

## **ENVIRONMENTAL SCIENCE CP (LAB SCIENCE)**

Grade level: 9,10,11,12

Credit: 0.5 or 1.0

Prerequisite: None

Environmental Science provides an overview of basic environmental issues, including climate change, sustainability, pollution, depletion of natural resources, renewable energy, loss of biodiversity, deforestation, soil fertility and erosion, and waste disposal. It also explores the history of the environmental movement, the politics and ethics involved in environmental issues, and the regulations that help limit environmental damage. Students are expected to explore their own impact on the environment and ways to mitigate that impact. The four projects are designed to help students assess the environmental damage in their own ecosystems and determine their own environmental footprint. The five labs are designed to give students hands on experience in observing and assessing natural systems and how they function. The topics include the recycling of wastes, soil erosion, stream health, invasive species, backyard ecology, energy audits, and acid rain.

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### **Environmental Science Lessons**

#### **Teacher Message**

#### **Lesson 1: What is Environmental Science?**

#### **Lesson 2: Ecology**

#### **Lab 1: Backyard Ecology**

#### **Lesson 3: Air Quality and Pollution**

#### **Lesson 4: Climate Disruption**

#### **Lesson 5: Forestry Management and Deforestation**

#### **Lesson 6: Animal Population and Endangered Species**

#### **Lesson 7: Biodiversity**



**Lab 2 Invasive Species Early Detection Surveys**

**Lesson 8: Human Population Demographics**

**Lesson 9: Sustainability**

**Lab 3: Energy Audit and Energy Source Investigation**

**Lesson 10: Political Influences and Activism**

**Lesson 11: Review**

**Lesson 12: Energy**

**Lesson 13: Soil Quality**

**Lab 4: Soil Composition and Soil Erosion**

**Lesson 14: Solid Wastes and Recycling**

**Lesson 15: Pesticides**

**Lesson 16: Toxicology**

**Lesson 17: Water Quality and Pollution**

**Lesson 18: Watersheds and Management**

**Lab 8: Acid Rain**

**Lesson 19: Environmental Ethics and Law**

**Lesson 20: Environmental Technologies**

**Lesson 21: Review**

**Final Project – Ecological Footprint and Carrying Capacity**

