



National Energy Education Development Project

Putting Energy into Education
www.need.org



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Teacher Advisory Board Vision Statement

In support of NEED, the national Teacher Advisory Board (TAB) is dedicated to developing and promoting standards-based energy curriculum and training.

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THIS IS NEED

THE NEED MISSION

The National Energy Education Development (NEED) Project is a 501(c)(3) nonprofit education association incorporated in the Commonwealth of Virginia. The mission of NEED 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. Established by Presidential Proclamation in 1980, NEED is a dynamic force in thousands of schools nationwide.



PROFESSIONAL DEVELOPMENT

The NEED Project conducts workshops and professional development programs throughout the year to meet the needs of school districts and individual teachers. These training programs provide comprehensive energy information and introduce educators to NEED materials and other energy education resources. Information about up-coming conferences, workshops and other events is available on NEED's website at www.NEED.org. To discuss hosting a training program, call NEED Headquarters at 1-800-875-5029.

THE NEED PROGRAM

The NEED Program includes innovative K–12 educational materials, teacher and student training programs, evaluation, and recognition. NEED materials and training conferences are designed to provide comprehensive, objective information about energy production and consumption and the major energy sources—how they are used and their impact on the environment, economy, and society. The program emphasizes the development of critical thinking and problem solving skills using hands-on activities that encourage students to consider the trade-offs inherent in energy use.

NEED materials have been designed to meet the needs of teachers and students, and are correlated to the National Science Education Content Standards and many state standards. Activities are available at all grade levels—from kindergarten to 12th grade—and incorporate NEED's *Kids Teaching Kids* approach to education by encouraging students to teach others. The NEED Project has a Teacher Advisory Board to ensure that all curriculum materials are objective, up-to-date, scientifically accurate, and meet the requirements of national and state standards.

NEED also publishes two newsletters. *Energy Exchange* is published four times a year to keep teachers and sponsors informed about new curriculum materials, current energy issues and opportunities available for teachers and students. *Career Currents* is published four times a year to provide students with information about a variety of careers in the energy industry. The newsletters are distributed to all NEED teachers, partners and sponsors, and are also available on the NEED website at www.NEED.org.

NEED works with school districts and teachers across the country to design and implement individualized energy programs to meet their education goals and objectives. In many areas, NEED materials are incorporated into the formal curriculum at many grade levels. NEED has the flexibility to tailor programs to meet the specific requirements of individual states, schools districts, and teachers.

LEADERSHIP DEVELOPMENT

NEED encourages student energy leadership by sponsoring a Youth Awards Program for Energy Achievement. Students and teachers who coordinate outstanding energy projects are recognized at statewide awards programs and the National Recognition Ceremonies held each June in Washington, DC.

As students learn about energy during the year, they put their knowledge to good use. Our students are leaders. Since the NEED Project began in 1980, students have been learning and leading others to an understanding of energy in the world. They are teaching the next generation to make good energy decisions. The Kids Teaching Kids approach works.



NEED CURRICULUM INFORMATION

Any educator can become a part of NEED's dynamic network of schools across the nation participating in innovative energy education programs. NEED Educators receive **2008 NEED Curriculum Packets**, subscriptions to **Energy Exchange** and **Career Currents** newsletters; access to NEED conferences, workshops, and the Youth Awards Program for Energy Achievement; and the opportunity to personalize classroom programs by ordering free curriculum units and supplemental materials using the **Order Form** on page 27. Additional materials are available online as indicated.

NEED Curriculum Packets are provided by sponsors to all educators who attend NEED workshops. Each packet includes the following materials:

CATALOG KEYS

Many materials are available on our website at www.need.org and are indicated with this icon. 

Each curriculum booklet in the resource catalog is color-coded by grade level as follows:



ENERGY INFOBOOKS

NEED's **Energy Infobooks** are provided on primary, elementary, intermediate, and secondary reading levels. The booklets provide resource information on the sources of energy, electricity, transportation, conservation and efficiency, and consumption. The Infobooks are used in the classroom as resources for many NEED activities and class sets of the elementary, intermediate, and secondary versions are available. The primary version is a flipbook for teachers to read to students. The Infobooks are revised every year to provide complete, up-to-date information. They are also available on the website as individual factsheets.

