



*CT Energy Education is a curriculum resource for educators featuring the energy topics in the Connecticut high school curriculum. Issues and topics are explored with a Connecticut focus, and with an emphasis on solutions that students can implement. We offer information, and more than 30 lessons, labs and activities in the Fundamentals of Energy, Climate Change, Energy Efficiency, Green Jobs and Green Schools. CT Energy Education is brought to you by the Institute for Sustainable Energy at Eastern Connecticut State University, and funded by Connecticut electric ratepayers through the Connecticut Energy Efficiency Fund.*

All resources are available at [www.ctenergyeducation.com](http://www.ctenergyeducation.com)

Look for the link to NSTA Resources on the homepage to download this document with hotlinks. \*\*\* lessons were featured at the NSTA Hartford 2011 workshops.

### Focus on Fundamentals of Energy

[Energy Issues in Connecticut](#) Up to date information in PowerPoint format to help students understand the energy challenges facing Connecticut.

[Green Job Lesson](#). What job opportunities do your students have after graduation? This lesson uses a Myers-Briggs Type Indicator Tool, and guides students to resources such as O\*NET to investigate green jobs.

**NEW!** [Energy Misconceptions](#) All students (and even some teachers!) have misconceptions about energy. This resource helps you to understand what concepts may be very challenging for your students.

[9.1 Energy Transformations Lesson](#) from the Connecticut Science Center. CT Energy Education wrote this lesson that supplies 68 pages of activities and resources for students to explore how energy is transformed.

[Cat-Traption](#) is a great online “Rube Goldberg” exploration of Energy Transformation. This lesson includes worksheets and questions.

**NEW!** [Rube Goldberg Challenge](#) Do your students really understand energy transformations? Links to YouTube videos set the stage for a quick and easy **Rube Goldberg Challenge** that is fun, creative and informative.

\*\*\* [Energy in the 9.3 Standard Unit](#) This comprehensive unit uses a leveled curriculum style that is easily adapted for diverse learners. The unit includes links to 5 PowerPoints and creative assignments that allow students to explore where energy and electricity come from, traditional and alternative energy sources, and to plan solutions for the future. We will be creating webinar lectures of the 5 power points for use in your classrooms.



\*\*\*[Your Source of Energy](#) includes background information and activities that help students understand how electricity is generated in Connecticut, where our generators are, how old, what fuels and what their sizes are. The lesson includes a data set of Connecticut's 121 generators from the US Department of Energy and many questions for students to analyze and investigate.

**NEW!** [CFL-LED Cost Benefit Analysis](#) Is it worth it to change to CFLs? How about the new LEDs? What is the difference between those lights and incandescent bulbs? This lesson includes guides for creating a cost benefit analysis for changing lights in the home, and the carbon emissions consequences of powering those bulbs.

### Focus on Global Interdependence

[Connecticut and Climate Change](#) power point about how Climate Change will affect our state, includes teacher discussion notes in the Notes Page view.

\*\*\*[Ecological Footprint Lesson](#) with a World of 7 Billion extension. This diverse lesson offers many extensions to help you and your students explore how our lifestyles affect our impact on the planet. Also included in the Ecological Footprint Lesson is the new **“Material World” book data update sheet** for world statistics.

[Stabilization Wedges](#) and **Personal Wedges**. Challenge your student to create a plan to decrease carbon emissions, globally in their own lives. This presentation included a link to a [powerpoint that explains the Stabilization Wedges](#).

[Carbon Cycle Game](#). A fun, fast-paced way to experience how carbon moves through Earth's reservoirs.

\*\*\***NEW!** [Greenhouse Effect Lab](#). This inquiry lab allows students to design their own experiments to test how carbon affects temperature changes in an enclosed atmosphere.

[Mauna Loa in the Classroom](#). Use real data sets to investigate how carbon emissions have changed over the last 50 years, and how carbon dioxide is dispersed in the atmosphere.

[NEED's Exploring Climate Change](#) 92 pages of information, resources and activities.

### Focus on Nuclear Energy

CT Energy Education lessons on Nuclear Energy include the **Nuclear Power Point** from the [Energy in the 9.3 Standard Unit](#); [Nuclear Energy Lesson](#); [Nuclear Waste Lesson](#); [Law of Radioactive Decay](#); [Your Source of Energy](#); and [How Electricity is Generated](#).



**NEW! [Nuclear Resources](#)** , including: The Half-Life of Twizzlers and M&Ms; a National Archive lesson using a 1950's nuclear fallout brochure; resources from the Connecticut Academy of Science and Engineering; and more.

### Putting it all Together

\*\*\*[12 Steps to a Green School](#) is a guide to a more sustainable school, and the basis for the [Keep Connecticut Cool Challenge](#), a contest for students to create climate change solutions in their schools and communities. The contest provides prizes and leadership training for student teams.

\*\*\***Alliance for Climate Education** offers a free school assembly about climate change. This presentation is FREE, hip, energizing and scientifically based. It is a great catalyst for green school projects. See a trailer of the presentation at <http://www.acespace.org/> Contact Rouwenna Lamm to book your New England presentation at [Rouwenna.lamm@climateeducation.org](mailto:Rouwenna.lamm@climateeducation.org)

### CT Energy Education in a Nut Shell Webinars

Join us for 30 minute webinars about selected lessons. Each presentation begins at 3 pm with introductions and discussion. The content will start at 3:05 pm to give you a chance to settle in! We will discuss the lesson, show you its hidden gems, and share great ways to integrate it into your curriculum.

RSVP by noon of the day of the Webinar to [KOHLL@easternct.edu](mailto:KOHLL@easternct.edu) for instructions on how to join us. You will need access to a computer, and a phone. The system will call you, so the call is toll-free. All webinars are free. We will archive the webinar after the presentation so you can check out those you missed, or review presentations you attended.

date	resource topic
Wednesday, Oct. 5	Your Source of Energy--lesson
Thursday, Oct. 6	Connecticut Energy Issues--background
Wednesday, Oct. 12	Green Jobs--lesson
Monday, Oct. 17	Energy in the 9.3 Unit
Monday, Oct. 31	Rube Goldberg/Cat-Trap--lesson
Wednesday, Nov. 2	Stabilization Wedges--lesson
Monday, Nov. 7	12 Steps to a Green School
Friday, Nov. 4	How Electricity is Generated --lesson
Monday, Nov. 14	Ecological Footprint & Extensions --lesson
Tuesday, Nov. 15	Nuclear Energy--lesson
Monday, Nov. 21	Carbon Cycle Game--lesson
Monday, Nov. 28	Greenhouse Effect--lab