

Guide Your Students Toward Energy Literacy

Engage your students with
**MEEP's Free
Classroom Offerings
for Grades 4-8**



**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. (Grades 4-8; Time: 75minutes)



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. (Grades 4-8; 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 acquisitions for an imaginary island they govern. (Grades 7-8; Time: 60-75 minutes)

Energy Education Leadership Workshop. Day long, classroom based session including the following activities: *Energy Icebreaker, Palmer Putnam Rap, Great Energy Debate Game, Apple Battery, Mini Wind Turbine, PV Fan, Energy Jeopardy.* Grades 4-8 (Option: Classes from several schools may choose to come together at a regional workshop hosted by MEEP.)

TRANSPORTATION & THE ENVIRONMENT ACTIVITIES



Junior Solar Sprint: Students build and race model solar electric cars. Free teacher workshop in March. State championship in June. *Cost involved for materials.* (Grades 6-8; Time: Spring)

Alternative Fuels: Offers an overview of a variety of alternative fuels such as biofuels, hybrids and hydrogen, including a hands-on experience with a model hydrogen fuel cell car. (Grades 6-8; Time: 75 minutes)

Alternative Fuels Debate: Modeled on the *Great Energy Debate.* (Grades 6-8: 80 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 need. (Option: Classes from several schools may choose to come together in a regional workshop hosted by MEEP.)



These workshops are a collaborative effort of MEEP, Maine DEP, Kids and Transportation of York and Cumberland Counties, the Maine Council of Churches Environmental Justice Program, and Sierra Club of Maine.

CLASSROOM BASED OFFERINGS

CLIMATE CHANGE ACTIVITIES



Climate Change 101: Presents three activities to help introduce and explain *carbon dioxide* and *greenhouse effect*: a simulation using soda bottles and thermometers to demonstrate the greenhouse effect, the *Carbon Dioxide Game* (tag game or board game version) and an experiment that measures and compares CO₂ from student breath and from car exhaust. (Grades 5-8; Time: 75-90 minutes)



Climate Change 201: Features the *Climate Time Machine*. Using simulated pollen, a pollen key and a climatic characteristic table, students track how the climate has changed from 20,000 years ago to the present, then graph and contrast the results with other pollen sediment studies. (Grades 6-8; Time: 60-75 minutes)



Climate Change 301: Offers the *HOB0 Energy Experiment* in which students use data loggers to illustrate the greenhouse effect, a *Carbon Footprint Activity* and the *Carbon Cycle Game* which introduces CO₂ pathways in earth systems. (Grade 8; Time: 60-90 minutes)



MAINE GREEN SCHOOLS - ACTION PROJECTS

Maine Green Schools takes energy awareness and skills building into the realm of direct action. Students pursue energy efficiency projects in their own schools, homes and communities, with the goals of reduced cost and lessened environmental impacts.

Energy Patrol: Students learn the skills of reading an *Electric Meter*, a *Light Meter* and an *Electric Nameplate* before being trained to implement an *Energy Patrol* in their school. Using materials provided free by MEEP (calendars, stickers, light meter, Polar Bear puppet), students monitor lights and computers to reduce wasted electricity. (Grades 4-8)



Kill-a Watt Challenge: Students investigate their home appliances and machines with a Kill-a-Watt meter to determine electricity use, cost and CO₂ emissions. (Grades 4-8)



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. (Grades 6-8)

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 materials (t-shirts, no-idling car magnets, pledge cards). (Grades 6-8)





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Maine Energy Education Program - Energy Activities in an Ecological Context

Look inside for Maine Energy Education Program's Free Classroom Offerings for Students and Teachers, Grades 4-8

Call 207-625-7833, or email meep@psouth.net NOW for scheduling in 2007/08.

Plus... Environmental Fundraisers - your students can raise funds for school projects:



Compact Fluorescent 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 CO₂ emissions. (Grades 4-8)

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



MEEP IS... a non-profit organization committed to producing an energy literate citizenry. It offers experiential education programs that focus on understanding the balance between the economic, environmental and social impacts of energy choices. Funding for MEEP is provided by the Maine's Efficiency Maine program and the State Energy Program. 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.



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