BLUEPRINT FOR SUCCESS

This booklet is designed to help educators develop effective energy education programs. It provides basic curriculum units and sample lesson plans for all grade levels and instructions to implement energy units in every classroom. Included in the booklet are brief descriptions of all NEED materials with appropriate grade levels and subject areas, as well as **Energy Polls** on four levels for pre/post assessment tools.



ENERGY GAMES & ICEBREAKERS

This booklet contains introductory energy activities and games, including **Electric Connections**, **Energy Chants**, **Bumper Stumpers**, **Energy Bingo**, and **America's Most Wanted Energy Wasters**.

ENERGY PROJECTS & ACTIVITIES

This booklet includes a sample workplan and suggestions for energy outreach activities to other classes, schools, families, and communities, as well as the **Youth Awards Program Guide** and **Application Form**.



2008 NEED Curriculum Packet: 35.00



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

LISTING OF NEED MATERIALS

BLUEPRINT FOR SUCCESS (K-12)

The Blueprint for Success includes detailed descriptions of NEED materials, sample lesson plans, and the Energy Polls.

PRIMARY (K-2)

MATERIALS	PAGE
Energy Fair	14
Exploring Magnets	9
Games & Icebreakers	15
NEED Songbook	21
Primary Energy Carnival	20
Primary Energy FlipBook	15
Primary FlipBook Activities	15
Primary Science of Energy	8
Primary Stories & More	15
Projects & Activities	20
Saving Energy FlipBook	19
Sun and Its Energy	10
Today in Energy	19
Trash FlipBook	19
Wind is Energy	11
Water and Energy	12

ELEMENTARY (3-5)

MATERIALS	PAGE	MATERIALS	PAGE
Biodiesel	18	Exploring Energy	20
Building Buddies	13	Exploring Magnets	9
ElectroWorks	9	Games & Icebreakers	15
Energy Carnival	20	Global Trading Game	21
Energy Conservation Contract	19	Greek Mythology & Energy	21
Elementary Energy Infobook	15	Mystery World Tour	21
Elementary Infobook Activities	15	NEED Songbook	21
Energy Around the World	21	Ocean Energy	20
Energy Fair	14	Projects & Activities	20
Energy Flows	14	Saving Energy Expo	19
Energy from the Sun	10	Science of Energy	8
Energy House	19	Talking Trash	19
Energy in the Balance	15	This Mine of Mine	20
Energy Jeopardy	21	Today in Energy	19
Energy Math Challenge	21	Transparent Energy	15
Energy on Public Lands	15	Transportation Fuels Expo	18
Energy on Stage	20	Transportation Rock Performances	18
Energy Rock Performances	15	U.S. Energy Geography	16
Energy Source Expo	16	Wonders of Water	12
EnergyWorks	9	Wonders of Wind	11
Ethanol	18	Yesterday in Energy	21

INTERMEDIATE (6-8)

MATERIALS	PAGE	MATERIALS	PAGE	MATERIALS	PAGE
Biodiesel	18	Energy Rock Performances	15	Museum of Solid Waste & Energy	19
Current Energy Affair	17	Energy Source Expo	16	Mystery World Tour	21
ElectroWorks	9	EnergyWorks	9	NEED Songbook	21
Energy Analysis	21	Ethanol	18	Ocean Energy	20
Energy Around the World	21	Exploring Energy	20	Projects & Activities	20
Energy Carnival	20	Exploring Solar Energy	10	Saving Energy Expo	19
Energy Conservation Contract	19	Fossil Fuels to Products	20	Science of Energy	8
Energy Enigma	16	Games & Icebreakers	15	Transparent Energy	15
Energy Flows	14	Global Trading Game	21	Transportation Fuels Expo	18
Energy from Moving Water	12	Great Energy Debate Game	15	Transportation Fuels Debate	18
Energy from the Wind	11	Greek Mythology & Energy	21	Transportation Rock Performances	18
Energy House	19	H2 Educate	12	U.S. Energy Geography	16
Energy Jeopardy	21	Intermediate Energy Infobook	15	What Car Will You Drive?	18
Energy Math Challenge	21	Intermediate Infobook Activities	15	Yesterday in Energy	21
Energy on Public Lands	15	Mission Possible	16		
Energy on Stage	20	Monitoring/Mentoring	13		

