Wildlife Objectives

1. Understand the role of federal and state agencies, and the programs and laws that govern Indiana wildlife and the protection, conservation, management, and enhancement of Indiana's wildlife and their habitat through improvement practices.

   NR-3.1 Identify the history and specific purpose of agencies (e.g. SWCD, NRCS, USDA, FSA, etc.) and laws associated with natural resources systems on local, state, and national levels (e.g., water regulations, game laws, historic preservation laws, environmental policy, etc.)

   NR-3.2 Evaluate the impact and effectiveness of agencies associated with natural resources systems

   HS-ENV6-1.* Conduct an investigation to evaluate the effectiveness of environmental policies
   and/or organizations (Clean Water Act, Clean Air Act, Endangered Species Act, Species Survival Plan, Resource Conservation and Recovery Act, Department of Energy, and the World Health Organization).

   HS-ENV6-2.* Construct an argument to explain that environmental policies/decisions have negative and positive impacts on people, societies, and the environment.

   HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

2. Identify Indiana wildlife species (mammals, birds, reptiles, amphibians, fish, crustaceans, mussels, insects, spiders, etc.) by physical characteristics, tracks, movement patterns, habitat suitability, and other unique characteristic signs.

   AS-6.1 Explain how animals are classified using a taxonomic classification system

   IAFNR-6.2 Classify, evaluate, select, and manage animals based on anatomical and physiological characteristics

3. Identity and differentiate between extinct, extirpated, endangered, threatened, and species of special concern. Understand the importance of biodiversity and the implications of its loss. Describe factors affecting Indiana species and the methods being used to improve existing populations.
   HS-ENV4-1. * Use a model or simulation to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
   NR-3.4 Discuss causes and solutions of species extinction and the importance of biodiversity

4. Describe the current struggles of native Indiana wildlife species impacted by biological and physical agents as well as the introduction of invasive non-native species and cite examples of current and potential concerns to native populations.

   NR-1.4 Identify invasive species and understand their impact on the environment

   NR-2.10 Analyze factors that influence the establishment and spread of invasive species, evaluate their impact, and determine the appropriate steps to prevent or minimize the impact of invasive species

5. Identify basic wildlife survival needs of Indiana wildlife, the niche they serve, and habitats where they may be found. Describe specific adaptations of Indiana wildlife species to its environment and its role in the ecosystem.

   NR-1.3 Identify different types of biotic (e.g., plants, animals, etc.) and abiotic (e.g., minerals, soil, wind, solar, water, air, etc.) natural resources to protect, conserve, manage, and understand their role in a healthy ecosystem

6. Describe situations that limit or enhance population growth and discuss the concept of carrying capacity and limiting factors. Be familiar with examples that have or may occur in Indiana.

   NR-2.9 Comprehend and apply ecological concepts (e.g., population ecology, population density and population dispersion, etc.) to living organisms in natural resource systems

7. Be able to name habitat requirements for wildlife and the factors that affect suitability. Recognize the importance of wildlife adapting to its environment and be able to explain advantages of anatomical, physiological, and/or behavioral adaptations of wildlife to their environment.

   HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales

8. Understand wildlife and wildlife related terminology such as: habitat, ecosystem, biodiversity, herbivore, endangered, food web, niche, invasive, etc.

   NR-2.6 Analyze and summarize examples of habitat disturbances and habitat resilience

   NR-2.10 Analyze factors that influence the establishment and spread of invasive species, evaluate their impact, and determine the appropriate steps to prevent or minimize the impact of invasive species

   NR-1.1 Analyze the interdependence of organisms within an ecosystem (e.g., food webs, niches, impact of keystone species, etc.) and assess the dependence of organisms on non-living components (climate, geography, energy flow, nutrient cycling, etc.)

   NR-1.2 Evaluate biodiversity in ecosystems and devise strategies to enhance the function of an ecosystem and the availability of natural resources by increasing the level of biodiversity

   NR-1.3 Identify different types of biotic (e.g., plants, animals, etc.) and abiotic (e.g., minerals, soil, wind, solar, water, air, etc.) natural resources to protect, conserve, manage, and understand their role in a healthy ecosystem

9. Be familiar with current events that may be impacting Indiana wildlife, whether year-round residents or migratory species.
   (Due to how current the event is, there might not be a cited reference for this objective.)