

Life Science 7
(Copy the following lab activity set up in your science notebook.)

Title: Activity 4 Population Dynamics

Challenge Question: What determines a population's size?

Background:

Factors that affect the population size and health of living things in an ecosystem are called *limiting factors*.

Vocabulary:

| Term | Definition | Picture or Example |
|-------------------|------------|--------------------|
| carrying capacity | | |
| limiting factor | | |
| competition | | |
| cooperation | | |

Materials:

"Ecology and the Environment" book

Procedures:

1. Read pages 30 - 39 in the *Ecology and the Environment* book. Answer questions 5 - 9; 11, 12, 16 - 18.
2. Do Lesson Review on page 41; questions 1 - 11. Complete Vocabulary.
3. Answer Analysis Questions.

Data/Results:

(Write answers to book questions here.)

Analysis Questions:

1. Do you think an arctic environment or a tropical environment can support a larger population of butterflies? Why?
2. Would the immigration or emigration of frogs cause the frog population to increase? Why?
3. What abiotic and biotic factors might affect the growth of a plant?
4. Give three examples of limiting factors.
5. What is carrying capacity? What can affect carrying capacity?