12th Grade Environmental Science 2026-2027 Instructional Plan

Created on 7, 2026

Contact Information

Teacher Name: Venkata Yelamanchili
Email: venkata.yelamanchili@midlandisd.net
Phone: 432-240-8700

WHAT IS AP(ADVANCED PLACEMENT)?

AP courses aim to teach students the skills and information needed to pass an end of year exam given by College Board. Any student who receives a score of three (or above) on College Board's five-point grading system typically receives college credit by most public colleges.

Moreover, regardless of exam score, many colleges and universities view participation in the AP program as a sign of a motivated student. The course is advanced not only in reading and writing, but in the depth of the material. Students taking this course will learn at an accelerated pace and must exhibit responsibility, good work ethic, and a drive to learn to achieve college readiness skills and (potential) college credit.

COURSE DESCRIPTION

AP Environmental Science (APES) is a rigorous, interdisciplinary science course designed to explore the relationships between the natural world, human populations, and the environment. Students investigate ecological processes, human impacts on the Earth, and sustainable practices through data analysis, laboratory work, case studies, and real-world problem solving.

This course prepares students to take the AP Environmental Science Exam and potentially earn college credit. It emphasizes scientific inquiry, critical thinking, and evidence-based reasoning.

COURSE ACTIVITIES

Below you will find descriptions of the most common activities that students will participate in during the course of each semester.

Throughout the year, students will complete the following:

- Hands-on activities
- Building models
- Making projects through Google slides
- Assessments: formal and informal

YOUNG WOMEN'S Leadership Academy

12th Grade Environmental Science 2026-2027 Instructional Plan

Created on 7, 2026

GRADES - Click here for → YWLA Grading Policy

Major (Test, Projects, Writing)	60%
Minor (Notes, Daily Work)	40%

Classroom Resources

- **AP Course guide Teacher Resource**
- **AP Course guide Student Resource**
- **Lessons posted in the Google Classroom**
- **Videos provided by AP classroom**

AP Exam Date:

Friday, May 13, 2027

COURSE OBJECTIVES AND TOPICS:

TOPICS:

- **The Living World: Ecosystems**
- **The Living World : Biodiversity**
- **Populations**
- **Earth Systems and Resources**
- **Land and Water Use**
- **Energy Resources and Consumption**
- **Atmospheric Pollution**
- **Aquatic and Terrestrial Pollution**
- **Global Change**

OBJECTIVES:

- **Describe how energy flows and matter cycles through ecosystems**
- **Analyze the roles of producers, consumers, decomposers, and ecological services**
- **Explain factors that influence species diversity and extinction**
- **Evaluate conservation strategies and ecological resilience**
- **Interpret population growth models and demographic transitions**
- **Predict the consequences of population trends on resource use and sustainability**
- **Explain geological processes (e.g., plate tectonics, soil formation)**
- **Analyze atmospheric and oceanic circulation and their effects on climate**
- **Compare different agricultural, mining, fishing, and forestry practice**
- **Assess the environmental and economic impacts of land development**
- **Distinguish between renewable and nonrenewable energy sources**
- **Analyze the environmental, political, and economic implications of energy use**
- **Describe types and sources of pollution (air, water, soil, noise, light)**
- **Assess the health and ecological impacts of various pollutants**
- **Analyze human contributions to climate change, habitat loss, and invasive species**

YOUNG WOMEN'S Leadership Academy

12th Grade Environmental Science 2026-2027 Instructional Plan

Created on 7, 2026

- **Explore mitigation and adaptation strategies**
- **Apply systems thinking to evaluate trade-offs and solutions**
- **Use ecological principles to justify conservation or sustainability actions**

Please feel free to reach out with any questions or concerns. We are excited to work together to make this a successful year of learning!
