



- The goal of the EEI is to increase environmental literacy for California's kindergarten through grade 12 students by teaching science and history-social science based academic content standards to level of mastery within an environmental context.
- In 2003, then-California Assemblywoman Fran Pavley authored bill (AB 1548 in 2003) which was sponsored by Heal the Bay, a nonprofit organization .
- The legislation required the state to develop an environment-based curriculum to be offered to all California public schools, it was signed into law by then-Governor Gray Davis.

Development of the Environmental Principles and Concepts

- The AB 1548 legislation directed CalEPA to develop a set of overarching environmental principles and concepts that would complement (but not duplicate or conflict with) existing academic content standards.
 - EEI Planning Team collected, and reviewed examples of environmental principles from a wide variety of sources to identify common themes, identifying more than 100 "Overarching Environmental Principles" to use as an initial framework for developing the EP&C.
 - In 2004, CalEPA commissioned the Technical Working Group (TWG) to prioritize a set of draft principles that addressed the 15 environmental topics, and to align them to the overarching principles initially identified by the EPA design team
- 1.Air
 - 2.Energy
 - 3.Environmental Justice
 - 4.Environmental Sustainability
 - 5.Fish & Wildlife Resources
 - 6.Forestry
 - 7.Integrated Pest Management
 - 8.Integrated Waste Management
 - 9.Oceans
 - 10.Pollution Prevention
 - 11.Public Health & the Environment
 - 12.Resource Conservation & Recycling
 - 13.Toxics & Hazardous Waste
 - 14.Water
 - ** Climate Change was added as the 15th

Principle 1: People Depend on Natural Systems

- Concept 1. The goods produced by natural systems are essential to human life and to the functioning of our economies and cultures.
- Concept 2. The ecosystem services provided by natural systems are essential to human life and to the functioning of our economies and cultures.
- Concept 3. That the quality, quantity, and reliability of the goods and ecosystem services provided by natural systems are directly affected by the health of those systems.



Principle 2: People Influence Natural Systems

- Concept 4. Direct and indirect changes to natural systems due to the growth of human populations and their consumption rates influence the geographic extent, composition, biological diversity, and viability of natural systems.
- Concept 5. Methods used to extract, harvest, transport, and consume natural resources influence the geographic extent, composition, biological diversity, and viability of natural systems.
- Concept 6. The expansion and operation of human communities influences the geographic extent, composition, biological diversity, and viability of natural systems.
- Concept 7. The legal, economic, and political systems that govern the use and management of natural systems directly influence the geographic extent, composition, biological diversity, and viability of natural systems.



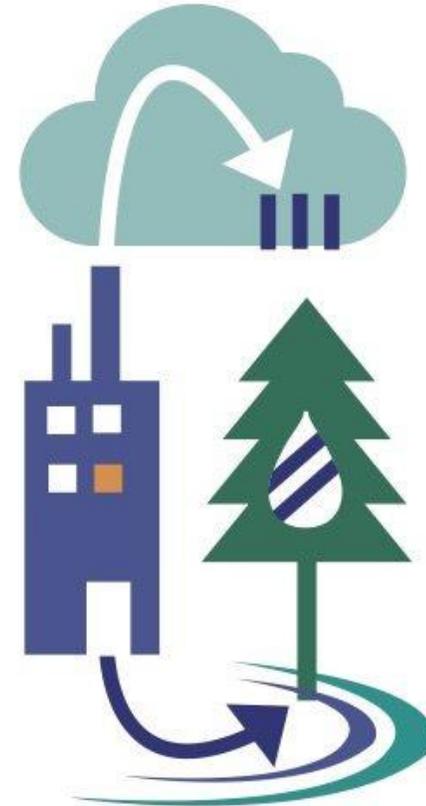
Principle 3: Natural Systems Change in Ways that People Benefit from and can Influence

- Concept 8. Natural systems proceed through cycles and processes that are required for their functioning.
- Concept 9. Human practices depend upon and benefit from the cycles and processes that operate within natural systems.
- Concept 10. Human practices can alter the cycles and processes that operate within natural systems.



Principle 4: There are no Permanent or Impermeable Boundaries that Prevent Matter from Flowing Between Systems

- Concept 11. The effects of human activities on natural systems are directly related to the quantities of resources consumed and to the quantity and characteristics of the resulting byproducts.
- Concept 12. The byproducts of human activity are not readily prevented from entering natural systems and may be beneficial, neutral, or detrimental in their effect.
- Concept 13. The capacity of natural systems to adjust to human-caused alterations depends on the nature of the system as well as the scope, scale, and duration of the activity and the nature of its byproducts.



Principle 5: Decisions Affecting Resources and Natural Systems are Complex and Involve Many Factors

- Concept 14. There is a spectrum of what is considered in making decisions about resources and natural systems and how those factors influence decisions.
- Concept 15. The process of making decisions about resources and natural systems, and how the assessment of social, economic, political, and environmental factors has changed over time.



