



High School Science Virtual Learning

College Biology

April 27, 2020



High School College Biology

Lesson: April 27, 2020

Objective/Learning Target:

Students will be able to discuss and identify different types of diversity, risks to that diversity, and different interactions within a biological community.



Let's Get Started:

1. How does the loss of genetic diversity endanger a population?
2. A lion kills and eats a zebra. This is called predation. What is the name/role of the lion in this relationship? The zebra?



Answers:

1. A population with decreased genetic diversity has less ability to evolve in response to environmental change.
2. The lion is a predator. The zebra is the prey.



Lesson Activity:

1. Read over pages 1-14 of the Chapter 20 Notes. ([Linked Here](#))
2. Watch this Stated Clearly video on [Ecosystem Interactions](#).



Practice:

1. How does biodiversity protect a species from extinction?
2. What are ecosystem services and give some examples?
3. What is the competitive exclusion principle and how can species avoid it.

Practice Answers:

1. Biodiversity includes the genetic diversity of an entire population. Genetic variation is the raw material of natural selection. Some organisms will thrive where others die off.
2. Ecosystem services are functions performed by an ecosystem that directly or indirectly benefit people. They include air and water purification, climate regulation and erosion control.
3. The competitive exclusion principle states that no two species can have too similar niches. To avoid this, species can simply modify when and how they obtain their resources.

More Practice:

1. What are the four main causes of declining diversity?
2. Currently, the number one cause of biodiversity loss is _____.
3. According to the concept of competitive exclusion,
 - a. two species cannot coexist in the same habitat.
 - b. extinction is the only possible result of competitive interactions.
 - c. Intraspecific competition results in the success of the best-adapted individuals.
 - d. two species cannot share exactly the same niche in a community.



More Practice Answers:

1. Habitat destruction, invasive species, overexploitation, and pollution
2. Habitat destruction
3. d



Review Tools:

-[Kahoot 1](#)

- Mr. Anderson videos about ecosystem ecology and diversity:
[Video 1](#) (start at 5:05), [Video 2](#).