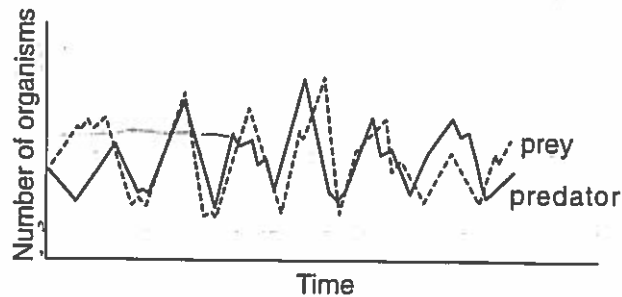


The ability to read and interpret visual displays of information (such as diagrams, tables, and graphs) is an important skill required for processing scientific information.

Test Like a Scientist

Use the following graph to answer questions 1–3.



- What does this graph show about the predator and prey populations?
 - They remain stable over time.
 - They are directly related.
 - They show no relationship.
 - They appear to be related.

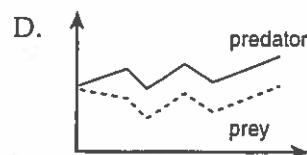
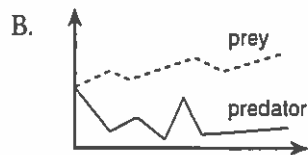
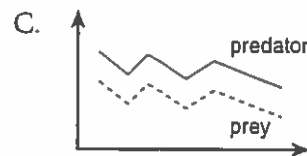
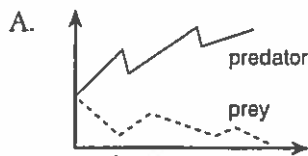
Reasoning: State your reason or reasons for selecting the answer. (Describe and explain the pattern that you observed.)

KEY WORDS predator prey

2. The relationship shown by the graph is most likely the result of which factor?
- food supplies
 - disease epidemics
 - hunting pressure
 - habitat destruction

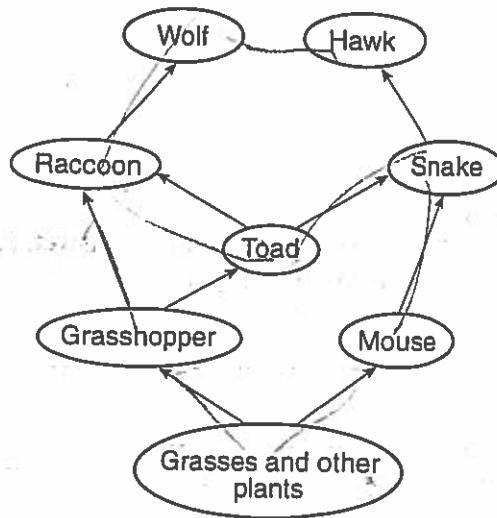
Reasoning: State your reason or reasons for selecting the answer. (Explain how a predator's population is regulated by that of its prey, and vice versa.)

3. Which graph would likely represent the pattern that would occur if the food eaten by the prey became scarce?



Reasoning: State your reason or reasons for selecting the answer. (Explain how each population is affected in this situation.)

Use the following picture to answer questions 4-7



4. Which of the following describes the relationship between the raccoon and toad?

- A. predator-prey
- B. consumer-producer
- C. symbiotic partners
- D. parasite-host

Hint: What do the arrows signify?

Reasoning: State your reason or reasons for selecting the answer. (Explain each of the terms in your answer choice. Use the term "food web" or "food chain" in your answer.)



Sometimes scientists must make inferences based upon the information they have.

5. What is the original source of energy for the hawk?

- A. snake
- B. mouse
- C. plants
- D. sun

Reasoning: State your reason or reasons for selecting the answer. (Describe the energy sources by working backward from the hawk on the food web.)

Knowing the characteristics of an object or organism can help scientists to make predictions and evaluations.

6. If a rabbit were added to this web, with which organism(s) would it compete?

- A. plants
- B. mouse
- C. snake
- D. hawk

Reasoning: State your reason or reasons for selecting the answer. (What do competitors have in common?)

7. An increase in the number of snakes would most likely result in which of the following changes?
- A. more mice
 - B. fewer wolves
 - C. fewer toads
 - D. more raccoons

Reasoning: State your reason or reasons for selecting the answer. (Discuss both the effect on what snakes eat and what eats snakes.)

8. Some automobiles are designed to run on alcohol, which can be produced from plant materials, such as corn. In what way would using plants as a source of energy be better than using oil made from petroleum?
- A. Plants are a renewable resource.
 - B. Oil is a flammable safety hazard.
 - C. Plants can be grown without cost.
 - D. Oil is obtained only in foreign countries.

Reasoning: State your reason or reasons for selecting the answer. (What is the long-range possibility in each case?)

