

Lesson 7: Becoming Schoolyard 'Wildlife Stewards'

Air, Water, and Soil Pollution Background:

Pollution occurs on a global scale, but instructors should also cover ways in which humans are locally impacting wildlife populations and talk to students about nearby sources of pollution. Local sources include car exhaust from buses or carpool lane at the school, runoff from parking lots that carries oil and other chemicals, litter, or pesticide or fertilizer use around the schoolyard. Instructors should then explain how each of these sources of pollution impacts natural resources (air, water, and soil) and how pollution of air, water, and soil resources affects animal populations and humans. For example, in order to quickly get from one place to another, humans burn fossil fuels like gasoline to power cars or buses. Combustion of these fuels puts different chemicals into the air that animals and humans breathe. Inhalation of such chemicals can cause direct health effects such as asthma and bronchitis. However, many chemicals that are not inhaled travel far into the atmosphere and trap heat and light energy from the sun that has bounced off earth and is attempting to be re-emitted into space. Absorption of heat and energy by these particles warms the atmosphere and the earth and has caused increased temperatures worldwide changing climate and impacting the lives and habitats of many mammals worldwide. Additionally, some of these pollutants emitted into the air from burning fossil fuels combine with water in order to make acid rain, which can harm fish, insects, and plants. Soils are also impacted by acid rain because the acid leaches out certain soil constituents which are important for soil health.

At this time, instructors can also share one or more North Carolina wildlife stories to expand on how habitat destruction and other activities by humans have impacted wildlife populations, what has been done to manage populations, and the resulting successes or failures associated with management. Specific information about different species can be obtained on the [NCWRC website](#) by clicking the "profile" of a specific species. Instructors should conclude the discussion by considering with students why it is important, especially in regards to human health, safety, and the function of society, to manage wildlife populations in the state.