

# Wildlife

The biodiversity of animal species is vast. Each species has a specific ecological niche in order for them to thrive. Wildlife depends on the soil, aquatics and forests to survive. It is important to understand wildlife as an indicator of environmental quality.

## **What do you need to know for the competition?**

Here is a list of all the skills you will need to master the wildlife section.

## **Knowledge Base**

Some of the knowledge you will have after you master the wildlife section include:

- Identify needs for survival for common Ontario wildlife species; explain why a certain species' habitat requirements might change and describe the changes;
- Compare and contrast the difference between adaptable (generalized) and non-adaptable (specialized) wildlife;
- Describe the concept of carrying capacity with reference to two or more Ontario wildlife species. (grade 12 biology, grade 11 biology);
- Describe succession in a terrestrial (bare ground) and an aquatic (pond) environment;
- Explain how a change in climate, topography or land use might modify the process of succession;
- Define predator, prey, herbivore, carnivore and omnivore and explain how they interact with one another (grade 12 biology);
- Explain how predator/prey relationships and carrying capacity are related and give examples (grade 12 biology);
- Give reasons for habitat loss in Ontario;
- Identify how governments and other stakeholders are trying to stop habitat loss;
- List examples of wildlife species that are non-native to Ontario;
- Describe how various non-native species have naturalized to Ontario and/or how they have been harmful;
- Identify the presence of wildlife based on: scat, eggs, tracks, patterns on trees, sounds, pest evidence, feathers, nests;
- Identify specific habitat components for above species (biotic, abiotic);
- Using a field guide/key/index participants will identify: insects (aquatic and terrestrial), reptiles, wildlife (large & small), birds, amphibians, fish;
- Identify and explain how non-native species arrived in Ontario;
- Recommend measures to remove/reduce impact of non-native species on Ontario Ecosystems;
- Identify reasons for habitat loss in Ontario;
- Examine the factors (natural and external) that affect the survival and equilibrium of populations in an ecosystem (grade 10 academic science);

## **Hands on Application**

After mastering the knowledge base, some of the skills you will have include:

- Participants will use a field guide to identify wildlife species common to Ontario (grade 11 diversity living things);
- Participants will classify wildlife as rare, threatened and endangered species (grade 12 organic chemistry);
- Analyze a population case study by producing population growth curves for each of the populations in the study, and use the graphs to explain how different factors affect population size (grade 10 academic science);
- Participants will identify wildlife signs and describe their significance;
- Participants will identify animals as predator, prey, herbivore, carnivore and omnivore;
- Participants will be able to identify an area as habitat for certain wildlife species;
- Draw and explain a food web and food chain.

## **Putting it All Together**

Now you can:

- Participants will be able to evaluate/assess a site as suitable habitat for common wildlife species;
- Describe and evaluate factors contributing to environmental resistance and the carrying capacity of ecosystems (grade 11 biology);
- Participants will assess sites for their ability to support wildlife;
- Participants will investigate sites for signs of wildlife;
- Participants will analyze sites and/or information on sites and formulate an explanation for how things are on that site;
- Analyze and evaluate how the change in one population affects another.

## **Wildlife**

Module Study Material Download

Introduction

Endangered Species Part 1

Endangered Species Part 2

Habitat

Migration Part 1

Migration Part 2

Disease and Danger

Monitoring

Fisheries

Biodiversity Part 1

Biodiversity Part 2