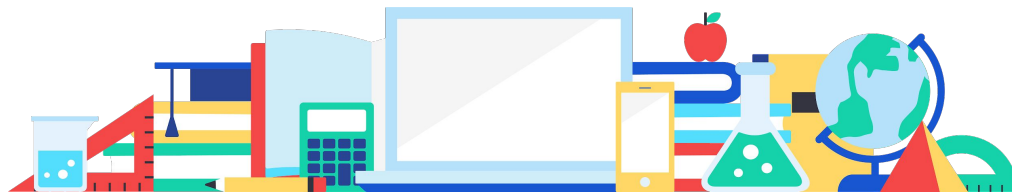





Environmental Science Topics & Resources

June 2022





Topics to discuss

- Introduction to Environmental Science
- Earth Systems and Resources
- The Atmosphere
- Interdependence of Organisms
- Ecology
- Populations
- Land and Water Resources and Use
- Energy Resources and Consumption
- Natural Biogeochemical Cycles
- Pollution
- Impact on Human Health and Environment
- Global Change



Introduction to Environmental Science

- Ecological Footprint
- Principles of Sustainability
- Scientific Method
- Biodiversity
- Environmental Problems and their Causes



Earth Systems and Resources

- Earth's Structure
- Plate Tectonics
- Soil Formation and Erosion
- The Rock Cycle
- Earthquakes, Tsunamis, and Volcanoes
- Earth's Geography and Climate
- Solar Intensity



The Atomosphere

- Atmospheric Composition
- Structure
- Climate and Weather
- Atmospheric Circulation
- El Niño and La Niña - Southern Oscillation (ENSO)
- Hurricanes, Cyclones, and Tornadoes



Interdependence of Organisms

- Energy Flow in Ecosystems
- Trophic Levels
- Interactions between Species
- Species Diversity
- Stability in Ecosystems
- Food Chains and Food Webs
- Primary Productivity
- Interdependence
- Of Organisms
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Ecology

- Ecosystem Structure and Services
- Terrestrial and Aquatic Biomes
- Ecosystem Biodiversity
- Natural Ecosystem Change
- Ecosystem Productivity
- Law of Tolerance
- Ecological Succession



Populations

- Survivorship Curves
- Population Ecology
- Age Structure Diagrams
- Human Population Dynamics
- Demographic Transition
- Population Growth



Land and Water Resources and Uses

- Tragedy of the Commons
- Types of Agriculture
- Sustainable Agriculture
- Pest-Control Methods
- Irrigation Methods
- Forestry
- Deforestation
- Urban Land Development
- Mining
- Fishing
- Green Revolution



Energy Resources and Consumption

- Energy Sources
- Global Energy Consumption and Distribution
- Energy Use
- Renewable Energy Sources
- Energy Conservation Methods
- Transportation



Natural Biogeochemical Cycles

- Water Cycle
- Sulfur Cycle
- Phosphorus Cycle
- Nitrogen Cycle
- Carbon Cycle
- Role of H₂O, C, N, P, and S in the Human Body



Pollution

- Major Air Pollutants
- Air Pollution
- Methods to Reduce Air Pollutants
- Acid Decomposition
- Thermal Pollution
- Noise Pollution
- Water Pollution
- Groundwater Pollution
- Maintaining Water Quality
- Septic Systems
- Municipal Solid Waste
- Waste Reduction Methods
- Sources of Pollution



Impact on Human Health and Environment

- Hazards to Human Health
- Dose-Response Relationship
- Biomagnification and Bioaccumulation
- Contaminated Sites
- Hazardous Chemicals in the Environment
- Pathogens and Infectious Diseases
- Sustainability
- Environmental Economics



Global Change

- Ozone Depletion
- Global Warming
- Reducing Global Climate Change
- Loss of Biodiversity
- Ocean Acidification and Warming
- Impacts of Global Warming
- Invasive Species