

Name \_\_\_\_\_

# POPULATION CHANGES

**Directions:** Read the information below.

In your home, you may find each person has certain roles or chores they must complete to help out the entire family. Maybe you do the laundry, your sister does the dishes, your mother mows the lawn, and your father cleans the house. If you decided you were going to stop doing laundry, how would that affect the rest of your family? Consider the effects: you stop doing laundry, your mother has no clean clothes to wear to go outside, she can't mow the lawn, and the grass gets overgrown. This is an extreme example, but the idea is that your family works as a system. When one person doesn't do their job it can affect everyone else.

Ecosystems work the same way. An ecosystem is the collection of all the living organisms in an area. In a pond ecosystem, there are frogs, snakes, fish, birds as well as living plant life like grass and algae. Each part of the ecosystem depends on each other. The fish may eat the algae at the bottom of the pond, then the birds eat the fish. If there were no algae in the pond the fish would lose their source of food and potentially die off. This would then affect the birds' source of food causing them to decline in population.

A food web exists in any ecosystem, which is a model for which animals are predators to others, and which animals are prey. In real life, food systems are complex. Any given organism may feed off of multiple things in the ecosystem, thus a reduction in one food source may not be as devastating, however, it means the second food source will be relied on more heavily. Ecosystems are a delicate balancing act.

**Directions:** Answer the questions below.

1. Draw a graph of what happened in your game simulation.

