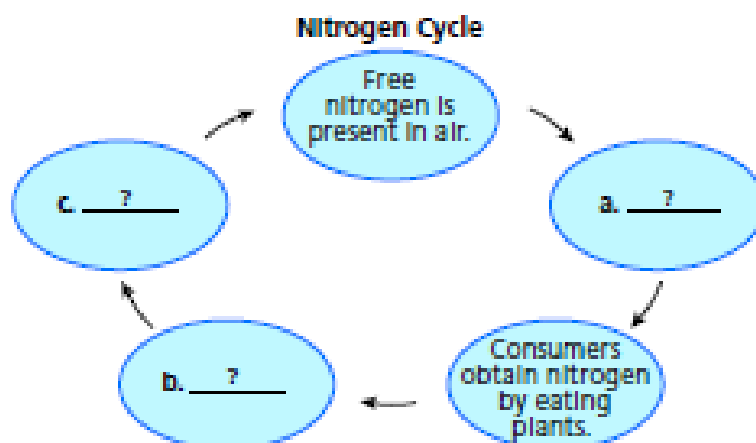


# Review and Assessment

## Organizing Information

**Sequencing** Copy the cycle diagram about the nitrogen cycle onto a separate sheet of paper. Then complete it. (For more on Sequencing, see the Skills Handbook.)



## Reviewing Key Terms

Choose the letter of the best answer.

- Which of the following organisms are typical decomposers?
  - grasses and ferns
  - mushrooms and bacteria
  - mice and deer
  - lions and snakes
- A diagram that shows how much energy is available at each feeding level in an ecosystem is a(n)
  - food chain.
  - food web.
  - water cycle.
  - energy pyramid.
- When drops of water in a cloud become heavy enough, they fall to Earth as
  - condensation.
  - evaporation.
  - permafrost.
  - precipitation.
- Organisms may be dispersed in all the following ways *except* by
  - wind.
  - water.
  - temperature.
  - other organisms.
- Much of Canada is covered in fir and spruce forests. The winter is cold and long. What is this biome?
  - tundra
  - boreal forest
  - deciduous forest
  - grassland

If the statement is true, write *true*. If it is false, change the underlined word or words to make the statement true.

- An organism that eats the remains of dead organisms is called a(n) herbivore.
- The study of where organisms live is called continental drift.
- Precipitation and temperature are the two major abiotic factors that determine what types of plants can grow in an area.

## Writing in Science

**Encyclopedia Entry** Write a half-page encyclopedia entry about life in the desert. Describe at least two plants and animals that live in the desert. Focus on the adaptations that allow these organisms to thrive in the harsh environment.

# Review and Assessment

## Checking Concepts

9. Name and describe each of the three energy roles organisms can play in an ecosystem.
10. How are food chains and food webs different?
11. What is the source of energy for most ecosystems? Explain.
12. Describe the role of nitrogen-fixing bacteria in the nitrogen cycle.
13. Explain how competition can affect the dispersal of species.
14. Why is the tropical rain forest able to support so many species?
15. In which biome would you find large herbivores such as elephants and zebras? Explain.
16. Describe the role of algae in freshwater and marine ecosystems.

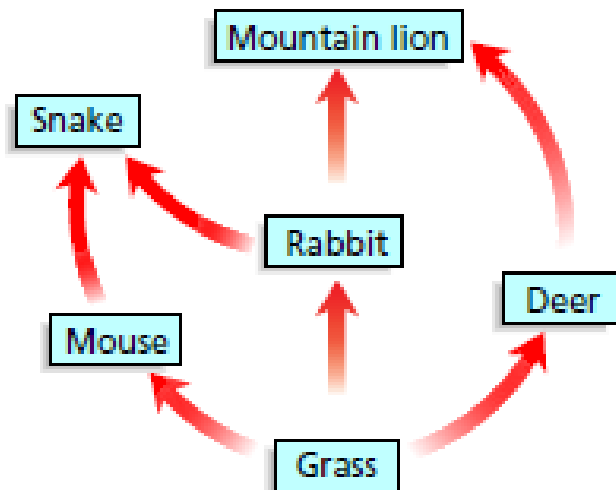
## Thinking Critically

17. **Inferring** Polar bears are very well adapted to life around the Arctic Ocean. Their white fur camouflages them in the snow. They can withstand freezing temperatures for a long time. They can swim and hunt in very cold water. Is the distribution of polar bears limited by physical barriers, competition, or climate? Explain your answer.
18. **Comparing and Contrasting** How are the temperate rain forest and the tropical rain forest similar? How are they different?
19. **Predicting** A chemical spill has just killed off all the algae in a part of the surface zone in the open ocean. How will this accident affect the food webs in that part of the surface zone?
20. **Classifying** Which organisms in the illustration are producers? Consumers?



## Applying Skills

Use the diagram of a food web below to answer Questions 21–24.



21. **Interpreting Diagrams** Which organism in this food web fills the role of producer?
22. **Classifying** Specify whether each consumer in this food web is a first-level, second-level, or third-level consumer.
23. **Inferring** Which level of the food web contains the greatest amount of available energy?
24. **Predicting** If a disease were to kill most of the rabbits in this area, predict how the snakes, deer, and mountain lions would be affected.

Lab  
zone

## Chapter Project

**Performance Assessment** Create a report, poster, or other product that clearly presents your data and conclusions from your decomposition experiment. In your notebook, compare your results to your predictions about the different waste materials in the compost mixture. Were you surprised by any of your results? Based on what you have learned from your project and those of your classmates, make a list of the ideal conditions for decomposition.