



Haikubox Lesson Grades 4/5

What Does a Bird Need?

Engage

Show Cornell live cam of owls <https://www.youtube.com/watch?v=3XZ6k66r0ao>

Teacher: What do you notice?

Explore

Teacher: What do you think this book is about? As I read aloud, think about why birds would need to be saved?

Read aloud: Counting Birds, The Idea That Helped Save Our Feathered Friends by Heidi Stemple. https://www.amazon.com/Counting-Birds-Feathered-Friends-Naturalist/dp/1633226042/ref=sr_1_1?crid=1Z1CD5KOU09D2&keywords=counting+birds+temple&qid=1705343931&srefix=counting+birds+stemple%2Caps%2C116&sr=8-1



Teacher: How were birds saved during this story? Discuss at your table group what surprised you during this true story.

Introduce the Haikubox- These birds are identified by their bioacoustics. What do you think this word means? (Bio= life, acoustics= sound). Show different birds by the house and their songs. Do we see birds around school? How can you describe the birds around school? Show the Haikubox and share the tracking table for students to use.

Explain

Teacher: How does the identification of birds help ornithologists? A citizen scientist is someone who sends information to scientists for them to track information about a species, including where people see them. Citizen scientists are also called community scientists, because they are just regular people who are helping scientists. Show the Cornell information from the All About Birds website: <https://www.allaboutbirds.org/news/>

How can you be a community scientist? Students should share ideas at their table. Remind students about the Christmas Count on page 11. There is also the Great Backyard Bird Count on President's Day Weekend- <https://www.birdcount.org/>. How would the Haikubox help with this count? (Birds can be counted that we hear, but maybe cannot see.)

What do all living things need to survive? What does a bird need to survive? What might a bird use to help its own survival (eyes, ears)? How does a bird know where to find food or look for danger? Why would a bird make sounds – how could they help or potentially harm the bird? Compare the lists from table to table. What does our school ecosystem provide for the birds?

If the environment of an area does not provide what an animal needs, the animal can move or die off.

Students will create a table with 5 bird names that have shown up on the Haikubox at school. Take time every morning to check the birds that have been identified and add them to the table. What do you notice?

Evaluate

Students should be able to write 3-4 sentences making inferences from what the evidence (table) is showing after 5 days. Was there a time that the birds were here more often? Why might that be? How does that relate to what the bird needs to survive?

Elaborate

Take your data a step further by creating a graph using your data after 5 days. <https://nces.ed.gov/nceskids/createagraph/>

Which graph would be appropriate for this information- A bar graph, picture graph, circle graph, or line graph? If you need a way to remind students about the best way to display data, visit this site. <https://www.nytimes.com/column/whats-going-on-in-this-graph>

Share your findings- post the graphs and sentences around the school or on the school news to give other students an idea about the birds in your area.

Standards:

Next Generation Science Standards

4-LS1-2: From Molecules to Organisms: Structures and Processes: Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

4-LS1-2 From Molecules to Organisms: Structures and Processes: Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.

5-LS2-1: Ecosystems: Interactions, Energy, and Dynamics: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

National Council of Teachers of Mathematics

Data Analysis and Probability

Grades 3-5 Expectations: In grades 3-5 each and every student should –

- design investigations to address a question and consider how data-collection methods affect the nature of the data set;
- collect data using observations, surveys, and experiments;
- represent data using tables and graphs such as line plots, bar graphs, and line graphs;
- recognize the differences in representing categorical and numerical data.