SECONDARY (9-12)

MATERIALS	PAGE	MATERIALS	PAGE	MATERIALS	PAGE
Biodiesel	18	Ethanol	18	Projects & Activities	20
Current Energy Affair	17	Exploring Hydroelectricity	12	Saving Energy Expo	19
Energy Analysis	21	Exploring Wind Energy	11	Science of Energy	8
Energy Around the World	21	Fossil Fuels to Products	20	Secondary Energy Infobook	15
Energy Carnival	20	Games & Icebreakers	15	Secondary Infobook Activities	15
Energy Conservation Contract	19	Global Trading Game	21	Transparent Energy	15
Energy Enigma	16	Great Energy Debate Game	15	The Future is Today	18
Energy Flows	14	H2 Educate	12	ThermoDynamics	14
Energy Jeopardy	21	Learning & Conserving	13	Transportation Fuels Expo	18
Energy Math Challenge	21	Marine Energy	21	Transportation Fuels Debate	18
Energy on Stage	20	Mission Possible	16	Transportation Rock Performances	18
Energy Rock Performances	15	Museum of Solid Waste & Energy	19	U.S. Energy Geography	16
Energy Source Expo	16	Photovoltaics	10	Yesterday in Energy	21



BASIC CURRICULUM UNITS

ORDERING BASIC CURRICULUM UNITS (Order Form is on page 27)

The Teacher Advisory Board has designed basic NEED curriculum units at four levels to help new teachers implement energy units in their classrooms. These units are designed to meet the National Science Content Standards for each level by teaching the science of energy, sources of energy, electricity & magnetism, transportation, and energy efficiency and conservation. Synthesis, reinforcement, evaluation, and recognition activities are also included.

A teacher may choose to receive the booklets in a basic unit as shown below by level, or may choose six supplemental booklets. The booklets in italics are not available in print; they are only available to download from the NEED website at www.need.org. To order a basic unit, check the appropriate box on the order form. Descriptions of all NEED materials are in the **Blueprint for Success** in the **NEED Curriculum Packet**, as well as in this catalog on pages 8-22.

BASIC NEED UNITS	BASIC PRIMARY UNIT (K-2)	BASIC ELEMENTARY UNIT (3-5)	BASIC INTERMEDIATE UNIT (6-8)	BASIC SECONDARY UNIT (9-12)
INTRODUCTORY ACTIVITIES	←..... Energy Games & Icebreakers→			
STEP ONE SCIENCE OF ENERGY	Primary Science of Energy	EnergyWorks or Primary or Elementary Science of Energy	EnergyWorks or Science of Energy	Secondary Science of Energy
STEP TWO SOURCES OF ENERGY	←..... Energy Infobooks→			
	Primary Energy Stories and More Sun and its Energy Wind Is Energy Water and Energy	Energy in the Balance Energy from the Sun Wonders of Wind Wonders of Water	Debate Game Exploring Solar Energy Energy from the Wind Energy from Water H ₂ Educate	Energy Enigma Photovoltaics Exploring Wind Hydroelectricity H ₂ Educate
STEP THREE ELECTRICITY MAGNETISM	Exploring Magnets	Exploring Magnets or ElectroWorks	ElectroWorks <i>Current Energy Affair</i>	<i>Mission Possible</i> <i>Current Energy Affair</i>
STEP FOUR TRANSPORTATION	Primary Energy Stories and More	What Car Will You Drive?	The Future Is Today	The Future Is Today
STEP FIVE CONSERVATION EFFICIENCY	Saving Energy At Home & School Flipbook or Building Buddies <i>Today in Energy</i>	Building Buddies or Monitoring/Mentoring	Monitoring/Mentoring or Learning/Conserving	Learning/Conserving <i>School Energy Survey</i>
	←..... Energy Conservation Contract→			
STEP SIX SYNTHESIS REINFORCEMENT	Primary Carnival	<i>Energy Flows</i> <i>Rock Performances</i> Energy House	<i>Energy Flows</i> <i>Rock Performances</i>	<i>ThermoDynamics</i>
	←..... Energy Jeopardy→			
STEP SEVEN EVALUATION	←..... Energy Polls (Blueprint for Success)→			
	←..... Question Bank→			
STEP EIGHT RECOGNITION	←..... Youth Awards Program (Projects & Activities)→			

