Nature-Watch Activity Kit

Bird Wheel

(Nature Watch Kit #122)

Kit Contents

	Kit Size	
	25	**100**
Item:	Qty.	
Bird Wheel Sets (1 top + 1 bottom)	25	100
Bird Artwork Sheets	25	100
Brads	25	100
Bird Information Sheet	1	1
Instructor Manual	1	1

This page includes the Next Generation Science Standards (NGSS) mapping for this kit and Science, Technology, Engineering, and Math (STEM) extensions (on back) to use in adapting and extending this activity to other subject areas.

See Back for STEM Extensions

Next Generation Science Standards Alignment

K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change their environment to meet their needs.

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

3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS1-4. Use argument based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful animal and plant reproduction respectively.

MS-LS4-2. Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

This Nature Watch Activity Kit contains an Instructor Manual and materials to implement the curriculum. The kit was designed to be used with adult supervision only. Unsupervised use is not recommended.

Nature Watch 5312 Derry Ave. #R, Agoura Hills, CA 91301
800-228-5816 info@nature-watch.com www.nature-watch.com

Bird Wheel

(Nature Watch Kit #122)

STEM Extensions

Science

Draw pictures of eight different bird species that have interesting characteristics (such as a pelican's beak or a blue-footed booby's blue feet). Cut the pictures into three sections – one section for the head, one for the body, and one for the feet – and mix up the pieces. Try putting the correct pieces together to make the birds whole again. Then, just for fun, create imaginary birds that mix up the heads, bodies, and feet in different ways.

Choose a location where you often see birds. Each day for 10 days, watch the location for a half hour at the same time of day and record how many birds you see. If you can, record what kind they are, too, or just write down a description (size, coloring, etc.). Jot down some notes about their behavior. At the end of 10 days, review your data and reflect on what you saw. Why do you think birds like this location as a habitat? What would small birds like about it? Big birds?

Join in on a bird watching expedition in your area. Learn details about bird behavior from the knowledgeable birders and pay attention to their techniques. What did you learn about birds that you couldn't learn from reading a book or a website?

Technology

Record the songs of several birds that live in your area. Then, go online to find existing recordings of birdsongs (from birds you know live in your area) and try to match up the songs you recorded so that you can identify (or confirm) which bird it comes from.

Imagine that you were going to produce a five-minute mini documentary about a certain bird. Create a storyboard for the documentary, with sketches of the visual components and a transcript of the voiceover. Think about how you can get the important information and messages across and how you can use imagery to help viewers learn about birds and appreciate them.

Engineering

Choose a specific bird that lives in your region. Build a birdhouse for that specific kind of bird, taking into consideration what you know about its characteristics, needs, and behavior. Conduct some research if necessary.

Construct additional bird feeders like the types presented on page 2 of the activity kit manual, but try out different ingredients and see which ingredients attract the most birds or how different ingredients may attract different kinds of birds. You may need to set aside time to watch the feeders daily. If you have access to a motion-sensor wildlife camera, that will be helpful for this activity.

Math

Create graphs to visually represent the comparisons for "Comparing sizes" under the "Group Activities with Bird Wheels" section on page 3 of the manual. Then, see if your classmates can figure out what information you are trying to convey just by looking at the graphs.

Many birds migrate incredible distances. Do some research to find out about migration patterns of birds that live in your region. Rank them in order of the longest to the shortest migration routes. Based on the average lifespan of the birds, how far are they likely to fly over their lifetime? What is the average length that this set of birds migrates? Trace the migration routes on a map. Do any of them intersect?