



The goal of the Wisconsin K-12 Energy Education Program is to improve and increase energy literacy in Wisconsin's K-12 schools through teacher education. KEEP is a collaborative effort of the Wisconsin Center for Environmental Education and Focus on Energy.

Wisconsin K-12 Energy Education Program

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Why does Wisconsin need KEEP?

Energy literacy is critical to Wisconsin's economic and environmental future. Until KEEP, Wisconsin lacked the appropriate frameworks and support systems for a sequential and comprehensive approach to energy education in schools. Teachers reported they need more education and resources to be able to incorporate energy into their lessons. There is evidence that students lacked energy literacy. The KEEP Baseline Study found that

- ✓ Just over half of the students surveyed could identify the sun as Earth's primary source of energy, and
- ✓ Only a third of the secondary students surveyed recognized conservation as a solution to energy shortage problems.

What Has KEEP Accomplished So Far?

Professional Development Opportunities

Energy Education in the Classroom: Nearly 4,000 Wisconsin educators have received hands-on experience teaching lessons from the Activity Guide through its introductory energy education course. A KEEP course increases teachers' energy literacy and increases the likelihood that they will implement KEEP materials in their classrooms, potentially reaching over 1,000,000 Wisconsin students.

Web-based energy literacy courses: Energy education via the Internet; the content of these interactive courses (one on energy concepts and misconceptions and a second on renewable energy concepts and applications) are available at reduced costs to teachers year-round via the KEEP Web site and is offered for credit several times during the year making information about energy more conveniently located and easily accessible.

Renewable Energy Education in the Classroom: Through this course, teachers gain an understanding of renewable energy concepts and build on the activities and experiences provided through KEEP in-services. Teachers receive a copy of the supplemental guide, *Doable Renewables*, and gain firsthand experience in renewable energy through fieldtrips and guest speaker presentations.

School Building Energy Efficiency Education: During this course, teachers collaborate with their district administrators and facility managers and with consultants from Focus on Energy to investigate how their school uses energy and how their school can save money and energy through energy efficiency. Teachers have the opportunity to develop an action plan they can use with their students to help reduce their school's energy costs.

"The greatest asset of this in-service is that it didn't matter what grade level we were associated with. The KEEP materials provide a wide variety of activities & informational booklets."

NRES 730 Energy Education in the Classroom course participant

Over

What Has KEEP Accomplished So Far? (Continued)

Student Involvement Opportunities

Bright Idea Fundraiser: Through this project, students learn about energy efficiency and conservation while raising needed funds for various school resources and projects. Each year, thousands of Compact Fluorescent Light bulbs are sold preventing millions of pounds of carbon dioxide emissions from being released into Wisconsin's atmosphere.

Annual Bookmark Contest: Students in 5th, 6th, and 7th grade have the opportunity to enter artwork that illustrates an energy theme in KEEP's annual bookmark contest. Three winners from each grade have their artwork published on bookmarks that are distributed throughout the state.

Student-Built Homes Support Program: KEEP builds capacity of technology education teachers to involve their students in designing and building energy efficient homes that earn ENERGY STAR certification.

Electrathon: KEEP coordinates the Wisconsin Electrathon program which provides a means of teaching young people how to evaluate alternatives and make sustainable lifestyle choices, and uses a problem-solving discipline to design and build an efficient vehicle, all in a hands-on and team oriented approach.

Resources

A Conceptual Guide to K-12 Energy Education in Wisconsin: Identifies important energy concepts that students should know and understand.

Activity Guide: Contains 44 hands-on, interdisciplinary lessons that are aligned with Wisconsin's academic standards and make energy relevant to students' lives.

Doable Renewables: Building on the *Activity Guide*, this supplement provides teachers with inter-active lessons on renewable energy education they can share with students.

Energy Education Resource Trunks: Hands-on teaching materials, videos, posters, and lessons teachers can use to increase student appreciation of energy resources and the need for saving energy.

High School Supplement: An online supplement has been developed for high school level educators.

Pedal Power: KEEP has purchased four Pedal Power units that are distributed throughout the state. It is a tool to help teach about energy production, use, and conservation. Students ride a stationary bike to power a generator, which in turn powers an incandescent light bulb and a compact fluorescent light bulb (CFL), a hair dryer, radio, and a fan. This activity will teach students how much energy it takes to power these common electrical conveniences we use everyday and how important it is to turn them off when not in use (or not use them at all).

Networking and Outreach

KEEP On Going: KEEP provides continued support for teachers through print and online newsletters, our Web site, and at conferences. In support of the interests of Focus on Energy, we are reaching out to new audiences.

KEEP Connected: The KEEP Web site, www.uwsp.edu/keep, continues to be enhanced and updated to provide teachers with the latest resources and links to energy education teaching ideas and support networks.

Energy Awards Ceremony: Each year, KEEP recognizes winners of the bookmark contest, top sellers in the Bright Idea Fundraiser, exemplary student builders, and Energy Educator of the Year at its annual awards ceremony.

Educator Tent at the Energy Fair: KEEP staff host the Educator Tent including workshops and graduate credit opportunities to gain leadership skills in promoting renewable energy in their school and community. This outreach event serves the greater Wisconsin community by educating them about renewable energy and energy opportunities for teachers and students.

Partnerships in Energy Education: Working collaboratively with Focus on Energy, utilities, and energy resource professionals, KEEP promotes energy literacy in homes, schools, and communities.