Ecosystem Resources and Wildlife Populations

Your Name: _____ Date: _____

Caution – Be careful not to harm any wildlife or their habitats.

Your Habitat lab is an ecosystem. An ecosystem includes all of the living things (biotic) in a given area, interacting with each other and also with their non-living (abiotic) environments. Some biotic factors are those living things that can cause predation and competition for food and space. Some abiotic factors include weather, soil composition, and water sources.

We know that wildlife need four basic things to survive: food, water, shelter, and a place to raise their young. But how might biotic factors like plants or other animals or abiotic factors like sunlight impact an animal's survival in its habitat? Limited resources can affect the likelihood or probability of survival for one individual animal of a specific species or an entire population, which is all of the individuals of a species within an ecosystem.

Interactions between plants, animals, and other biotic components with abiotic components of an ecosystem are endless. Everything is connected. One very simple example of these relationships is as follows:

Colder winter than usual

⬇

Small mosquito population

⬇

Less food for frogs, bats, & birds.

⬇

Fewer large predators like hawks & owls.

Take a walk in your Habitat lab and observe what sort of interactions are occurring. Make note of relationships between the biotic and abiotic components of your ecosystem as you answer the questions below.

1) **What wildlife do you see? Try to determine the specific species using field identification guides if possible. Explain the evidence you used to identify the species.**

2) **What habitat resources does this species need to survive?** Research the species needs using the AWF Wonders of Wildlife webpages (https://alabamawildlife.org/learn-about-wonders-of-alabama-wildlife/), field identification guides, OutdoorAlabama.com, and other educational websites.

3) **What biotic factors in this ecosystem impact this species' ability to survive?**

4) **What abiotic factors in this ecosystem impact this species' ability to survive?**

5) **Does the ecosystem have what is needed for a population to exist? What could you add or take away to improve the success of a population?**