

Envirothon New Brunswick Wildlife Learning Objectives

Key Topic #1: Wildlife Biology

1. Identify common New Brunswick mammals (without the use of a field guide) and describe their diet and habitat.
2. Identify common New Brunswick birds (without the use of a field guide) and describe their diet and habitat.
3. Identify common New Brunswick reptiles and amphibians (without the use of a field guide) and describe their diet and habitat.
4. Identify wildlife skulls based on shape, size, and dentition.
5. Describe how to age a white-tailed deer using the tooth replacement and wear technique.
6. Physical and behavioral adaptations to varying seasonal weather and how these adaptations benefit wildlife.
7. Physical and behavioral adaptations to special weather events and how these adaptations benefit wildlife.

Key Topic #2: Wildlife Ecology

1. Identify the essential components of a habitat.
2. Explain the difference between generalist and specialist species and provide examples of each.
3. Describe different habitat characteristics that are important to wildlife (such as edges, ecotones, downed wood debris, riparian areas, early successional stages, etc.)
4. Differentiate between a territory and a home range and explain how each is important for wildlife species.
5. Describe the roles of producers, consumers, and decomposers in various ecosystems and identify their trophic levels.
6. Draw a food web and describe the flow of energy within it.
7. Define limiting factors and carrying capacity with respect to wildlife populations.
8. Explain the different types and levels of biodiversity, and how they apply to ecosystems.
9. Describe how changes in demographic parameters (such as birth, mortality, reproduction rate, immigration, emigration, age structure, sex ratio, etc.) affect wildlife populations.

Key Topic #3: Wildlife, Conservation and Society

1. Define invasive species and describe their characteristics.
2. Identify invasive species in New Brunswick, describe how they are spread, and explain their impact on local ecosystems.
3. Describe how Canadian wildlife species are affected by climate change.
4. Describe the role and history of hunting in wildlife management.
5. Describe the use of technology such as remote sensing, GPS, and GIS in wildlife management.
6. Familiarize yourself with management strategies for creation/ maintenance of deer wintering areas as well as productive wetlands for waterfowl.
7. Learn the types of biological data collection methods used to create management and conservation strategies.