HANDS-ON ENERGY KITS

PRIMARY SCIENCE OF ENERGY KIT

Grades 1–3

Science of Energy & Forms of Energy: This booklet includes background information and hands-on experiments to explore the fundamental concepts of energy. Students explore the science of motion, heat, sound, and light with a series of simple activities that incorporate both English and metric measurements, using safe student thermometers, balances, rulers, measuring tapes, beakers and graduated cylinders. Primary students learn to make observations, measure, record results, compare and contrast, categorize, make predictions, analyze and graph results, and draw conclusions.

The **Primary Science of Energy Kit** includes a comprehensive, step-by-step Teacher Guide with background information on the energy topics covered, transparency masters, and detailed instructions for each activity; a class set of 30 Student Guides; and the materials needed for the students to conduct the experiments. Replacement equipment can be purchased separately so that the kit can be used for many years. A price list for replacement parts is at www.NEED.org, or can be obtained by calling 1-800-875-5029.

SET OF TEACHER & STUDENT GUIDES	5.00
PRIMARY SCIENCE OF ENERGY KIT	300.00
CLASS SET OF 30 STUDENT GUIDES	50.00



SCIENCE OF ENERGY KIT

Elementary/Intermediate Guide (Grades 5–8) and Secondary Guide (Grades 9–12)

Science of Energy & Forms of Energy: Hands-on experiments explore the different forms of energy and how energy is transformed from one form to another. Groups of students master six stations, then teach others about the energy transformations at their stations. Teacher demonstrations are included to introduce the unit. Reinforcement activities are also included. The stations include equipment to teach transformations focusing on kinetic and potential energy, heat, light, motors, batteries, and electromagnetism.

The kit comes with BOTH **Elementary/Intermediate (6th grade reading level)** and **Secondary (9th grade reading level) Guides** that have detailed teacher instructions with demonstrations, student instructions for the six stations, laboratory safety rules, and the laboratory equipment necessary to conduct the experiments. The **Secondary Guide** has more detailed scientific explanations of the experiments. The **Science of Energy Kit** is available for sale or rental.

A **Class Set of Consumables** contains 8 lightsticks, 8 handwarmers, 1 jar of calcium chloride, 10 balloons, 1 toy car, 10 rubber bands, 1 set of nails and wires, 1 solar cell, 1 live wire, and 1 candle. Replacement parts can be purchased separately so that the kit can be used for many years. A price list for replacement parts is available at www.NEED.org or by calling 1-800-875-5029.

ELEMENTARY/INTERMEDIATE OR SECONDARY GUIDE	3.50
SCIENCE OF ENERGY KIT	400.00
RENTAL OF SCIENCE OF ENERGY KIT	150.00
CLASS SET OF CONSUMABLES	35.00



HANDS-ON ENERGY KITS

EXPLORING MAGNETS KIT ● ●

Grades 1–4

Science of Energy, Magnets & Magnetism: This booklet includes background information and hands-on experiments to explore the basics of magnets and magnetism. The **Exploring Magnets Kit** includes a Teacher Guide with background information, transparency masters, demonstration materials, and instructions for each activity; Student Activity Sheets, and the materials needed to set up five centers. Replacement parts can be purchased separately so that the kit can be used for many years. A price list for replacement parts is at www.NEED.org, or can be obtained by calling 1-800-875-5029.



