

The Birdman by Veronika Martenova Charles Teacher Study Guide

Suggested Exercise with *The Birdman*

(Spanning Life Systems curricula from grades 3 - 4)

The inter-relationships between animals and plants and their habitats

The following is a preparatory exercise to help introduce the subject matter of the book and set the tone.

"Birds are beautiful to the eye and pleasing to the ear, but do they play a more important role in the nature?"

Birds have inspired painters, musicians and poets for centuries. They have been used as international symbols of strength (the eagle), wisdom (the owl), peace (the dove), and pride (the peacock). Many ancient cultures have legends about ravens, cranes, swans and other birds that form an integral part of their cultures. But did you realize that without the birds our very existence on this planet would be threatened?

We suggest this classroom exercise take place before a reading of *The Birdman*, by Veronika Martenova Charles. New vocabulary is highlighted in bold.

Teacher asks students: "Who can tell me what they ate for breakfast this morning?"

Responses can be written on the board. Expected responses will include things like cereal with berries or sliced banana, orange juice, toast and strawberry jam, muffins, pancakes, a granola bar, etc.

Teacher asks: "Where do fruits for juices and jams, and grains for cereal and bread come from? Expect responses like farms, orchards, fields, trees, or the grocery store.

Teacher adds: "That's right. Fruits, vegetables and grains, or food crops, come from farmers fields and orchards all over the world."

Teacher asks: "Everyone please go over to the window. Can you see any farmers out there? Look closely." Students will likely be puzzled.

Teacher asks: "Well, how about birds (or bees)? Can you see any of them out there?" Wait until at least one student spots a bird.

Teacher asks: "What kinds of birds live in our area?" Repeat whatever students come up with – sparrows, starlings, crows, swallows, cardinals, owls, pigeons, gulls, etc.

Teacher adds: "Did you know that wild birds and flying insects are responsible for pollinating at least 80% of all the food crops that feed the world? Can anyone tell me what pollination is?"

Teacher confirms: "That's right. Pollination is how tiny seeds get moved from one plant to another, so that flowers, fruits, vegetables and grains can reproduce and grow. So birds, bees and other insects are helping farmers grow crops all over the world. Sometimes when there are too many insects, this can damage crops. Birds help control the number of insects by eating them and feeding them to their babies."

Teacher asks: "What happens when you catch a wild bird and put it in a cage? Or more importantly, what doesn't happen?"

Teacher confirms: "That's right. Not only does the bird feel trapped and helpless, but some crops may not grow, insects may overpopulate and if the bird is a parent, their babies may not be fed. Okay, let's return to our seats and read a story."

Read *The Birdman* aloud.

Background for Teachers

Insect pollination is a necessary step in the production of most fruits and vegetables that we eat and in regeneration of many forage crops used by livestock. Recent surveys document that more than 30 genera of animals -- consisting of hundreds of species of floral visitors -- are required to pollinate the 100 or so crops that feed the world. Only 15% of these crops are serviced by domestic honey bees, while at least 80% are pollinated by wild bees, birds and other wildlife. (According to the U.S. Department of Agriculture.)

Recent analyses of global inventories of biodiversity indicate that more than 100,000 different animal species -- and perhaps as many as 200,000 -- play roles in pollinating the 250,000 kinds of wild flowering plants on this planet. In addition to countless bees (the world contains an estimated 40,000 species of bees), wasps, moths, butterflies, flies, beetles and other invertebrates, perhaps 1,500 species of vertebrates such as birds and mammals serve as pollinators. Hummingbirds are the best-known wildlife pollinators in the Americas, but perching birds, flying foxes, fruit bats, possums, lemurs and even a gecko function as effective pollinators elsewhere in the world. We must learn to appreciate the benefits that a diversity of pollinators provides.

Birds catch insects in midair and forage for them on tree bark, leaves, twigs, and stems, and in leaf litter. Insects attracted to necklace pod and coffee colubrina attract many insect-eating birds. Some insect-eaters will visit feeders for suet and peanut butter mixtures. Many birds who do not typically eat insects as adults feed them to their young because insects provide more nutrition for growth.

Resource for teachers wishing to help students identify local bird species:

A Field Guide to the Birds of Eastern and Central North America (Turtleback)
by Roger Tory Peterson (Series Editor), Virginia Marie Peterson