K-12 Sustainability Education Strategies
Course Outline

COURSE DESCRIPTION

This 7.5 hour online course consists of five units designed specifically for K-12 educators and administrators interested in integrating sustainability education into their classrooms and schools. The course package is designed as an add-on to the Institute’s foundation course, Introduction to Sustainability Concepts. However, teachers with a prior knowledge of sustainability topics may enroll independent of the foundation course.

CREDIT

Upon completion of this course participants have the option to purchase .75 CEUs or .5 academic credits from the Institute’s partnering university.

INSTRUCTIONAL RESOURCES

The 7.5 hours of directed instruction is accessed online through any internet connection. The course consists of three sequential units which contain all of the instructional resources participants will need to complete the course. These include a variety of instructional formats, such as video, animations, presentations, guided activities, and readings.

Unit 1: Sustainability Education: Students, Teachers, and Schools

Essential Question: What does sustainability education look like across the nation?

The Big Idea: In the same way that there is no “silver bullet” for the sustainability challenges that humanity faces, there is no one-size-fits-all approach to sustainability education. Sustainability literacy will not look the same for any two teachers and sustainability initiatives will vary between schools. Teachers all have unique interests, skills sets, and job requirements. However, the role of education is paramount to creating a sustainable future. We need to guide, help, and learn from one another in order to create a fair and kind society, a healthy and equitable green economy, and to protect and utilize our planet's resources with care. There are fantastic resources available to us, including a vast network of governmental and non-governmental organizations supplying information, curriculum, expertise, sustainable schools programs, award and grant programs for green schools, and national standards for sustainability education. As literacy in sustainability increases, teachers and students develop their ability to adapt and grow in the new green economy. The capacity to adapt and integrate helps both people and governments create solutions and prosper as we address the issues facing this and future generations.

Topics Covered:

- The integrative practice of sustainability education
- The role of systems thinking in sustainability education
- National and international support for sustainability education
- Sustainable schools
Unit 2: Sustainability Education Standards and Frameworks

**Essential Question:** How can sustainability education standards guide our work?

**The Big Idea:** Sustainability and sustainability education can be advanced by standards and frameworks that are already available. Each takes a slightly different approach to sustainability concepts and skills based on addressing what students should know and be able to do. For example, the new national science framework explicitly promotes systems thinking, technology, and engineering for sustainability, environmental stewardship, and an appreciation for limits in nature. National and state standards and frameworks are increasingly addressing sustainability, often through a strategy of integrating sustainability concepts into core content areas.

**Topics Covered:**

- National Sustainability Education Standards
- K-12 Science Framework
- National Social Studies Standards
- Ed Steps Global Competence Matrix
- Oxfam Global Citizenship Framework

Unit 3: Sustainability Education Teaching Methods

**Essential Question:** How can sustainability education guide us in implementing best teaching practices?

**The Big Idea:** A 2008 report examining sustainability initiatives in European schools and communities highlighted innovation as a key determinant of success. Specifically, the report called out programs with innovation in their delivery method. Successful sustainability education initiatives demonstrated participatory and interactive learning approaches as well as the thoughtful use of new technology. Educators know that such approaches are not necessarily new ideas in the discussion of best teaching practices. For many years, innovative educators have sought to engage their students in authentic, accessible, and meaningful exploration of content and skills. Sustainability education provides educators with opportunities to refine their best teaching practices as well as identify new best practices that apply beyond sustainability into core disciplines.

**Topics Covered:**

- Blended learning
- Collaborative learning
- Differentiated learning
- Place-based learning
Unit 4: Sustainability as an Integrating Context for Learning

Essential Question: How and where in your curriculum can you teach about sustainability?

The Big Idea: Teachers and students will get more out of sustainability curriculum if it can be framed in a well-structured and integrated unit that takes advantage of sustainability standards. Curriculum should be designed and delivered with best teaching practices that engage the learner’s existing knowledge, provide rich new information and concepts. The point of this exercise is to give course participants an experience in framing a curriculum unit, with the possibility of later development complete lessons and assessments.

Topics Covered:

- Pedagogy: the learning cycle
- Connecting core content topics and sustainability education standards
- Developing a sustainability education unit

Unit 5: School-wide Sustainability Initiatives

Essential Question: How can sustainability foster school improvement by contributing to a school culture of respect, student engagement, and achievement?

The Big Idea: Sustainability education thrives when it engages students and administrators from the onset, employs best teaching practices, and favors collaboration and innovation. Good partnerships are essential. Most important is the creativity of the teacher in designing activities that enthusiastically engage students.

Topics Covered:

- Developing a school-wide sustainability initiative
- Integrated sustainability curriculum
- Green Campus initiatives
- Environmental and physical health
- School climate and citizenship
- Place-based learning and service learning
- Professional development
- Creating a sustainability education plan