

## **Connecting to the *Common Core Standards* (NGAC and CCSSO 2010):**

This section provides the Common Core for English Language Arts and/or Mathematics standards addressed in this column to allow for cross-curricular planning and integration. The Standards state that students should be able to do the following at grade level.

### **English/Language Arts**

#### Reading Standards for Informational Texts K–5 – Key Ideas and Details

Grade 1: “ask and answer questions about key details in a text.”

Grade 4: “refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.”

#### Language Standards

#### Writing Standards Research to Build and Present Knowledge

Grade K: “with guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.”

Grade 4: “recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.”

#### Writing Standards K–5- Text Types and Purposes

Grade K: “use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.”

Grade 4: “write informative/explanatory texts to examine a topic and convey ideas and information clearly.”

Vocabulary Acquisition and Use is one of the standards for language. This particular standard is across grade levels. “Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade [appropriate] reading and content.”

#### Speaking and Listening – Comprehension and Collaboration

Grade 1: “participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.”

Grade 4: “Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher led) with diverse partners on *grade 4 topics and texts*, building on others’ ideas and expressing their own clearly.”

#### Speaking and Listening Standards K–5—Presentation of Knowledge and Ideas

- Kindergarten: “add drawings or other visual displays to descriptions as desired to provide additional details.”

- Grade 1: “add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.”

Grade 5: “Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.”

Furthermore, the Common Core for ELA provide a standard related to the Range of Text Types for K–5 where it indicates that students in K–5 should apply the Reading standards to a wide range of texts to include informational science books

## **Connecting to the *Next Generation Science Standards* (NGSS Lead States 2013)**

### **K–2 Counting Birds**

## 2-LS4 BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<https://www.nextgenscience.org/dci-arrangement/2-ls4-biological-evolution-unity-and-diversity>

*The chart below makes one set of connections between the instruction outlined in this article and the NGSS. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities. The materials, lessons, and activities outlined in the article are just one step toward reaching the performance expectations listed below.*

### Performance Expectation

2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.

### Science and Engineering Practice

#### Planning and Carrying Out Investigations

Students observe birds in their local area, try to identify them, and select one bird to sketch and describe based on characteristics.

### Disciplinary Core Idea

#### LS4.D: Biodiversity and Humans

There are many different kinds of living things in any area, and they exist in different places on land and in water.

Students observe birds in a video and determine which card matches the bird based on the characteristics.

### Crosscutting Concepts

#### Structure and Function

Students examine similar looking birds from the card set and determine how the birds are similar and how they are different.

### 3-LS4 BIOLOGICAL EVOLUTION: UNITY AND DIVERSITY

<https://www.nextgenscience.org/dci-arrangement/3-ls4-biological-evolution-unity-and-diversity>

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#### Performance Expectation

3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

#### Science and Engineering Practice

Engaging in Argument from Evidence

Students develop a Claim-Evidence-Reasoning statement about why bees are important to food production after researching information.

#### Disciplinary Core Ideas

<p>LS4.D: Biodiversity and Humans</p> <p>Populations live in a variety of habitats, and change in those habitats affects the organisms living there.</p> <p>LS2.C: Ecosystem Dynamics, Functioning, and Resilience</p> <p>When the environment changes in ways that affect a place’s physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die.</p>	<p>Students describe the importance of the pollination of flowers by bees in our environment.</p> <p>Students explain how humans are impacting the habitat of bees and contributing to colony collapse.</p>
<p>Crosscutting Concept</p>	
<p>Systems and System Models</p>	<p>Students explain what would happen to the production of some food products if bees continue to die.</p>