The Model Curriculum Plan and Alignment to Academic Standards

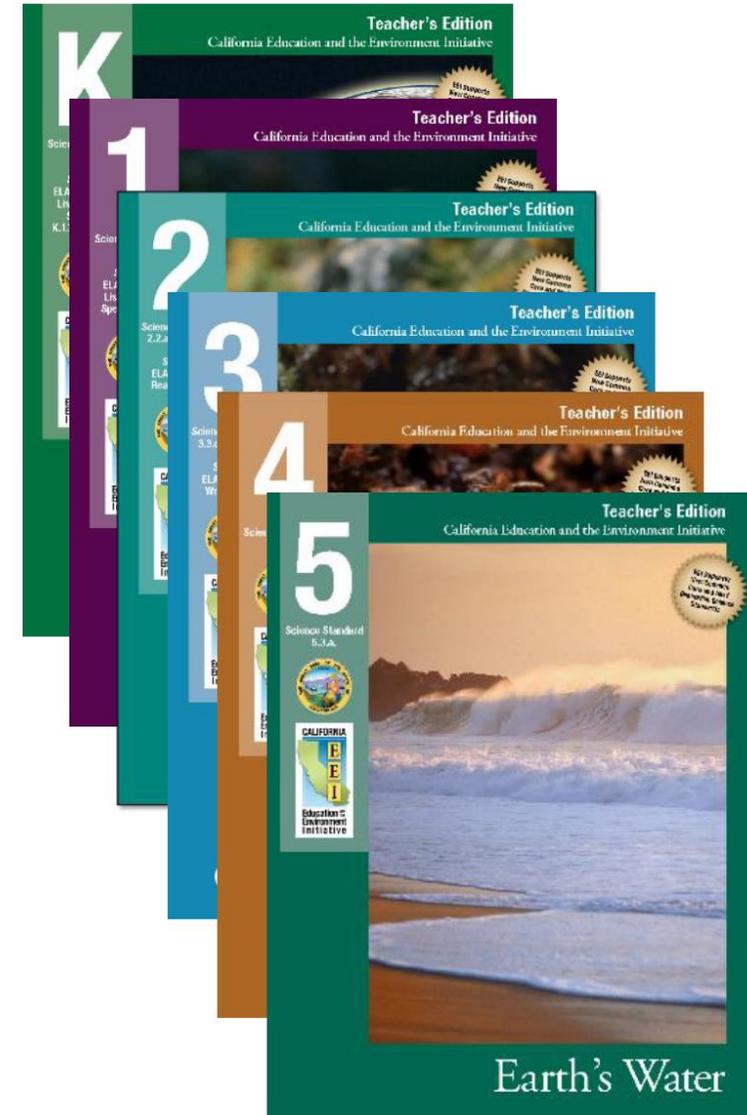
- The goal was to align the EP&Cs with existing standards that could be well-taught and mastered through the context of any one or more EP&C.
- An Educator Needs Assessment was sent to 10,000 teachers, numerous focus group meetings and discussion sessions were conducted to gather suggested design elements for the EEI Curriculum
- Results indicated the EP&C needed to be an overlay on existing curricular standards and without increasing instructional content.

EEI Units by Grade	Principle I	Principle II	Principle III	Principle IV	Principle V
Kindergarten					
K.3.a.	X				
K.3.c.	X				
K.4.5./K.6.3.		X			
First Grade					
1.2.a.		X			
1.2.c.		X			
1.2.d.		X			
1.2.4.		X			
1.4.2.	X				
Second Grade					
2.2.a./2.2.b.			X		
2.2.c./2.2.d.			X		
2.2.e./2.2.f.			X		
2.3.a./2.3.b.	X				
2.2.4.		X			
2.4.1.		X			
2.4.2./2.4.3.	X				
Third Grade					
3.3.a.			X		
3.3.c./3.3.d.		X			
3.1.1./3.1.2.	X				
3.2.2.	X				
3.5.1./3.5.2./3.5.3.	X				

The EEI by design is a “Spiral” curriculum, from kindergarten to twelfth grade, leading students to an ever deeper and more complex understanding of the relationship between humans and the environment.

The Curriculum Refinement Process

- Development of Model Curriculum Plan took place in June 2005
- Content modules had been solicited from stakeholder groups and resulted in 85 instructional units that were reviewed by content experts
- The 85 units needed to provide lessons and resources that support the teaching of science and history-social science standards.
 - •Forty-five units teach select history-social science standards to mastery.
 - •Forty units can serve as a rich content library to support the teaching of the Next Generation Science Standards.
 - •All 85 units support the teaching of Common Core State Standards in English language arts.
- These were field tested by 190 teachers statewide that were recruited California Regional Environmental Education Community (CREEC)



Education for the Environment

- 2009 a new set of content experts were appointed by the Board of Education to respond to the Field Test Results
- The EEI Curriculum received final unanimous approval by the State Board of Education on January 7th, 2010.

