

Cycles and Interactions Quiz

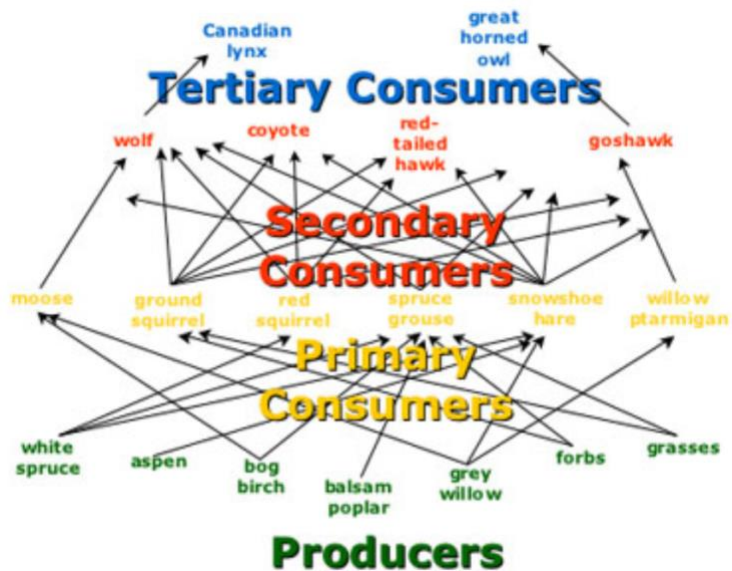


Real World Ecosystems
Assessment
Grade Level: 5-8

Name:

After completing the section of activities under *Cycles and Interactions* use the following quiz questions for assessment.

1. Use the diagram to answer the question below



List the organisms that would match each of the following classifications:

a. Herbivores:

b. Tertiary Consumers:

c. Fifth Order Consumer:

d. Omnivore:

2. True or False? Correct the false statements.

a. Organisms that live off dead and decaying material are called carnivores.

b. Photosynthesis is the process in which green plants convert carbon dioxide gas and water vapor into organic carbon molecules

c. In food pyramids the top levels contain the largest amounts of organic carbon.

d. A food chain is a more accurate way to represent the flow of energy through an ecosystem than a food web is.

11. What two basic things do all living organisms on Earth require?

12. A fellow learner says that carnivores and detritivores are really the same thing since they both eat dead things. Give a short statement that would explain to this learner the basic difference between a carnivore and detritivore.

11. Explain why it is rare to find more than four or five links in a food chain.

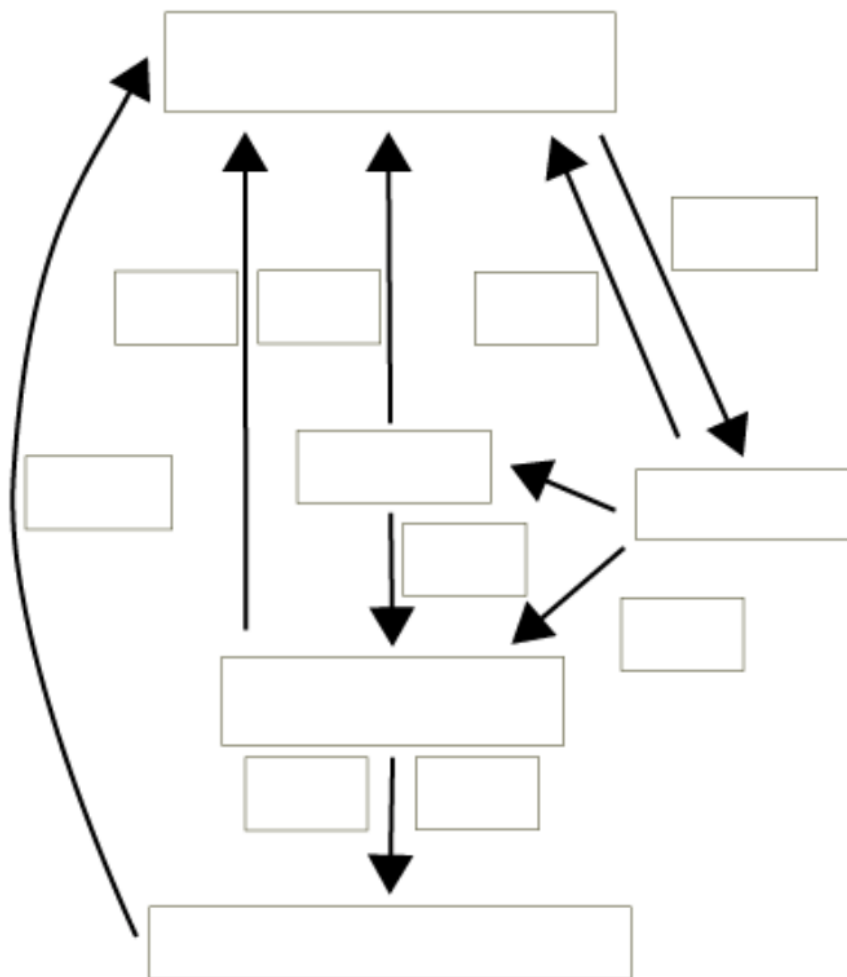
12. In examining an ecosystem, it is likely that you will see many more herbivores than carnivores. Why should this be so?

13. What essential role do detritivores such as fungi and bacteria fill in any ecosystem?

14. Ecologists are fond of saying that energy flows through an ecosystem but matter cycles. Why is this distinction made?

15. What are the two main processes by which water enters the atmosphere? How are these processes different?

10. Complete the following diagram of the carbon cycle by placing the given labels into the correct boxes



Terms:

- Atmospheric CO₂
- Respiration (x3)
- Fossil Fuels
- Animals
- Death Decay (x2)
- Plants
- Heat
- Pressure
- Combustion
- Detritus

16. Explain why the burning of fossil fuels is an issue for environmentalists.

17. Until the development of agriculture as a practice, nitrogen was a major limiting factor in ecosystems. What is it about nitrogen that makes it a limiting factor? What is it about agriculture that makes nitrogen less of a limiting factor?

18. Describe why bacteria are an essential part of the nitrogen cycle.

19. There are several main problems related to the overuse of nitrogen fertilizers. Identify one of those problems and explain why it is a problem.

20. How is commensalism different from mutualism?

16. Ecologists make a distinction between predators and parasites. What are two differences between predators and parasites?

17. Many of the flowering plants found in our year, garden or neighbourhood rely on bees to get their pollen to another plant during reproduction. What kind of symbiosis would this relationship be?

18. The Elm Bark beetle carries the spores of the fungus responsible for Dutch Elm disease as it goes from elm tree to elm tree in its feeding. What is the symbiotic relationship exhibited by:

- a. The beetle and fungus?**
- b. The beetle and elm tree?**

19. The twining honeysuckle (*Lonicera dioica*) is a common woody vine found across Alberta. This plant can grow to heights of five meters or more by twining around the trunks of deciduous trees. The honeysuckle has its own root system but the trees that it grows around often grow sickly and suffer some damage. Another student insists that the honeysuckle is a parasite on the tree it grows on. Is that learner correct? Explain.

20. Habitat loss is probably the leading mechanism for producing endangered animal or plant species. Explain how this mechanism might lead to a species being endangered.