Exploring Magnets Kit

EXPLORING MAGNETS GUIDE	3.00
EXPLORING MAGNETS KIT	120.00



ElectroWorks Kit

● ● ELECTROWORKS KIT

Grades 4–7

Electricity: A background and hands-on experiments explore the basic concepts of atomic structure and electricity. Included are center-based experiments on **static electricity, batteries, magnets, electromagnetism, and circuits**. The kit comes with a detailed Teacher Guide, a class set of Student Guides, and most of the equipment necessary to conduct the experiments. The materials not included in the kit are readily available in the classroom or at home.

SET OF TEACHER & STUDENT GUIDES	5.00
ELECTROWORKS KIT	350.00
3-WEEK RENTAL OF KIT	150.00
CLASS SET OF 30 STUDENT GUIDES	50.00

ENERGYWORKS KIT ● ●

Grades 4–8

Science of Energy & Forms of Energy: Background information and hands-on experiments explore **motion, light, sound, heat, growth, and powering technology**. Teacher Demonstrations are also included. The kit comes with a Teacher Guide, a class set of Student Guides, and most of the equipment necessary to conduct the experiments. The materials not included in the kit are readily available. Replacement parts can be purchased separately so that the kit can be used for many years. A price list is available at www.NEED.org, or by calling 1-800-875-5029.



EnergyWorks Kit

SET OF TEACHER & STUDENT GUIDES	6.00
ENERGYWORKS KIT	400.00
3-WEEK RENTAL OF ENERGYWORKS KIT	150.00
CLASS SET OF 30 STUDENT GUIDES	60.00



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

HANDS-ON ENERGY KITS



The Sun & Its Energy Kit



Energy From The Sun Kit



Exploring Solar Energy Kit



SOLAR ENERGY KITS

Grades K-12

Solar Energy: Backgrounders and hands-on experiments explore solar energy and photovoltaics at four levels, plus a guide for schools with solar panels.

The Sun And Its Energy Kit (Primary) comes with a flipbook and classroom-based activities, including thermometers, a solar oven, a solar house kit with solar cells, a solar balloon, solar beads, and more.

The **Energy From The Sun Kit (Elementary)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including two solar cookers, four solar house kits with ceiling fans and lights powered by PV panels, thermometers, solar balloons, radiometers, and more.

The **Exploring Solar Energy Kit (Intermediate)** comes with Teacher Guide, class set of Student Guides, and five sets of equipment to conduct experiments, including radiation cans, thermometers, solar concentration mirrors, PV kits, and more.

The **Photovoltaics Kit (Secondary)** comes with Teacher Guide, class set of Student Guides, and six sets of equipment to conduct experiments, including multimeters and PV cells.

SET OF GUIDES (ANY LEVEL)	5.00
THE SUN AND ITS ENERGY KIT	200.00
ENERGY FROM THE SUN KIT	350.00
EXPLORING SOLAR ENERGY KIT	350.00
PHOTOVOLTAICS KIT	350.00
CLASS SET OF 30 STUDENT GUIDES	50.00

(for elementary, intermediate, and secondary levels)



Photovoltaics Kit



HANDS-ON ENERGY KITS

WIND ENERGY KITS



Grades K-12

Wind Energy: Backgrounders and hands-on experiments explore wind energy at four levels.

The **Wind Is Energy Kit (Primary)** comes with a flipbook and materials for activities, including a mini wind turbine.

The **Wonders Of Wind Kit (Elementary)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including pinwheels, bubbles, a mini wind turbine, and more.

The **Energy From The Wind Kit (Intermediate)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including a KidWind Turbine, a Genecon, and more.

The **Exploring Wind Energy Kit (Secondary)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the wind experiments, including KidWind Turbine components, a Genecon, and more.

