AP Environmental Science Overview for Parents and Students

Prerequisites: 10th-12th grades, enrolled in Algebra II or higher

Course Overview

AP Environmental Science is a rigorous, interdisciplinary course equivalent to a one-semester college-level class. It explores the scientific principles, concepts, and methodologies needed to understand the interrelationships of the natural world. Students will identify and analyze environmental problems, evaluate associated risks, and explore solutions to mitigate these issues. Topics include ecology, geology, energy resources, pollution, and sustainability, providing a foundation for understanding environmental systems and human impacts.

Course Content: The course is structured into **nine units,** each addressing key environmental science topics and skills:	
Unit 1: The Living World: Ecosystems	Understanding ecosystem dynamics, energy flow, and nutrient cycles
Unit 2: The Living World: Biodiversity	Exploring biodiversity, ecological relationships, and resilience
Unit 3: Populations	Analyzing population growth, carrying capacity, and resource use
Unit 4: Earth Systems and Resources	Examining geological processes, soil science, and water availability
Unit 5: Land and Water Use	Studying agriculture, urban development, and resource management
Unit 6: Energy Resources and Consumption	Investigating renewable and nonrenewable energy sources
Unit 7: Atmospheric Pollution	Assessing air quality and human impacts on the atmosphere
Unit 8: Aquatic and Terrestrial Pollution	Exploring water and land pollution and mitigation strategies
Unit 9: Global Change	Addressing climate change, loss of biodiversity, and sustainability

Student Skill Developed

- **Concept Explanation:** Understand and explain environmental concepts and processes.
- **Visual Representations:** Analyze and interpret models, graphs, and diagrams.
- **Data Analysis:** Interpret and evaluate environmental data to identify patterns and trends.
- **Scientific Experiments:** Analyze research and propose modifications to experimental methods.
- **Mathematical Routines:** Apply quantitative methods to solve environmental problems.
- **Environmental Solutions:** Propose and justify solutions to environmental challenges.

Expected Student Workload

Classroom Work Requirements
In class, students will participate in discussions, complete group projects, analyze case studies, and engage in hands-on laboratory or field investigations, which make up at least 25% of instructional time. They will also practice AP-style questions, complete assessments, and develop solutions to real-world environmental problems.

Independent Work Requirements
Outside of class, students are expected to read and analyze scientific texts, review environmental case studies, watch course-related videos, take notes, and prepare for discussions and projects. Assignments include completing lab reports, practicing free-response questions, completing multiple-choice questions, and reviewing for unit tests.

Students should plan to spend 3-5 hours on homework and study time each week, depending on their reading speed, comprehension level and critical thinking skills.

AP Exam Structure		
The AP Environmental Science Exam is a comprehensive **2-hour and 40-minute assessment**, consisting of two sections:		
Section I		
Multiple Choice (60% of score)	80 questions in 90 minutes	Tests comprehension of environmental science concepts, visual data analysis, and application of scientific practices.
Section II		
Free-Response (40% of score)	3 questions in 70 minutes	**Design an Investigation**: Develop a hypothesis and describe procedures for an environmental experiment. **Analyze an Environmental Problem**: Propose and justify solutions with supporting data. **Mathematical Analysis**: Apply quantitative skills to solve environmental problems.

How AP Exams are Scored
The AP Environmental Science Exam combines machine-scored multiple-choice questions and free-response essays graded by trained AP readers. Essays are scored using detailed rubrics that assess students' ability to analyze environmental problems, interpret data, and propose justified solutions.
Multiple-Choice Section
This section tests students' knowledge of environmental concepts, scientific principles, and data analysis. Each correct answer earns points, with no penalty for incorrect responses, so students are encouraged to answer all questions.
Free-Response Section
The free-response section requires students to design investigations, analyze environmental problems, and apply mathematical calculations. Responses are evaluated on students' ability to present clear, evidence-based arguments and solutions using the claim - evidence - reasoning format.
Grading Process and Consistency
Free-response questions are scored by experienced AP readers, including teachers and college faculty, using standardized rubrics. Scorers participate in calibration sessions to ensure consistency and fairness across all exams.
Composite Score and Scaling
Scores from each section of the AP exam are combined into a composite score, which is then converted to the AP 5-point scale. A score of 5 means "extremely well qualified," while a 3 indicates "qualified," and a 1 means "no recommendation." A score of 3 or higher is generally considered passing, but some colleges only grant credit for scores of 4 or 5. Be sure to check your colleges of interest for their AP credit policy to confirm its score requirements for credit. **All AP scores are released in July. Students can check their College-Board accounts for their scores. GCS only puts AP scores of 3 or higher on student transcripts.**