



## JCCB EE Programs matched with Iowa Core Curriculum

# Kindergarten – 2nd Grade

### Feathers, Fossils, & Fuzz

Kindergarten

Method:

Students will learn about textures in nature and be able to describe and sort natural items that are rough, smooth, hard, and soft.

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

1. Describe if an item is rough, smooth, hard, or soft
2. Determine that an item can be described by more than one word
3. Identify at least 5 natural items

Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the characteristics of living things and how living things are both similar to and different from each other and from non-living things
- Mathematics
  - Measurement & Data
    - Classify objects and count the number of objects in each category

### Are We the Same?

Kindergarten

Method:

Students will observe the difference in animal groups by sorting real artifacts into groups (mammals, reptiles, birds, fish, amphibian, and insects). Students will learn the similar characteristics of animals in each group.

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

1. List at least 1 characteristic of each group of animals
2. Describe the differences between the groups
3. Describe similarities of animals within a group
4. Sort animals into their correct group

Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment

- Life Science
  - Apply and understand the characteristics of living things and how living things are both similar to and different from each other and from non-living things
- Mathematics
  - Measurement & Data
    - Classify objects and count the number of objects in each category

## **Where's Your Winter Coat?**

**Kindergarten**

### Method:

During an interactive program with hands-on items, students will learn how animals of Iowa survive the winter through migration, hibernation, and adaptations.

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

1. Define the terms migration and hibernation
2. Explain at least 3 adaptations of animals for winter survival
3. Determine what at least 5 animals do in the winter to survive

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

## **The Pond Builder**

**Kindergarten**

### Method:

During an interactive program, students will learn about the adaptations that help the beaver “do its job” in nature. Real beaver items will be passed around.

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

1. List at least 4 adaptations a beaver has to help it survive
2. Describe where a beaver lives
3. Explain how a beaver can alter a habitat

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

## Turkey's Gift to the People

Kindergarten

### Method:

Through a story and turkey effects, students will learn more about this creature of Iowa woodlands. A great Thanksgiving time tale!

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

1. Explain what each animal's job was in the story and why that was important
2. Describe at least 5 characteristics of a wild turkey

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment
- Literacy
  - Reading
    - Key Ideas and Details
      - With prompting and support, ask and answer questions about key details in a text
      - With prompting and support, identify characters, settings, and major events in a story
    - Craft and Structure
      - Ask and answer questions about unknown words in a text

## The First Dog

1<sup>st</sup> Grade

### Method:

A story, recording of wolf howls, a wolf skin, and other materials help the students visualize this wild ancestor compared to our pet dogs. The program is designed to encourage reading to "learn more about it".

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

1. Describe how dogs and wolves, coyotes, and foxes are similar
2. Describe how dogs and wolves, coyotes, and foxes are different
3. Describe at least 5 characteristics about wolves

### Iowa CORE:

- Science
  - As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment.
- Literacy
  - Reading
    - Key Ideas and Details
      - Ask and answer questions about key details in a text.
    - Craft and Structure
      - Ask and answer questions to help determine or clarify the meaning of words and

phrases in a text.

## Snake Sense

1<sup>st</sup> Grade

### Method:

How does an animal with no ears, no fingers, and not much of a nose use its senses to find out about the world around it? Students will learn all about snakes and reptiles through hands-on materials like real snake skin, a snake skull, and other snake items. (We have 2 live snakes to bring along per your request!)

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

1. Describe physical characteristics of a reptile
2. List at least 4 adaptations of a snake
3. Explain why snakes are important for an ecosystem

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

## Bats

1<sup>st</sup> Grade

### Method:

We will discuss myths of bats with students and explain the difference between myths and facts. A real bat, bat effects, and a game help bring about a change in attitude and illustrate how these amazing animals are truly important to our ecosystem.

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

1. Explain what bats in different parts of the world eat
2. Describe why bats are an important part of our ecosystem
3. List at least 5 traits of bats

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

## Build a Bird Feeder

1<sup>st</sup> Grade

### Method:

Students will make simple feeders to take home. An illustrated checklist will be provided to help them recognize common birds that may visit their feeders.

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

1. List at least 5 birds that spend their winter in Iowa
2. List at least 3 kinds of seeds that people set out for birds in the winter

### 3. Describe how to make a bird feeder

#### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment
    - Apply and understand ways to help take care of the environment
- 21<sup>st</sup> Century Skills
  - Employability Skills
    - Develop initiative and demonstrate self-direction in activities
    - Recognizes different roles and responsibilities and is open to change
    - Communicate and work appropriately with others to complete tasks

## **Animal Homes**

**1<sup>st</sup> Grade**

#### Method:

What do animals need to survive? Food, water, shelter and space are the four basic needs. We'll focus on the need for shelter and look at a variety of animal homes from "apartments" to "mobile homes". The students will take a tour of some animal homes.

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

1. Explain what habitat means
2. List the 4 basic components an animal needs in its habitat
3. Explain in detail what shelter is
4. Describe at least 4 animal homes they saw

#### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment
    - Apply and understand ways to help take care of the environment

## **Endangered Species**

**2<sup>nd</sup> Grade**

#### Method:

Students will participate in a discussion about examples of threatened and endangered species in Iowa; the factors that have led to their decrease in numbers; impacts of loss of biodiversity and the actions that can be taken to protect biodiversity.

