



The NEED Project

Over 30 Years of Energy Education



What is NEED?

National Energy Education Development

The mission of the NEED Project is to promote an energy conscious and educated society by creating networks of students, educators, and business, government, and community leaders to design and deliver objective, multi-sided energy education programs.

NEED exists to:

prepare future leaders

train teachers to teach energy from a balanced perspective

reach parents and community decision makers through energy outreach and education



Materials are updated annually and reviewed by NEED's Teacher Advisory Board and an Energy Advisory Board in an effort to remain current – in both education philosophy and energy technologies and issues.

NEED Curriculum and Materials

Science of Energy

- With hands-on activities, students learn the science of energy to develop an understanding of the forms of energy.

Sources of Energy

- Students learn about the economic and environmental impacts of our energy sources while exploring the history of energy, the current energy situation, and the energy challenges and opportunities ahead.

Electricity

- Electricity is discovered with hands-on experiments and reinforcement activities.

Transportation

- NEED's extensive transportation portfolio allows students to learn about specific transportation solutions and compare a range of options.

Conservation & Efficiency

- NEED helps schools and students make wise energy decisions at home and at school.

Evaluation and Curriculum Connections

- Materials are updated annually. NEED has a Teacher Advisory Board of educators who help guide and create curriculum.
- Program participants evaluate materials, training programs, and new activities.
- All NEED activities are correlated to the Next Generation Science Standards, Common Core standards, and to state science standards where applicable.



Training and Professional Development

- NEED offers a variety of training opportunities for teachers and students.
- During the school year, training programs (one-two day workshops) are offered for teachers, students, and the community. Professional development or graduate credit can be earned.
- Examples of NEED Training Include:
 - Summer/Spring Break Camp for students
 - One-Two Day Teacher Workshops
 - Teacher Inservices
 - Pre/Post School Year Inservices
 - Multi-Day Training Programs for specific activities/content
 - 5-day NEED Energy Conference for Educators
 - Sessions at national and regional conferences (state science conferences, NSTA, NAAEE, WVSTA, etc.)

The NEED Network

Teacher Networking & Support

- NEED provides a support system for educators, helping them plan individual energy units, connecting them with each other and with resources in their area.
- The NEED Network connects educators, students, directors, coordinators, sponsors and community partners.

Recognition and Awards

- NEED rewards student leadership and innovation with a Youth Awards Program for Energy Achievement. Many schools submit reports on their energy activities.
- Awards are given at the local, state and national level with the National Recognition Ceremony held in Washington D.C. each June.

Student Leadership

- NEED students don't just read textbooks and answer questions. They are actively engaged in their own learning and in teaching others.
- Some sponsors host summer energy camps, spring break camps, overnight energy weekends, and student internships.

NEED and Energy Efficiency

Efficiency is at the core of what we do

- NEED curriculum guides are written for grades K-12 by teachers, for teachers
- Lighting
- HVAC
- Building Envelope
- Appliances and Electronics

Conservation drives how we do it

- Classroom materials to guide behavior
- Student energy teams
- Educational energy audits
- Teacher support through professional development

NEED Energy Efficiency Curriculum Materials

- Grade-level appropriate with recurring themes across levels
- *Building Buddies, Monitoring & Mentoring, Learning & Conserving*
- *Building Science and Energy House*
- *Plug Loads*
- Home-based kit program
- *Blueprint for School Energy Teams*
- All curriculum is online in pdf format
- www.need.org/curriculum



Programs to Build Good Conservation

- We provide teachers with tools and training to build student teams to audit schools on a very basic level
- Certified Energy Managers lead educational energy audits of buildings, teaching students about how their school uses energy
- Youth Awards Program provides a way to recognize students for their leadership in energy efficiency and conservation projects
- Short Line School, Reader, WV – state-level winner and headed to Youth Energy Conference and Awards program later this month



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