



## Nazareth Area School District

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### **AP Environmental Science:**

The goal of the AP environmental science course is to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems, which are both natural and man-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental science is interdisciplinary; it embraces a wide variety of topics from biology, chemistry, earth science, meteorology, and geography. The major topics of study include: earth systems and resources, the living world, populations, land and water use, energy resources and consumption, pollution, and global change. This course has a significant laboratory and field investigation component, which allows students to utilize scientific techniques and methods to apply their knowledge to real world situations. In addition, extensive reading and independent work are required outside of the classroom.

### **By the end of AP Environmental Science students will know:**

Environmental, Chemistry, and Science Basic Knowledge: Environmental problems, causes, sustainability matter, energy, nutrient cycling, systems, ecosystems

Biodiversity and Evolution: Biodiversity, evolution, species interactions, and population control

Human populations: GDP, GPP, birth rate, death rate, contraception, demographics, populations, immigration, and emigration

Climate and Biodiversity: Climate, Precipitation, Hadley Cells, Coriolis Effect, Convection, Biome, Climograph

Aquatic Biodiversity and systems: Marine, Freshwater, Littoral, Benthic, Wetlands, Estuaries, Macroinvertebrates

Terrestrial Biodiversity, Agriculture, and terrestrial systems: Terrestrial, GMO's, Agriculture, Grazing, Renewable, Nonrenewable, Pest management, Greenhouse gas

Pollution, solid and hazardous wastes, toxins: Pollutants, CFC's, PCB's, Toxins, Greenhouse gas, Solid Waste disposal, Waste treatment, Reduce, Reuse, Recycle

Renewable energy, nonrenewable energy, and energy efficiency: Nonrenewable energy, Renewable Energy, Mining, Reclamation