Quiz: Ecosystem Dynamics

Read each question. Circle the letter of the correct answer.

1. When does succession occur?

A. only after a glacier retreat

B. after a new food web is established

C. as a previously existing community is replaced

D. as one generation of organisms replaces the previous one

2. In 1988 several large forest fires occurred in Yellowstone National Park. What process occurred after these fires?

A. pioneer succession

B. primary succession

C. symbiotic succession

D. secondary succession

3. Why would an alder tree not be considered a pioneer species? Choose the correct answer.

A. alder trees are a form of lichen

B. pioneer species are always animals

C. smaller organisms come before trees in succession

D. it is not one of the trees that make up the final forest

4. A coral reef is a low-resistance species. How would coral reefs likely be affected if global ocean temperatures increased slightly?

A. They would grow.

B. They would all die.

C. They would decline.

D. They would be unaffected.

5. The new island of Surtsey was formed near Iceland by a series of volcanic eruptions. Which of these processes occurred first on Surtsey?

A. Plants grew on the island.

B. Animals moved onto the island.

C. A complex ecosystem developed.

D. Lichens converted volcanic rock into soil.

6. When an ecosystem loses biodiversity, how does it change?

A. It becomes less resilient.

B. It becomes fragmented.

C. It becomes more efficient.

D. It becomes easier to live in.

7. A farmer has expanded her farming capacity by converting an acre of grassland into tilled, farmed land. What can the farmer most likely expect to see in this acre of land as she continues to farm it over several years?

A. The land will quickly return to its original state.

B. The land will gradually return to its original state.

C. New species will move in and the land will revert to grassland.

D. Many species that once lived there will die off or move to a new location.

8. Two species of shorebirds are both adapted to live in coastal marshes. One species outcompetes the other for the small fish that live within one niche in the marsh. What is likely to happen to the other species of bird?

A. It would die off completely.

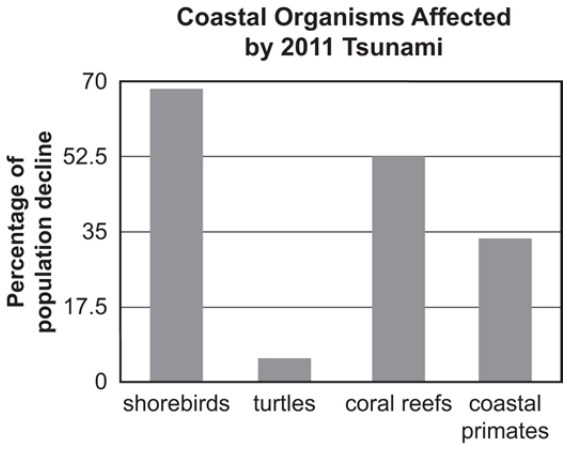
B. It would move to a totally different ecosystem.

C. It would find another niche within the same ecosystem.

D. It would shrink in population size but stay in the same niche.

9. In March 2011, a large earthquake hit off the coast of Japan, which triggered a large tsunami. Scientists have studied how that event affected various coastal populations. Study the graph.

Which population would most likely be the first to reach the ecosystem's carrying capacity in the months following the tsunami?



A. turtles

B. shorebirds

C. coral reefs

D. coastal primates

10. Which of the following would be considered an example of commensalism?

A. The lamprey and a fish. The lamprey attaches to the outside of the fish and utilizes its flesh for food.

B. A barnacle growing on a whale. The whale moves the barnacle to places where food can be found, but the whale is not harmed.

C. A tapeworm living in the digestive system of a mammal. The tapeworm uses some of the food for its own energy that the mammal eats.

D. A hummingbird and a flower. The hummingbird receives food from the flower, and the flower uses the hummingbird to spread its pollen.

Read each statement. Write your answer on the lines.

11. What is an example of a keystone species?

Why are they important to an ecosystem?

12. What is the most important factor in an ecosystem's resiliency?

13. Explain why an ecosystem with greater biodiversity is more resilient than an ecosystem with less biodiversity.

14. Sequence the process of succession after a glacier retreat.

15. Explain how a disturbance in the habitat of a species might affect the entire ecosystem.