

Biodiversity

Introduction to Biodiversity

- **Definition:** Biodiversity refers to the variety and variability of life forms within a given species, ecosystem, or planet.
- **Importance:** It is crucial for maintaining ecological balance, supporting human life, and ensuring the survival of species.
- **Objective:** Understand what biodiversity is and why it matters.



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The Value of Biodiversity

- **Direct Value:** Provides resources such as food, medicine, and raw materials.
- **Indirect Value:** Supports ecosystem services like pollination, water purification, and climate regulation.
- **Potential Value:** Holds untapped resources for future discoveries and innovations.

Threats to Biodiversity

- **Reasons:**
- Habitat destruction
- Climate change
- Pollution
- Overexploitation
- Invasive species
- **Impact:** Loss of species, disruption of ecosystems, and potential ecological collapse.

Protecting Biodiversity

- **Importance:** Protecting biodiversity is essential for:
 - Maintaining ecological balance
 - Ensuring human well-being
 - Preserving genetic diversity
- **Measures:**
 - Establishing protected areas
 - Promoting sustainable practices
 - Raising awareness and education



Case Study: The Importance of Protecting Coral Reefs

- **Role of Coral Reefs:**

- Provide habitat for marine life
- Support coastal protection
- Offer potential medical discoveries

- **Threats:**

- Ocean acidification
- Overfishing
- Pollution

- **Protection Measures:**

- Limit carbon emissions
- Enforce fishing regulations
- Reduce pollution



Summary of Key Points

- **What is Biodiversity?:**
- Species diversity, genetic diversity, and ecosystem diversity
- **Why is it Important?:**
- Supports ecological balance, human well-being, and future discoveries
- **Threats:**
- Habitat destruction, pollution, and climate change
- **Protection Measures:**
- Establish protected areas, promote sustainable practices, and raise awareness

Assignment

1. **Design a Poster:**

2. Illustrate the concept and content of biodiversity with images and text.

3. **Species Report:**

4. Choose a species or ecosystem, understand its role, and write a report on its importance.

5. **Group Discussion:**

6. Propose specific protection measures for biodiversity and submit a summary.