

Global Citizen Scholar Program Elective Course Template

Course Title: AP Environmental Science

Grade Level: 11th and 12th grades

Keeping in mind Asia Society's framework for Global Competence, please fill in the sections below to illuminate and clearly communicate why this course qualifies as an elective for our Global Citizen Scholar Program. This information will be included on the GCS webpage and will allow scholars to read about each elective's approach to global citizenship education.

- **Investigate the World:** Students can initiate investigations of the world by framing questions, analyzing and synthesizing relevant evidence, and drawing reasonable conclusions about global issues.
- **Recognize Perspectives:** Students can recognize, articulate, and apply an understanding of different perspectives (including their own).
- **Communicate Ideas:** Students can select and apply appropriate tools and strategies to communicate and collaborate effectively, meeting the needs and expectations of diverse individuals and groups.
- **Take Action:** Students can translate their ideas, concerns, and findings into appropriate and responsible individual or collaborative actions to improve conditions.

Course Content:

This course reflects learning that analyzes environmental concepts and processes to achieve understanding in order to propose and justify solutions to environmental problems around the world. The course teaches students how to apply science to the solutions of important social problems. It also provides opportunities to practice applying scientific methods to practical, real-life global problems.

The goal of the 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 both natural and human-induced, to evaluate the relative risks associated with these problems, and to evaluate alternative solutions for resolving and/or preventing them.

Course Objectives Relevant to Global Citizenship:

Almost every unit in this class addresses at least one of the Global Citizenship outcomes.

Below are some course objectives as an example.

- Students will understand that climate variation causes some regions of the world to possess abundant supplies of water, whereas other regions have very little water.
- Students will understand that people have attempted to harmonize economic development with sustainable development.
- Students will understand that improved technology and more efficient use of resources has increased the world's agricultural output.
- Students will know how energy use and energy resources have varied over time, both in the U.S. and worldwide.
- Students will know the major historical and emerging infectious diseases around the world.
- Students will know the difference between global change, global climate change, and global warming.

Texts/Sources/Materials Used to Promote Deepen Cultural Competencies:

Friedland A., Courard-hauri D., and Reylea. *Environmental Science for AP*.

Each unit has at least one class discussion and lab/activity regarding global sustainability in the topic of the unit.

Lessons/Projects/Activities That Will Produce the Above-Stated Learning Outcomes

(minimum of four): Every unit in this class addresses at least one of the learning outcomes above. Some units are naturally weighted a little more. For example:

- The second half of Unit 6 covers more sustainable, renewable energy. As a class we recreate many renewable resources on a smaller scale and then discuss how each of them are used around the world.
- Unit 3 covers populations. Within this unit we study the dynamics of the human population by describing and discussing the environmental problems that are associated with the different population distributions found around the world.
- Unit 5 discusses land and water use around the world. After talking about how the land has been overused for things such as overfishing, meat production, mining, and urbanization, students research more sustainable practices used around the world.
- Unit 7 addresses air pollution. We discuss the variety of sources of air pollution around the world and what many cities around the world have implemented to reduce air pollution. We also design an experiment to test some of the reduction techniques, including scrubbing coal.