

Discovery Guide

Michigan Wildlife

High School



Welcome to the University of Michigan Museum of Natural History!

These guides are intended to focus student attention and start conversations about topics in natural history.

Pre-visit tips

Please make copies of this guide for your students before coming to the museum. This will ensure that the proper number of guides are available for your group.

Bring pencils and clip boards or notebooks to write on.

Please divide your students into groups of about 5 to 10 students.

Provide the chaperones with a copy of the answer guide(s).

While Visiting

Encourage questions! If you cannot find the answer, ask the student host.

Encourage touch! People learn best when as many senses as possible are engaged in the learning process. Please look at, listen to, and even touch exhibits that are not behind barriers.

Encourage discovery! Remind students that it is not a race but an adventure of discovery.

In the Classroom

The following questions and prompts are designed to promote in-classroom discussion and writing across the curriculum.

Questions?

Please visit our website at www.ummnh.org or call us at 734.764.0480.

Answer Guide

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1. The female bird is camouflaged to reduce attention from predators, and the male is bright to attract females. This is known as sexual selection.

Different species of bird's beaks are different because they are adapted to eat different food types. Different beak shapes help reduce competition between species for food so more species can coexist.

2. 'Convergent evolution' means that similar ecological pressures (available food types, in this case) have resulted in similar beaks in groups which do not share a recent common ancestor.

3. The Great Gray Owl and Bald Eagle are similar because of the **color of their feathers, their forward facing eyes, curved claws, and curved beak.**

The Great Gray Owl can fly with less turbulence so this reduces noise so owl can approach prey at night without being heard.

4. An invasive species is a species that is non-native. Invasive species affect a food web by competing for food and reducing numbers of native species. Invasive species may also provide an alternative food source for predators and so increase their numbers.

5. Poison called lampricide kills sea lamprey larvae. But lampricide may kill other species or build up in the water.

6. 1/5th of the world's fresh water is in the Great Lakes. There are 150 native species and about 25 invasive species in the Great Lakes.

7. Algae > Snail > Pumpkinseed > Great Blue Heron
A producer captures inorganic energy (light) as organic energy (sugars), but does NOT make energy!

8. Decomposers are important because they break down organic material so that elements can be reused. High numbers of some decomposers like oscillitoria indicate high levels of pollution.

9. Sandhill cranes use mud to camouflage to reduce attention from predators, particularly when nesting.

10. Grey squirrel

11. The wolf and domestic dog are the same species and can interbreed to produce fertile offspring.

12. A spore is a single cell, whereas a seed is several cells
Fungi are more closely related to humans. They do not have chloroplasts, they use organic sources of energy (they are heterotrophic), they excrete enzymes to digest food, and their cell walls are made of chitin rather than cellulose.