

FLATHEAD AUDUBON SOCIETY BIRD VIDEO SERIES

EDUCATION TOOLS (January 2021)

In response to the COVID-19 pandemic, we at Flathead Audubon Society decided to take our Conservation Education Program in a "virtually" entertaining direction, with a both light-hearted and serious video series, and with our primary bird education messages front-and-center.

Professor Avian Guano, Bir.D. is our eccentric, slightly off-the-wall narrator -- doing his own brand of "edutainment" for middle-school-and-up ages (you won't realize you have learned something until it's too late!). The videos feature some gorgeous bird footage gathered by Birds in Motion, a local Montana nonprofit with the goal of video- documenting all of the bird species in North America!

Here is the link to all three videos:

<https://flatheadaudubon.org/educationvideos>

Birds Rock! Educational Tools

- 1) Research/discussion (related to #1) – investigate the estimates for the cost of crop damage from insects, and the cost of insect control using pesticides, and the negative side effects (human, animals/birds, environment) of using pesticides. Hold a discussion about balancing the pros and cons of insect control methods, and the impact on humans.
- 2) Research/discussion (related to #4) – Brainstorm the types of jobs that would be generated by birdwatching activity. Research the economics of birdwatching in Montana, the United States, and the world, especially exploring the jobs associated with this activity.
- 3) Bird music (related to #5) – select a bird with a distinctive song that appeals to you, and use your voice or whistle, an instrument, or a music-generating website to try to mimic or imitate the bird song. Give a classroom presentation of your finished product.
- 4) Investigation/Analysis (related to #6) – investigate bird migration: why birds migrate, which birds migrate and which don't, when and where they migrate, how they migrate (large groups, small groups, solo), distances traveled and why they are drawn to their final destination, risks and survival rates, special location systems and methods (seeing UV light and magnetic fields, memory and recognition, training by parents or group migration, etc.). Analyze their migration activity, and compare it to instances of human migration.
- 5) Problem solving comparison (Related to #6) - the teacher will locate an appropriate video about the problem-solving skills of the Corvid family of birds, in particular the Ravens. Following this video, have the class view a video about Human/Childhood Development and how and when humans develop similar problem-solving skills.

6) Discussion (related to #7). Use the saying “the canary in the coal mine” to discuss the meaning of this phrase, and then try to think of other ways that humans receive warning messages from nature through animals, birds, fish, plants, trees, algae, fungi, etc.

7) Creative writing – Following the viewing of Birds Rock! formulate a creative writing piece that reflects a personal perspective of the positive effects generated by the birds with whom we share the planet.

8) I Know This Bird – Following the viewing of Birds Rock!, use reliable sources (Audubon Society, or Cornell Lab of Ornithology website are reliable sources) to research a bird that is common to the Flathead Valley. Note: there is an educational trunk available through Flathead Audubon that presents information about the Common Birds of the Flathead. Research could include: description/photo, songs/calls, habitat used, feeding behavior, nesting behavior, conservation status, migration behavior, etc. Results could be shared as a written document or a classroom presentation.

Bird Trouble – Education Tools

1. Complete a Know/Wonder/Learned chart prior to, and after, watching the video.
2. Why would someone want to “control” insects? What are some of the reasons people might want to kill large numbers of insects? Research alternatives to “broadcast spraying” of insecticides.
3. Let’s be sure we understand the concept of “bioaccumulation”. What questions do you have about it?
4. Let’s review the components of Scientific Method. Why is it important to use Scientific Method when searching for facts or conclusions? What issues do you think might result from not following the Scientific Method?
5. What questions should we ask ourselves when assessing the reliability or validity of sources of information?
6. What are some things we might learn by looking at, or studying, data about birds? What could we learn about them and how they function in their world, and in our world?
7. What is a “citizen scientist”? How could the information gathered by citizen scientists help the real scientists? Do you know of any citizen science programs in our area, or would you like to participate in one? Where could we find information about citizen science projects in which we could participate?

8. How many different kinds of birds do you see that live in the same area in which you live? Should we do our own Bird Count over the next week? What would be our goal or purpose? How would we structure such a project?
9. How could we change what we do so we don't take over, or destroy, the habitat where birds live? In our valley? In our state? In our country? On our continent? In other parts of our world?
10. Why do different birds require different habitat? Why do they live where they do?
11. Let's look into how many cats there are in our animal shelters, explore the reasons they are there, and brainstorm solutions.
12. Let's recall all of the major causes of bird mortality, and explore why these are a cause of bird death. Let's brainstorm some ideas for reducing the death of the birds in the Flathead Valley, then we can compare our ideas to the ideas presented in the next video.
13. Let's review and discuss the maps about the loss of birds as a result of one, two, and three degrees Centigrade increase in global temperature. Why do you think birds are affected by an increase in temperature?
14. Can any of you imitate a bird call you've heard? Do you know the name of the bird? If we checked back in one week, do you think you could imitate the call of 3 different birds?

Bird Help! Education Tools

- 1) Starter activity. If you viewed Bird Trouble!, have students try to recall the 7 main reasons given for the decline of the bird population. If you didn't view Bird Trouble!, have students brainstorm the what might be causing lots of birds to die.
- 2) MIND MAP - While viewing Bird Help!, have students complete a Mind Map to record the 8 suggestions made about how they can help birds. It might be more efficient to have students prepare a template for their mind map prior to the viewing, rather than creating it during viewing, but it can be done either way. Depending on the time and resources your classroom has available, the template could be hand drawn, or prepared and printed using devices with this capacity. Many examples are available online, but students should feel free to personalize theirs, including using colors, including sketching, unique structuring, etc. If you have not discussed mind mapping as a student learning tool, this would be an opportunity to include this information.

At a minimum, the mind map needs to have a place for the title, and have 8 locations for listing the 8 ways to help, including some space to record their notes related to each helping idea.

Additional requirements could include:

- *a space to record at least 5 vocabulary words to explore after viewing (a compilation could become a classroom vocabulary list),

- *a space to record at least 3 questions you wonder about (these could be used for follow-up discussion)

- *a space to record at least 5 things you found to be notable, such as a graphic, statistic, quote, name, or brief statement that you easily noted. (these could be compiled for the class, to draw conclusions about what was the most notable, memorable content)

3) Math cross-curricular topic. Related to number 2 (window collisions), students could study a unit learning to calculate the force of inelastic collisions using data about the weight (mass), and speed of flight (velocity) of various birds. The University of Colorado (teachengineering.org) offers a lesson for grades 7-9 titled CRASH! BANG!.

4) Investigation of resources cited at the end of the video. Prepare an assignment requiring students to investigate one of the 5 organizations presented at the end of the video. These include: National Audubon Society, Cornell Laboratory of Ornithology, Montana Audubon, American Bird Conservancy, and Flathead Audubon Society. You could prepare a list of general questions, and require students to find the answers to a certain number of these questions, and share answers in class (one organization at a time), so all students learn something about each of the 5 organizations.

Thank you!!

