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Hour: _____

Biodiversity and Loss

Biodiversity: is the number, variety, and variability of living organisms in a given area

3 Considerations

1. Species diversity - variety of plant, animal, fungi, and microorganisms
2. Genetic diversity of species - variety of genetic traits in a population
3. Ecological diversity - different habitats that exist within an area

- Biodiversity is important for...

- medicinal uses
 - Ex: Rosy Periwinkle used for cancer treatment
- Ecotourism - money made from tourism to unique locations
- Nutrient cycling and waste recycling
- Fresh water
- Regulate climates
- Consumption - things we eat or use (meat, rubber, fibers etc.)

Resources

1. Renewable Resources = any natural resource that CAN be replaced naturally with the passage of time
Examples: solar energy, soil, trees, grass, wind, water
2. Nonrenewable Resources = any natural resources that CANNOT be replaced at a sufficient rate for economic uses
Examples: oil, coal, natural gas

Loss of Biodiversity

- Threatened Species = one that is likely to become endangered
- Endangered Species = one that is at risk of going extinct
- Extinct Species = a species that has been totally eliminated

Causes of extinction:

- Habitat Loss = from deforestation, pollution, climate change, over exploitation
- Exotic Species = non-native species of organisms that are brought into an ecosystem
 - AKA: Invasive Species and Introduced Species

Keystone **Species** = species that influences the viability of the community, are important in the balance of the ecosystem even if they are not high in numbers or at the top of the food chain

- Example: Wolves in Yellowstone. Wolves kept elk, bison and rabbits on the move which meant they wouldn't overgraze one single area, which meant small tree could grow into mature trees, which could be used by beavers to create dams, which would allow waterways to build up, which provided habitats and resources for a variety of species etc.

Biodiversity Hotspots = regions of the world that contain large concentrations of different species

- Contain a large variety of Species in a limited area
 - Especially a high percentage of plant or animal life that are not found anywhere else on Earth and are irreplaceable and unique
 - 60 % of the world's plant and animal life can be found here
- Are threatened directly or indirectly by humans
 - Have already suffered at least a 30% loss (some 70% or more!)
- Often found in warm climates
- Can be both on land or water
 - Madagascar, Great Barrier Reef, California Coast, Cape of South Africa, Indonesia, Caribbean Islands