

Development of the Environmental Principles and Concepts

The Education and the Environment Initiative [Pavley, AB1548] directed CalEPA to develop a set of overarching, constant and accurate principles and concepts about the environment for elementary and secondary schools, known now as **California's Environmental Principles and Concepts (EP&C)**. Not only are the EP&C the foundation for the EEI Curriculum, by law they must also align to California's academic content standards, and not duplicate or conflict with any other academic content standards. Legislation further mandated that the EP&C include, but not be limited to, the following topics:

1. Air
2. Climate Change
3. Energy
4. Environmental Justice
5. Environmental Sustainability
6. Fish & Wildlife Resources
7. Forestry
8. Integrated Pest Management
9. Integrated Waste Management
10. Oceans
11. Pollution Prevention
12. Public Health & the Environment
13. Resource Conservation & Recycling
14. Toxics & Hazardous Waste
15. Water

NOTE - Global Climate Change was not included in the original legislation, but due to the critical importance of this environmental issue, was subsequently added as the 15th environmental topic to be included in the EEI Curriculum.

Per the law, CalEPA was to develop the EP&C in cooperation with the Natural Resources Agency, State Department of Education, and the State Board of Education. CalEPA also followed a collaborative and transparent process to ensure the participation of a wide range of involved and interested parties through technical working groups. Initially, the EEI Planning Team identified collected and reviewed examples of environmental principles from a wide variety of sources to identify common themes. By applying a systems-thinking approach, the team identified more than 100 "Overarching Environmental Principles" to use as an initial framework for developing the EP&C. Through a first round of Technical Working Group meetings, a diverse group of stakeholders also identified and prioritized a set of draft principles that addressed the 15 environmental topics outlined in the EEI laws, and corresponded to the 100 more general overarching principles initially identified. Through this process, the partner agencies worked with over 100 representatives of state and federal agencies, universities, non-governmental organizations, and educators. A second series of Technical Working Group meetings resulted in the highest-priority concepts that connected with each of the topic-specific environmental principles. A broader review process followed with an online review of the draft EP&C, field reviews and a series of school district focus groups. In 2005, the EP&C were reviewed and approved by the Secretary of the Cal/EPA.

The EP&C examine the interactions and interdependence of human societies and natural systems. They are the foundation of the environmental content taught in the EEI Curriculum. As the concepts are mastered, environmental literacy is developed in California's students. In the EEI Curriculum, students' knowledge of the EP&C builds and spirals through their educational years, leading to deeper and more complex understanding as the student advances. To further ensure that all California students become environmentally literate, the law requires the California Department of Education to only approve new K-12 Science and History/Social Science textbooks that incorporate and address the EP&C. This is remarkable.
