

12. EXPERIMENTING WITH OVERPOPULATION I

Introduction

This experiment graphically demonstrates what happens to a community under the pressures of a population increase.

Objective

The student will experience the pressures of overpopulation and will be able to explain animal behavior as a result of overpopulation.

Materials

Paper and pencil for each student
Any topic for a writing assignment.
(Examples:
What I plan to do in the future,
What life will be like 50 years from now,
Why the science of ecology is important to this planet.)

Teacher Instructions

1. Give the writing assignment. Place a stipulation on the assignment. For instance, a significant part of the grade for the quarter depends on how well and thoughtfully the student writes this short essay. Students begin writing for about 30 seconds.
2. Interrupt students and ask a few to move their chairs and join another group at a table (or limit the space for desks) forcing them to form a larger population in a smaller space. Students must bring their writing assignments with them, and they must have it in contact with a desk or table when they have moved. The teacher must remain serious throughout this change and not allow conversation.
3. Continue to create a situation where students are cramped and crowded, but in which they feel they must do a good job at their assignment.
4. After 3–5 minutes have the students stop writing, and before they return to their seats discuss how they feel right at that moment. Ask questions that cause students to look at their behavior—fighting, squirming, feeling angry or upset, trying to get away.

Name _____

Date _____

When you have finished counting, answer these questions.

4. Was your population easy or hard to count? Why?

5. Did you count or estimate your population? _____

6. How do the following populations under A and B affect each other?

| | | |
|--------------|-----|------------|
| <i>A</i> | | <i>B</i> |
| robins | and | earthworms |
| caterpillars | and | trees |
| cats | and | mice |

7. What would happen if the A populations became very large?

8. What would happen if the B populations became very large?

9. When do you think each pair of populations in Lists A and B is in balance? Explain your answer.
