

Environmental Science Course Overview

<p style="text-align: center;">1st QUARTER:</p> <p>I. Science and the Environment A. Understanding Our Environment B. Environment and our Society</p> <p>II. Tools of Environmental Science A. The Scientific Method B. Statistics, Models and Decision-Making</p> <p>III. The Organization of Life A. Ecosystems: Everything is Connected B. Evolution C. Diversity of Living Things 1. Organisms, species, populations, communities, biosphere 2. Habitat, niche 3. Relationships: predation, competition 4. Co-Evolution, extinction</p> <p>IV. How Ecosystems Work A. Energy Flow (food chains, webs, respiration) B. Cycling of Nutrients 1. Cycles: Carbon, Phosphorus, Nitrogen C. How Ecosystems Change 2. Succession: Primary & Secondary</p> <p style="text-align: center;">BENCHMARK I</p>	<p style="text-align: center;">2nd QUARTER:</p> <p>V. Biomes A. Forests 1. Tropical Rain, Temperate Rain, Temperate Deciduous, Taiga B. Grasslands 2. Tropical Savanna, Temperate Grasslands, Deserts, Tundra, Chaparral</p> <p>VI. Aquatic Ecosystems A. Freshwater: lakes, ponds, wetlands, rivers 1. Heating and cooling B. Marine: estuaries, reefs, ocean, polar</p> <p>VII. Understanding Populations A. How Populations Change in Size 1. Linear/exponential growth 2. Carrying capacity/limiting factors B. How Species Interact with Each Other 1. Introduced Species & Variations within Species 2. Natural Selection & Adaptations</p> <p>VIII. Biodiversity A. What is Biodiversity B. Biodiversity at Risk (adaptations within biomes) C. The Future of Biodiversity</p> <p style="text-align: center;">BENCHMARK II</p>
<p style="text-align: center;">3rd QUARTER:</p> <p>IX. Water A. Resources, Use & Management B. Pollution: Surface Water, Ground Water, Water Shortages C. Freshwater Pollution</p> <p>X. Air A. Causes and types of Air Pollution B. Effects of Human Health C. Air, Noise & Light Pollution D. Acid Precipitation</p> <p>XI. Atmosphere & Climate Changes A. Climate Determinants B. The Ozone Shield C. Global Warming & Greenhouse Earth-Effect</p> <p>XII. Land A. Urban land Use: Waste Water Treatment & Thermal Pollution B. Land Management & Conservation</p> <p>XIII. Food & Agriculture A. Feeding the World B. Crops & Soil C. Animals & Agriculture</p> <p style="text-align: center;">BENCHMARK III</p>	<p style="text-align: center;">4th QUARTER:</p> <p>XIV. Mining & Mineral Resources A. Exploration & Mining B. Mining Regulations & Mine Reclamation</p> <p>XV. Nonrenewable Energy A. Energy Resources B. Fossil Fuels C. Nuclear Energy</p> <p>XVI. Renewable Energy A. Renewable Energy Today B. Alternative Energy & Conservation</p> <p>XV. Waste A. Solid Waste B. Reducing Solid Waste C. Hazardous Waste</p> <p>XVI. The Environment & Human Health A. Pollution & Human Health B. Biological Hazards</p> <p style="text-align: center;">BENCHMARK IV</p>