

CELf promotes best principles and practices for Education for Sustainability (EfS) through the research-based curriculum of its project partners, national environmental literacy and EfS standards, and local community-based partnership opportunities. Education for Sustainability can be an effective lens through which academic skill instruction can be delivered and Earth Stewardship can be achieved. CELf's facilitators work side-by-side with educators to design programs that integrate EfS principles and practices into their existing curricula while creating a more sustainable classroom and school-wide learning opportunities.

Education for Sustainability Principles:

CELf uses the [*Big Ideas of Sustainability*](#) as entry points into classroom instruction to enhance the clarity, purpose and focus of learning. Thoughtfully sharing big ideas throughout the curriculum design process allows students to construct knowledge, and see connections between the more granular facts, and overarching concepts. This helps students create deeper meaning and determine what is most important, enduring, and transferable.

CELf's work is guided by three overarching Principles:

(1) Precautionary Principle - recognizes people's connection to the land, and elevates community, cultural, and economic wellbeing as equally important values alongside environmental concerns.

(2) Systems Thinking - emphasizes education for a systems approach to nurture environmental, sociocultural, and economic capital. A systems approach avoids compartmentalization of environment, society, culture, and economy, promoting the view that there are strong reciprocal linkages between humans-to-humans and humans-to-environment.

(3) The Three Pillars of Sustainability - accounts for balancing the the "3E's": environment, social equity and economy, recognizing that the economy is a subsystem of the finite biosphere that supports it. The ability to integrate scientific reasoning, economic impact and social justice as a part of the decision making process helps students to see how systems work and how actions taken can have long/short term consequences as well as unintended consequences.

Education for Sustainability Practices:

CELF's integrated approach transforms learning into an authentic exploration of real-world problems, centered in and around the school community. Using sustainability as a guiding framework, we help schools embed place- and project-based learning into existing curriculum, across all subject areas. This could mean testing the water in a stream behind the school in biology class, using a flood-prone hill to measure slope-intercept in algebra or growing ingredients for a salsa garden in Spanish class. Students are actively involved in their own learning through experience. Learning is interactive building on what the student already knows and values.

CELF leads professional learning programs to train teachers on the P3 Unit Design Framework. This framework provides curriculum and project design support to create a systemic approach to building environmental literacy through problem/project/place-based learning.

Place-Based Education: How to engage students in the systems of their local community, design activities and lessons which deepen a sense of place and knowledge of the human and natural resources of a neighborhood, and create learning opportunities to investigate the geography, culture, local policy and data within a specific place.

Problem-Based Learning: How to support and facilitate inquiry-based learning, design units that support problem-solving and critical thinking skills, implement STEM learning through the focus of a singular problem, and use real world contexts for problem-solving.

Project-Based Learning: How to design relevant project-based learning units, with an interdisciplinary approach to teaching and learning, and implement STEM learning through a single project which incorporates government, environmental data and metrics, technology, student advocacy and civic science.

These best practices provide students with opportunities to develop as Earth Stewards who:

- View themselves as part of the larger interconnected world
- Have the capacity to reflect on one's own personal and collective actions
- Are able to value and understand one's role to respect Earth's limited resources
- Take responsibility for their actions and understand they can make a difference
- Act as stakeholders in civic and environmental issues
- Practice critical systems-thinking skills by examining the interdependence of elements within systems, and recognize causal and feedback loops