

Chapter 10 Section 1 Notes

A World Rich in Biodiversity –

biodiversity – the number and variety of different species in a given area

- Unknown Diversity –
 - It is estimated that there are between 10 and 50 million species living on Earth.
 - There are so many species still unknown to modern science because cataloging these species is a huge task.
 - Most of the unknown species belong to the insect group.
- Levels of Diversity –
 - species diversity – most commonly equated with the overall concept of biodiversity
 - Humans and familiar animals belong to the vertebrate group.
 - ecosystem diversity
 - genetic biodiversity – all the different genes contained in all members of a population; may still be reduced after a species recovers from a threat to its survival

Benefits of Biodiversity –

People benefit from biodiversity for the following reasons:

aesthetic or personal enjoyment

variety of food sources

source of new products

- Species are Connected to Ecosystems –
 - keystone species – species that are critical to the functioning of an ecosystem
 - Hunting of sea otters along the U.S. Pacific coast resulted in a decrease in biodiversity because they are a keystone species
- Species and Population Survival
- Medical, Industrial, and Agricultural Uses
 - Many antibiotics are derived from chemicals that come from fungi.
 - biotechnology – the application of biological science to create new products
 - A crop that results from the combining of genetic materials is called a hybrid variety.
 - hybrids – varieties developed by combining genetic material from other populations
 - The human diet has been enriched with native food products such as sweet potatoes, beans, tomatoes, and corn that come from Central and South America.
- Ethics, Aesthetics, and Recreation
 - ecotourism – tourist experiences among unique wildlife and ecosystems; activities such as camping in wilderness areas