SET OF GUIDES (ANY LEVEL)	5.00
WIND IS ENERGY KIT	100.00
WONDERS OF WIND KIT	150.00
ENERGY FROM THE WIND KIT	300.00
EXPLORING WIND ENERGY KIT	500.00
CLASS SET OF 30 STUDENT GUIDES	50.00

(for elementary, intermediate, and secondary levels)



KIDWIND PROJECT

The KidWind Project is partnering with NEED on the wind curriculum and KidWind Turbines are included in the Energy from the Wind and Exploring Wind Energy Kits.

For more information about these turbines and other wind resources, go to www.KidWind.org.



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

HANDS-ON ENERGY KITS

HYDROPOWER KITS NEW

Grades K-12

Hydropower: Backgrounders and hands-on experiments explore the science of the water cycle and hydropower at four levels.

The **Water and Energy Kit (Primary)** comes with a flipbook and suggested classroom-based activities, including materials to make a water-powered turbine generator.

The **Wonders of Water Kit (Elementary)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including materials to make a water-powered turbine generator.

The **Energy of Moving Water Kit (Intermediate)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including materials to make water-powered turbine generators.

The **Exploring Hydroelectricity Kit (Secondary)** comes with Teacher Guide, class set of Student Guides, and equipment to conduct the experiments, including materials to make water-powered turbine generators.

SET OF GUIDES (ANY LEVEL)	5.00
WATER AND ENERGY KIT	100.00
WONDERS OF WATER KIT	300.00
ENERGY OF MOVING WATER KIT	425.00
EXPLORING HYDROELECTRICITY KIT	450.00
CLASS SET OF 30 STUDENT GUIDES	50.00

(for elementary, intermediate, and secondary levels)



H₂ Educate Kit

H₂ EDUCATE KIT

Grades 6-12

Electricity & Transportation: This intermediate/secondary kit introduces students to hydrogen as an important energy carrier for the future, both as a fuel for distributed generation and as a transportation fuel. Students conduct experiments in electrolysis, learn about atomic structure and the periodic table, make element models, simulate how a fuel cell works, learn what a hydrogen economy may look like through a cooperative learning jigsaw activity, and explore a hydrogen fuel cell car kit. The kit includes Teacher Guide, class set of Student Guides with backgrounders, eight sets of electrolysis apparatus, sodium sulfate electrolyte, element modeling materials, fuel cell simulation materials, and a model hydrogen fuel cell car kit with detailed manual.

SET OF GUIDES	6.00
H ₂ EDUCATE KIT	500.00
CLASS SET OF 30 STUDENT GUIDES	50.00



Saving Energy Home Kit

SAVING ENERGY CLASSROOM & HOME KITS

Grades 4-6

Energy Management: In some service areas, utilities sponsor NEED's Saving Energy program that focuses on reducing home energy consumption with classroom and home energy kits. For more information on this program, call NEED at 1-800-875-5029.



Saving Energy Classroom Kit



HANDS-ON ENERGY KITS

BUILDING BUDDIES KIT

Grades 2–3

Energy Management: The lower elementary program introduces students to basic concepts of energy use and conservation, beginning with activities focused on home energy use and extending to school energy use and conservation measures. Students monitor outdoor weather conditions, record indoor and outdoor temperatures, and evaluate their energy conservation behaviors daily. Individual students and classrooms are recognized for energy-saving habits and being good **Building Buddies**. The kit includes Teacher Guide, class set of Student Guides, indoor/outdoor thermometer, immersion thermometer, Flicker Checker, and neck pouches, buttons, stickers, CLF and incandescent bulbs, and certificates.

SET OF TEACHER & STUDENT GUIDES	5.00
BUILDING BUDDIES KIT	175.00
CLASS SET OF 30 STUDENT GUIDES	50.00



MONITORING & MENTORING KIT

Grades 4–6

Energy Management: The upper elementary/intermediate program introduces students to methods of measuring energy usage, determining costs, and quantifying environmental effects through a series of activities that includes reading electric and natural gas meters, EnergyGuide labels, and electric nameplates. Students conduct surveys of the school building and school energy consumption—gathering, recording and analyzing data, and monitoring energy usage. The kit includes Teacher Guide, class set of Student Guides, indoor/outdoor thermometer, hygrometer, immersion thermometer, Flicker Checker, Kill A Watt meter, light meter, radiation cans, insulating materials, CFL and incandescent bulbs, and more.

