Inspiring Greatness

ISD

INDEPENDENCE SCHOOL DISTRICT

High School Science Virtual Learning

Environmental Science

Biodiversity Loss

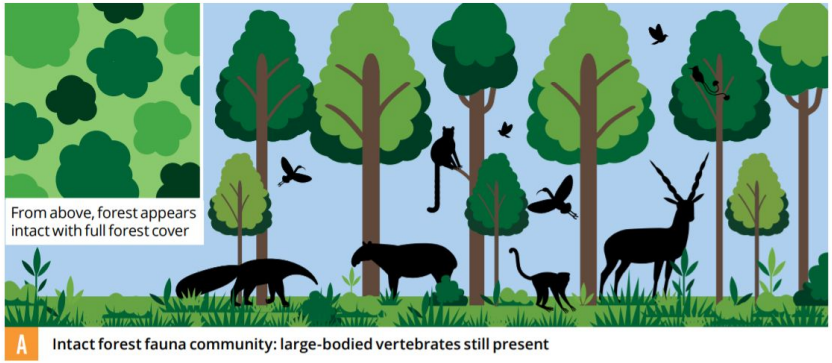
May 11, 2020

High School Environmental Science
Lesson: May 11, 2020

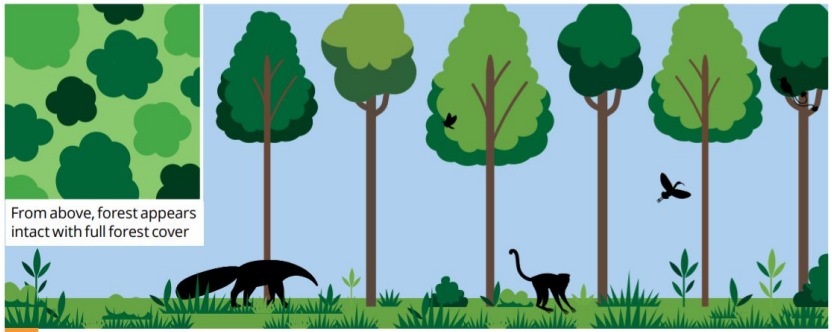
Objective/Learning Target:
Students will identify the types of biodiversity loss and how it affects humans.

1. What are some differences between the two forests?

2. If one part of the food chain was lost, which forest would adapt better?



A Intact forest fauna community: large-bodied vertebrates still present



B Fauna community degraded, large-bodied vertebrates lost; large seeds of carbon-dense trees stop being dispersed

1. Answers may include:
   a. Less animals
   b. Less diversity
   c. Less birds, etc.

2. After a loss, the top forest would best adapt due to the variety. If one species in the bottom forest's food chain was lost, the whole forest would collapse.

Lesson Activity:

Directions: You will be reading two articles as they both cover what is biodiversity and how its loss affects everyone beyond the original environment. You will want to take notes as you explore to organize your thoughts. Here is an example of how:

What is Biodiversity?	Causes of Loss	Climate change	How to reverse?

Link(s): What is biodiversity? Why is Biodiversity Loss a Problem?

Practice

You will use the notes and Guardian article from the activity on slide 5 to answer the following questions.

Practice Questions

1. What are the four main levels of biodiversity?
2. The “red list”, produced by the International Union for Conservation of Nature has assessed how much of known species?
3. In Germany, how many flying insects were lost in the last 25 years?
4. By weight, how much of the world’s vertebrate land animals are humans or their livestock and how much is wild?
5. What are some things that consumers can do to limit the clearing of land for cattle, soy, palm oil, timber, and leather?

Answer Key

Once you have completed the practice questions check with the work.

1. Genes, individual species, communities of creatures, and entire ecosystems
2. They have only assessed 5% of known species..
3. 751% of flying insects were lost in the last 25 years.
4. 97% of the world's vertebrate land animals are humans or their livestock, just 3% are thought to be wild.
5. Choosing only sustainable options helps, as does eating less meat, particularly beef.

More Practice

You will use the notes and second article from the activity on slide 5 to answer the following questions.

More Practice Questions

1. How long does most estimates give for half of all the species on the planet to go extinct?
2. In the last four decades, how much of the planet's biodiversity have we lost?
3. How much of the ocean has been overfished or is on the verge of collapse?
4. Bees alone pollinate how much of the total plants that feed more than 90% of the world?
5. What are some things we might be able to do about slowing biodiversity loss?

Answer Key

Once you have completed the practice questions check with the work.

1. 32 years in the article, but 30 now.
2. It is estimated we've lost more than 50% of the planet's biodiversity in the last four decades.
3. 60-90% of the ocean has been either.
4. Bees alone pollinate 70% of the plants that feed 90% of the world.
5. Recycle, buy sustainable, drive green, protect local habitats, go package-free, compost, volunteer, and donate.

Additional Practice

If you would like to explore what is biodiversity loss, and what more you as an individual can do to help reduce habitat loss, you can check out these resources:

Why is biodiversity so important?

Short video facts of Biodiversity loss

World Wide Fund for Nature