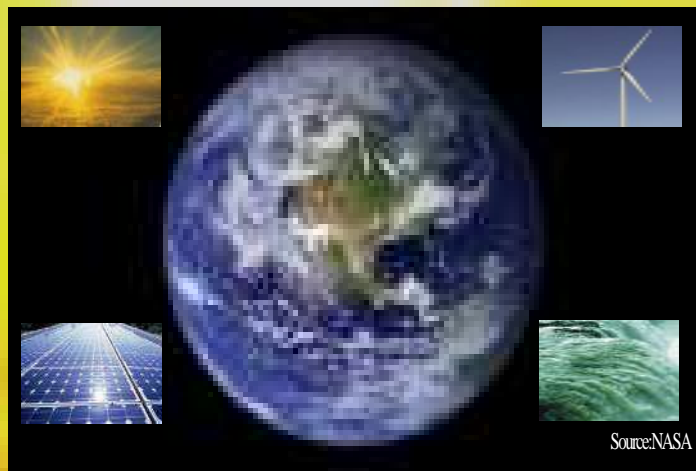


# *Guide Your Students Toward Energy Literacy*

Engage with MEEP's  
free classroom offerings  
for grades 9-12



**Calling Maine Teachers  
to sign up NOW...**

for School Year 2007/08

## CLASSROOM BASED OFFERINGS

*On site facilitators and materials provided.*



### ENERGY & THE ENVIRONMENT ACTIVITIES

**Electricity and the Environment.** Students create their own electricity with apple batteries, then discuss how electricity is generated in the "real world" and what this means for the environment. Simple PV fans and mini wind turbines are constructed to demonstrate alternative methods of electricity production. Time: 75 minutes

**Great Energy Debate Game.** Utilizes debate format to illuminate pros and cons of various energy sources (hydropower, coal, solar, etc.). Energy fact sheets available for preparatory research. Time: 75 minutes

**Global Energy Game.** Cooperative learning simulation. Challenges students to balance the "three E's"-Energy, Environment, Economy-while confronting decisions regarding energy acquisition for an imaginary island they govern. Time: 60-75 minutes.



### TRANSPORTATION & THE ENVIRONMENT ACTIVITIES

**Alternative Fuels:** Offers an overview of a variety of alternative fuels such as biofuels, hybrids, hydrogen, etc., including a hands-on experience with a model hydrogen fuel cell car. Time: 75 minutes

**Alternative Fuels Debate:** Modeled on the *Great Energy Debate*. Time: 80 minutes



**H2 Sprint:** Model fuel cell car competition in which students build and race model fuel cell cars powered by hydrogen. Free teacher workshop on December 1. A spring state championship race is planned. (*Cost involved for materials.*)

**Electrathon:** Dynamic integration of real world science and math. High school students are challenged to construct a lightweight, single person vehicle that runs on batteries. Electrathon races gather vehicles from different parts of the country and competitors see how far they can travel in one hour. Time: Entire school year

**Driving Softly on the Earth: Teen Driver Car Maintenance 101:** Presentation addressing the economic and environmental responsibilities of car ownership, including student interactions with an electronic dashboard, tire pressure gauges and owners' manuals. Time: 45-75 minutes.

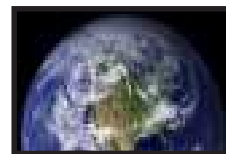
**Clean Air Zone Workshop:** Classroom based awareness session focusing on transportation choices and automobile idling and their effects on air quality and human health. Experiential activities include *Gallery Walk, Community Mapping, Clean Air Game, Peak Flow Meter*, among others. Time: Can be adjusted to needs. (*Option: Several school groups may choose to come together in a regional workshop.*)



*MEEP, the Department of Environmental Protection (DEP), the Kids and Transportation Programs of York and Cumberland Counties, Maine Council of Churches Environmental Justice Program and the Sierra Club of Maine collaborate to put on this event.*

# CLASSROOM BASED OFFERINGS

## CLIMATE CHANGE ACTIVITIES



**Climate Change 201.** Features the *Climate Time Machine*. Using simulated pollen, a pollen key and a climatic characteristics table, students track how the climate has changed from 20,000 years ago to the present, then graph and contrast the results. Time: 60-75 minutes



**Climate Change 301.** Offers the *HOBO Energy Experiment* in which students use data loggers to illustrate the greenhouse effect, a *Carbon Footprint Activity* and the *Carbon Cycle Game* which introduces CO<sub>2</sub> pathways in the carbon cycle. Time: 60-90 minutes

**Climate Change 401.** Presents a slideshow that examines the *Eco-Effects of Climate Change in New England* and culminates in a discussion about action solutions. Students then play the *Global Energy Game*. Time: 90 minutes

**Climate Change 501.** Features the *Maine Plant Watch Research Project* which has students studying climate change by observing plants, birds and spring peepers. By tracking the bloom times and the appearance of birds and peepers in the spring, students can gain a greater understanding of seasonal changes and our climate in Maine. Data is sent to DEP for inclusion in maps of seasonal changes on a web site.



## MAINE GREEN SCHOOLS - ACTION PROJECTS

Takes energy awareness and skills building into the realm of direct action. Students pursue energy efficiency projects with the goals of reduced costs and lessened environmental impacts.



**Vending Miser Challenge:** Students learn to read the *Electric Nameplates* on school appliances, then monitor the electricity demands of a vending machine with and without an energy saving *Vending Miser*. A brief report on potential savings is prepared and presented to the facilities manager, at which point a free *Miser* is awarded to the school.



**Light Meter Challenge:** Students learn to read light meters, then monitor their classrooms and hallways to ferret out overlighting.



**HOBO Challenge:** Students use the HOBO data loggers to help create an energy and greenhouse gas profile of their school.



**Kill-a-Watt Challenge:** Students investigate their home appliances and machines with a Kill-a-Watt meter to determine electricity use, cost and CO<sub>2</sub> emissions.

**Clean Air Zone Project:** For school groups willing to form Clean Air Zone action teams (after a CAZ workshop), support is offered in the form of consultation (how to become Eco-Detectives who record idling data) and communication materials (signs, t-shirts, no-idling car magnets, pledge cards).





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Maine Energy Education Program - Energy Education Activities in an Ecological Context

## MEEP 2007-2008



Call 207-625-7833, or email  
meep@psouth.net for scheduling.

*"Imagination is  
more  
important than  
knowledge."  
Albert Einstein*



**MEEP IS.....**a non-profit organization committed to producing an energy literate citizenry. It offers experiential educational programs that focus on understanding the balance between the economic, environmental and social impacts of energy choices that affect our society. Maine Department of Environmental Protection (DEP) is a sustaining partner in this program, offering financial and staff support to MEEP's workshop and classroom programming.

*Funding for classroom offerings comes from the US DOE's  
Maine State Energy Program and the Efficiency Maine  
(both programs of the Public Utilities Commission)  
as well as from the Maine DEP Bureau of Air Quality.*

### Environmental Fundraisers -Your students can raise funds for school projects:

#### Compact Fluorescent Lightbulb

**Fundraiser:** Under the aegis of Efficiency Maine, school groups purchase CFLs at greatly reduced rates and resell them to earn money and reduce air pollution, including CO<sub>2</sub> emissions.



#### Sunriseguide Fundraiser:

Raise funds, raise awareness, raise consciousness with the coupon book for sustainable living. (*Southern Maine only.*)



This pamphlet produced by  
Maine DEP under appropriation  
#012 06A 0250 122.