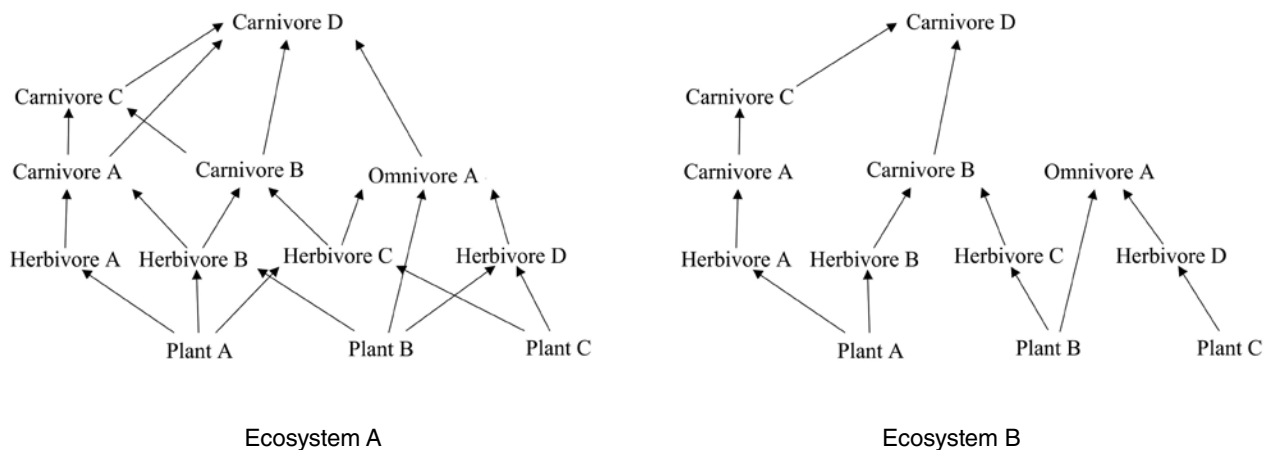# Lab 11. Ecosystems and Biodiversity: How Does Food Web Complexity Affect the Biodiversity of an Ecosystem?

Checkout Questions

Use the figure below to answer questions 1 and 2. The figure illustrates the food webs of two different ecosystems. Ecosystem A has a simple food web and Ecosystem B has a complex one.

Ecosystem A   Ecosystem B

1. Which ecosystem has greater biodiversity?

   a. Ecosystem A
   b. Ecosystem B
   c. Ecosystems A and B have the same amount of biodiversity
   d. Unable to determine from the information provided

   Explain your answer.

2. Which ecosystem is most likely to sustain a greater amount of biodiversity over time?

   a. Ecosystem A
   b. Ecosystem B
   c. Ecosystems A and B will both sustain a large amount of biodiversity
   d. Unable to determine from the information provided

   Explain your answer.

3. The inferences that are made by a scientist are influenced by his or her background and past experiences, but the observations made by a scientist are not.

   a. I agree with this statement.
   b. I disagree with this statement.

   Explain your answer, using examples from your investigation about ecosystems.

4. Science requires logic and reason but not imagination or creativity.

   a. I agree with this statement.
   b. I disagree with this statement.

   Explain your answer, using information from your investigation about biodiversity.

5. Scientists often attempt to identify patterns in nature. Explain why the identification of patterns is useful in science, using an example from your investigation about ecosystems.

6. An important goal in science is to identify the underlying cause of a natural phenomenon. Explain why it is important for scientists to learn about underlying causes, using an example from your investigation about ecosystems.

7. Scientists often use models to study complex natural phenomenon. Explain what a model is and how you used models during your investigation about ecosystems.

8. Biological systems, such as ecosystems, often go through periods of stability and change. Explain what this means, using an example from your investigation about ecosystems.