

# Nature Quest

**Description:** Participants will need to know the common names, life cycles, habitat and trophic level (consumer, producer, decomposer) of 5 organisms in 4 different categories. They may prepare charts that they may take into competition based on those outlined in the rules. They will need to be able to answer some basic trivia involving natural history in an outdoor setting.

**Number of Participants:** 1-2

**Approximate Time:** 20-30 minutes

## **The Competition:**

1. Competitors will identify organisms by name from a list of select organisms which include:

**Birds-** Great Blue Heron, Downy Woodpecker, American Robin, Northern Cardinal, Red-tailed Hawk

**Reptiles and Amphibians-** Green Frog, American Toad, Eastern Painted Turtle, Eastern Box Turtle, Eastern Hog-nosed Snake

**Insects-** Order Odonata: Damselflies and Dragonflies, Order Coleoptera: Beetles, Order Diptera: Flies, Order Lepidoptera: Butterflies, Order Hemiptera: True Bugs

**Trees-** Silver Maple, Bigtooth Aspen, Red Oak, White Pine, Sugar Maple

2. Contestants will be asked questions about the group of animals to which certain specimens belong (ie: are they reptiles, birds, insects, etc.). This includes *orders* of insects. They may be asked to use a key or describe particular features that identify an organism.

3. Contestants will be asked questions about the feeding habits and foods of organisms on the list. This includes what they eat, whether they are a producer, consumer or decomposer and what type of consumer (herbivore, insectivore, omnivore, carnivore).

4. Contestants will be asked questions about the breeding habits and life cycles of organisms on the lists and habitats they use when breeding (for example where a bird nests).

5. Contestants will be asked about particular adaptations of organisms on the list that help them to live in a particular habitat.

6. Contestants will be asked general trivia questions about natural history.

7. The competition will take place outdoors and contestants will need to know their cardinal directions (compass rose).

**Scoring:** One point will be awarded for each correctly identified organism and each correctly answered question.

**Charts:** Each team or individual may bring a chart or charts listing all of the organisms and information

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about them into competition with them. One chart may be made for each group of organisms. Include the order for insects. You may not bring a field guide as your resource. See example below.

Insects				
Name of organism	Food/feeding habits	Life Cycle/breeding habits	Wetland Adaptations	Particular wetland relationships
Wetlands Butterfly Order Lepidoptera	Larva: water lillies Adult: flower nectar	Eggs layed on host plant in spring, summer caterpillar, chrysalis, adult hatches following spring	Larva feed only on water lillies. Chrysalis is formed underwater beneath the lilly leaf. Adults prefer the nectar of several wetland species	Intimately related to plants that only grow in particular wetland habitats

Links:

Butterflies: <http://www.butterfliesandmoths.org/>

Insects: <https://www.amentsoc.org/insects/fact-files/a-to-z-of-insects.html>

Reptiles and Amphibians: <http://www.michherp.org/miherps.html>, <http://www.biokids.umich.edu/critters/>

Birds : <http://www.audubon.org/field-guide> , <http://www.birds.cornell.edu/onlineguide/>

Resources:

Trees- Michigan Trees: A Guide to the Trees of the Great Lakes Region, Barnes and Wagner, University of Michigan Press

Birds- The Sibley Field Guide to Birds of Eastern North America, by David Allen Sibley, Knopf Doubleday Publishing Group

Insects- National Wildlife Federation Field Guide to Insects and Spiders & Related Species of North America, by Arthur V. Evans, Sterling Publishing

Reptiles and Amphibians- Peterson Field Guide to Reptiles and Amphibians of Eastern and Central North America, Fourth Edition, Powell, Conant, and Collins, Houghton Mifflin Harcourt