversity
2. Recognize ways that threats to some species can be amplified by the interaction of unregulated wildlife trade with other ecological problems

Iowa CORE:

- Science
 - Science as Inquiry
 - Think critically and logically to make the relationships between evidence and explanations
 - Life Science
 - Understand and demonstrate knowledge of the interdependency of organisms, changes in environmental conditions, and survival of individuals and species

- Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Reading Standards for Informational Text
 - Key Ideas & Details
 - Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text
 - Determine a central idea of a text and how it is conveyed through particular details
 - Determine the meaning of words and phrases as they are used in a text
 - Analyze how a particular sentence, paragraph, or section fits into the overall structure of a text and contributes to the development of the ideas

Environmental Education Skills

- Environment and Society
 - Demonstrate and understanding of resources and describe various sources and origins of resources they use in their lives
- Decision making and citizenship skills
 - Consider whether they believe action is needed in particular situations and whether they think they should be involved
 - Learn the basics of individual and collective action
 - Evaluate the results of actions
- Personal and civic responsibility
 - Understand that they have responsibility for the effects of their actions

Alien Invaders!

Method:

Students will complete sentence puzzles as an introduction, then read descriptions and examine actual examples of various non-native species from their area to determine characteristics of invasive species and control methods that are used to reduce the species' impacts.

Objectives: At the end of this activity, the students should be able to

1. Identify at least three invasive species that are found in their locale
2. Explain the differences between native and non-native species and list characteristics that make a non-native species invasive
3. Describe problems associated with invasive species
4. Describe methods used to control at least one invasive species

Extension:

Take class to nearby location where they can do a service learning project and remove invasive species

Iowa CORE:

- Science
 - Science as Inquiry
 - Use evidence to develop descriptions, explanations, predictions, and models
 - Think critically and logically to make the relationships between evidence and explanations
 - Life Science
 - Understand and demonstrate knowledge of the complementary nature of structure and function and the commonalities among diverse organisms

- Understand and demonstrate knowledge of the interdependency of organisms, changes in environmental conditions, and survival of individuals and species
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Reading /Standards for Informational Text
 - Determine the meaning of words and phrases as they are used in a text

The Birds and the Bees (mostly the Bees)

Method:

Students will use charts and maps to investigate characteristics of various plants relative to pollinators and changes in vegetation cover in Iowa. They will use this information to discuss how changes in land use may affect the presence of pollinators. At the end of the activity they will construct nesting blocks for native bees and take steps to place the blocks in appropriate locations.

Objectives: At the end of this activity, the students should be able to:

1. State the importance of bees and other pollinators for our food sources
2. Discuss concerns that farmers, gardeners and scientists have concerning the decreases in pollinators in North America
3. Take steps to improve habitat for pollinators

Iowa CORE:

- Science
 - Science as Inquiry
 - Identify and generate questions that can be answered through scientific investigations
 - Select and use appropriate tools and techniques to gather, process, and analyze data
 - Incorporate mathematics in science inquiries
 - Use evidence to develop descriptions, explanations, predictions, and models
 - Life Science
 - Understand and apply knowledge of the complementary nature of structure and function and the commonalities among organisms
 - Understand and apply knowledge of interdependency of organisms, changes in environmental conditions, and survival of individuals and species
 - Understand and demonstrate knowledge of the social and personal implications of environmental issues
- Math – Data Analysis
 - Represent data using line plots
- Social Studies – Geography
 - Understand the use of geographic tools to locate and analyze information
 - Understand how physical processes and human actions modify the environment and how the environment affects humans
- Social Studies – History
 - Understand the effect of economic needs and wants of individual and group decisions
- 21st Century Skills
 - Communicate and work productively with others
 - Adjust to various roles and responsibilities and understand the need to be flexible

Environmental Education Skills

- Questioning, analysis and interpretation skills

- Locate and collect information about the environment and environmental topics from a variety of sources
 - Describe data and organize information to show relationships and patterns
- The living environment
 - Explain basic ways in which organisms are related to their environments and to other organisms
- Environment and society
 - Identify ways people depend on, change, and are affected by the environment
- Skills for understanding and addressing environmental issues
 - Speculate about and explore the social, economic, and environmental consequences of issues and propose solutions to them
 - Identify and evaluate alternative approaches to resolving issues
- Decision making and citizenship skills
 - Examine and express their own views on environmental issues
 - Consider whether they believe action is needed in particular situations and whether they think they should be involved
 - Learn the basics of individual and collective action, by participating in close-to-home issues of their choosing
 - Evaluate the results of actions, understanding that civic actions have consequences
- Personal and civic responsibility
 - Understand that they have responsibility for the effects of their actions