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

1. Name at least three animals or plants of special concern in Iowa (endangered, threatened, or re-introduced)
2. Discuss factors that can lead to organisms becoming endangered or threatened
3. Discuss several possible impacts of loss of biodiversity on an ecosystem

#### 4. Discuss actions that individuals and societies can take to protect biodiversity

##### Iowa CORE:

- Science
  - Life Science
    - Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment
- Social Studies
  - Understand economic needs and wants affect group decisions
- Environmental Education
  - Identify ways people depend on, change and are affected by the environment

### **Bugs, Bugs, Bugs**

**2<sup>nd</sup> Grade (or 3<sup>rd</sup> Grade)**

##### Method:

Students will participate in discussion about insects and their place in the food chain. Insect exoskeletons, chrysalides, insect homes, and other items are used to examine the natural history of our six-legged neighbors.

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

1. Explain the characteristics of an insect
2. List the body parts of an insect
3. Describe the importance of insects in our ecosystem

##### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand life cycles of plants and animals
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

### **Forests Are More than Trees**

**2<sup>nd</sup> Grade**

##### Method:

Students will watch a slide show that illustrates the many services and materials that forests provide for humans, wildlife, and the health of our environment. (We can leave supplies for a follow-up art activity per the teacher's request.)

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

1. Describe the relationship between forests and the animals that live there
2. Explain how forests improve air and water quality
3. List ways forests provide recreation for people
4. Recite examples of how forests are an important resource for people

##### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science

- Apply and understand ways to help take care of the environment
- Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment

*Materials and instructions are left with the teachers and class to complete collages about Wildlife, Products, and Recreational benefits of forests (by request).*

## **This is GREAT Water**

**2<sup>nd</sup> Grade**

### Method:

Students will use ground water models to illustrate sources of drinking water and investigate how water resources can be polluted.

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

1. Describe potential pollution sources of ground water
2. Explain ways we to prevent pollution of our drinking water

### Iowa CORE:

- Science
  - Science as Inquiry
    - Plan and conduct simple investigations
    - Use tools to gather data and extend the senses
    - Use data to construct reasonable explanations
    - Communicate investigations and explanations (orally)
  - Life Science
    - Apply and understand ways to help take care for the environment
- 21<sup>st</sup> Century Skills
  - Employability Skills
    - Communicate and work appropriately with others to complete tasks

## **The Lunch Box Program**

**2<sup>nd</sup> Grade & 3<sup>rd</sup> Grade**

### Method:

We will bring two examples of lunches to your classroom and guide your students through a comparison of the amount of trash each one produces and a comparison in cost for bulk packaging versus individual packaging. The program encourages students to make wise choices when selecting foods for their lunches.

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

1. Explain the difference between individual and bulk packaging
2. Describe the cost difference between individual and bulk packaged items
3. List 4 ways they can reduce their garbage when packing a lunch

### Iowa CORE:

- Science
  - Science as Inquiry
    - Use mathematics in scientific inquiry
- Mathematics
  - Operations and Algebraic Thinking
    - Represent and solve problems involving addition and subtraction
- 21<sup>st</sup> Century Skills

- Financial Liability
  - Recognize various ways to save and the reasons individuals decide to save
  - Distinguish between appropriate spending choices
  - Identify monetary resources and distribution options for those resources

## Trumpeter Swans

2<sup>nd</sup> Grade (or 4<sup>th</sup> Grade)

### Method:

Students will participate in a discussion of the life history of trumpeter swans and the history of their populations in North America, and Iowa in particular. (For classes that have read *The Trumpet of the Swan* we will also discuss which details of the story are not based on fact.)

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

1. Describe the habitat needs of trumpeter swans
2. Discuss the history of swan populations in Iowa from settlement by Europeans to the re-introduction of swans during recent decades
3. Relate how efforts by groups and individuals can combine to effect change

### Iowa CORE:

- Science
  - Science As Inquiry
    - Ask questions about objects, organisms, and events in the environment
  - Life Science
    - Apply and understand the basic needs of plants and animals and how they interact with each other and their physical environment.
    - Apply and understand ways to help take care of the environment
- Reading Standards for Literature (for classes that have read the story)
  - Key Ideas and Details
    - Ask and answer such as questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text
    - Recount stories, including fables and folktales and determine their central message, lesson, or moral

## Monarchs

Kdg – 3<sup>rd</sup> Grade

### Method:

Students listen to a description of the monarch butterfly life history and then actively assist with the capture and tagging of monarchs.

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

1. Describe the life cycle of the monarch butterfly as it relates to their migration to Mexico
2. Identify habitat needs for monarch butterflies and their caterpillars
3. Demonstrate how to capture and handle butterflies without causing harm to the butterflies
4. Describe the process of tagging monarchs and recording information from the tagging process
5. Describe how tagging helps scientists gather information about monarch populations and seasonal movements

### Iowa Standards

- Science
  - Science as Inquiry
    - Ask questions about objects, organisms, and events in the environment



- Communicate investigations and explanations
- Follow appropriate procedures
- Life Science
  - Understand and apply the knowledge of the characteristics of living things
  - Understand and apply knowledge of life cycles of plants and animals
  - Understand and apply knowledge of the basic needs of plants and animals and how they interact with each other and their physical environment
  - Understand and apply knowledge of ways to help take care of the environment
- 21<sup>st</sup> Century Skills
  - Communicate and work appropriately with others to complete tasks
- Geography
  - Understand the use of geographic tools to locate and analyze information about people, places, and environments

### Environmental Education Skills

- Environment and Society
  - Identify ways people depend on, change, and are affected by the environment