

# Ecology

## Lesson 4

### Value of Wolves

Text Book Reference: 1. 4, page 20-21

**Aim: To examine the factors that affect the survival and equilibrium of populations in an ecosystem**

The arrival of humans on an ecosystem creates havoc because of their land management, hunting practices, and because of their imported animals both domesticated and non-domesticated.

This interference by humans causes irreversible long-term effects.

An example of irreversible damage caused by humans is the wolf.

The wolf has been extirpated (recall: a species that no longer exists in one part of the world, but can be found another), in the south and is still hunted in the north.

Once the wolf was extirpated the populations of the next top carnivores ----->

—>Wolves eat coyotes so killing wolves allowed the coyotes and red foxes population to increase in number. This increase results in a competition for the same food.

—>However scavengers such as magpies, ravens and vultures that eat remains of the wolf-kill carcasses were decreased or eliminated from the ecosystem.

—>The elk population increased because they had very few predators. Since elk are herbivores and an increase in the elk population resulted in stripping the hills of plants.

Once humans appear on the scene and disrupt the balance of nature, it cannot be restored by simply withdrawing and leaving the plants and animals on their own.

Instead careful planning to restore balance to an area must be developed.

The fact that everything in an ecosystem is interconnected is not always appreciated when humans attempt to use the environment for their own purposes.

For example, programs to eliminate wolves can cause changes in vegetation.

Removing wolves permits deer herds to increase. This may lead to overbearing and hinder the growth of young trees, an impossible Winter food. The ultimate result may be a reduced deer population.

#### **Homework**

**Read pg 20-21**

**Answer: Understanding the Issue page 21 #1,2,3**

**Worksheet: Take a Stand**

Text Book Reference: 1.8, page 28-29

#### **Assignment**

**Read pg 28-29**

**Answer Question a-m**

**Pg 29, Understanding Concepts #1, 2, 3**