Biodiversity

Learning Targets:

1. Examine the importance of protecting and conserving biodiversity.
2. Predict the impact of a specific threat to the biodiversity of an ecosystem.

Essential Questions

1. What is biodiversity?

2. Why is biodiversity important?

3. What are the most significant threats to biodiversity?

4. How do we preserve biodiversity?

Why is biodiversity important?

- **Biodiversity** is the total of all the genetically based variations in all organisms in the biosphere.

What are the types of biodiversity?

Ecosystem diversity

- The variety of habitats, communities, and ecological processes in the biosphere.

Species diversity

- The number of different species in the biosphere, or in a particular area.

Genetic diversity

- The sum total of all different forms of genetic information carried by a particular species, or by all organisms on Earth.

What are biodiversity's benefits to society?

Medicine

- Wild species are the original source of many medicines.

Agriculture

- Most crop plants have wild relatives. These wild plants may carry genes we can use to transfer disease or pest resistance or other helpful traits.

Ecosystem Services

- The number and variety of species in an ecosystem can influence that ecosystem's stability, productivity, and value to humans.

What are the most significant threats to biodiversity?

- Altered habitats
- Hunting
- Introducing invasive species
- Releasing pollution into food webs
- Contributing to climate change

How do we preserve biodiversity?

- Protect individual species
- Preserve habitats and ecosystems
- Make certain that human neighbors of protected areas benefit from participating in conservation efforts.