Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
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Connecticut Wildlife: Biodiversity and Conservation Status of Our Vertebrate Populations

Guide for Curriculum Unit 05.05.03
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Biodiversity is broadly defined as the "full array of life on Earth" and is considered to include genetic, species, ecological, and landscape components. Biodiversity thus includes concepts of species richness, ecosystem complexity, and genetic variation (Allaby 1994), and it addresses "both the variety of these things and the variability found within and among them" (The Nature Conservancy and Association for Biodiversity Information 2000). This curriculum unit addresses contemporary issues of biodiversity and conservation biology. It develops ecological concepts relating to the meaning and value of biodiversity, the extent of biodiversity (local, regional, national, and global), present and past threats to biodiversity, and efforts to maintain or restore biodiversity to habitats or communities at regional, national, or global scales. I refer to the vertebrate wildlife of Connecticut for the examples or case studies that are developed, including our herpetofauna (amphibians and reptiles), avifauna (birds), and mammalian fauna. I do not discuss the freshwater and salt water fishes of the state, instead giving emphasis to the tetrapods or quadrupeds of Connecticut.

The unit is intended for students in Advanced Placement Environmental Science (APES) a course that I have been teaching for the past five years. This is an upper level science elective which is a part of the College Board/AP Program course offerings at Wilbur Cross High School in New Haven. Future development of the unit will provide some applications for the Macy Honors Anatomy & Physiology course that I teach, as well as college and general physiology courses. While the target student population is advanced high school science students, there are a number of aspects of the unit, including subject matter and laboratory and field activities, which can be applied to middle school and elementary science education.

(Recommended for Science, grades 11-12.)