

Skill Practice

What can analyzing data reveal about predator-prey populations?

Predators are organisms that hunt and kill other organisms, their prey, for food. You might think this means that predators control population size in an ecosystem. In reality, predators and their prey affect each other. Predators and their prey affect each other. You can observe this relationship by analyzing population data.

Learn It

Scientists make observations to learn about the world. However, scientists rely on data as a means to present explanations and prove hypotheses. They can **analyze data** from the results and form conclusions. Unlike general observations, collecting data is effective because data are less likely to be distorted by chance or misinterpretation.

Try It

- **1.** Observe the graph in your textbook, which shows the populations of hares and lynxes in an ecosystem. Note that the data show the changes that occur in the numbers of both populations over time.
- **2.** Examine the blue line that represents the population levels of hares in the ecosystem. Note any patterns in the graph.
- **3.** Examine the orange line that represents the population levels of lynxes in the ecosystem. Note any patterns in the graph.
- **4.** Describe the patterns of the two population lines in relation to each other.

Apply It

5. Explain which population is the predator and which is the prey.

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8. Infer why there is a time lag between similar patterns in both populations.

6. Describe the patterns you note in the individual population levels of the hares and the lynxes.

7. Describe the patterns you notice in the relationship between both populations. What might have caused these patterns?

9. **Key Concept** Use the information from this graph and infer what causes the changes in both populations. Use this information to describe the relationship that each population has with the other.