SET OF TEACHER & STUDENT GUIDES	6.00
MONITORING/MENTORING KIT	350.00
CLASS SET OF 30 STUDENT GUIDES	50.00



LEARNING & CONSERVING KIT

Grades 7–12

Energy Management: Intermediate and secondary students learn about energy consumption and conservation by reading utility meters and utility bills, comparing EnergyGuide labels, and exploring electric nameplates. Students conduct comprehensive surveys of the school building and school energy consumption—gathering, recording and analyzing data, and monitoring energy usage. Students work in groups to develop comprehensive energy management plans for the school that include suggestions for retrofits, systems management, and conservation practices. The kit includes a Teacher Guide, class set of Student Guides with backgrounders, indoor/outdoor thermometer, hygrometer pen, immersion thermometer, Flicker Checker, Kill A Watt meter, light meter, lamp, and CFL and incandescent bulbs.

SET OF TEACHER & STUDENT GUIDES	6.00
LEARNING/CONSERVING KIT	300.00
CLASS SET OF 30 STUDENT GUIDES	50.00



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

STEP ONE – THE SCIENCE OF ENERGY

PRIMARY SCIENCE OF ENERGY

Grades 1–3

Background information and hands-on experiments explore the fundamental concepts of energy, including motion, heat, sound and light with a series of simple activities.

SET OF TEACHER & STUDENT GUIDES 5.00
SEE PAGE 8 FOR KIT DETAILS AND PRICE.

SCIENCE OF ENERGY

Elementary/Intermediate & Secondary

Two guides at 6th and 9th grade reading levels provide background information and hands-on experiments that explore the different forms of energy and how energy is transformed from one form to another. Both guides are included in the kit.

EITHER LEVEL GUIDE 3.50
SEE PAGE 8 FOR KIT DETAILS AND PRICE.

WIND ENERGY CURRICULUM

Grades K–12

Backgrounders and hands-on experiments explore wind energy at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE PAGE 11 FOR KIT DETAILS AND PRICES.

SOLAR ENERGY CURRICULUM

Grades K–12

Backgrounders and hands-on experiments explore solar energy at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE PAGE 10 FOR KIT DETAILS AND PRICES.

HYDROPOWER CURRICULUM

Grades K–12

Backgrounders and hands-on experiments explore hydropower at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE PAGE 12 FOR KIT DETAILS AND PRICES.

EXPLORING MAGNETS

Grades 1–4

Background information and hands-on experiments to explore the basics of magnets and magnetism.

EXPLORING MAGNETS GUIDE 3.00
SEE PAGE 8 FOR KIT DETAILS.

ENERGYWORKS

Grades 4–8

Backgrounders and hands-on experiments explore the basic concepts of energy and the tasks energy performs, including motion, light, sound, heat, and growth

SET OF TEACHER & STUDENT GUIDES 6.00
SEE PAGE 9 FOR KIT DETAILS AND PRICE.

ENERGY FLOWS

Grades 5–12

This hands-on activity explains forms of energy and energy transformations to students in grades five to twelve. It can be used as a stand-alone activity or a companion activity to the Science of Energy Kit.

ONLINE ONLY

ENERGY FAIR

Grades 1–5

This activity is a guide to teaching younger students experimental design and the scientific method with an emphasis on developing energy-related science fair projects. Sample energy-related science projects at all grade levels are also online.

ONLINE ONLY

THERMODYNAMICS

Secondary

Teacher and Student Guides to hands-on experiments that explore concepts of thermodynamics, including molecular structure, conduction, convection, radiation, specific heat, heat of fusion and heat of vaporization.

ONLINE ONLY



STEP TWO – SOURCES OF ENERGY

ENERGY INFOBOOKS

Grades K–12

Energy Infobooks are the resource for many NEED activities and include an introduction to energy, information on major sources of energy, new technologies, energy conservation, electricity, global warming, and other energy information. They are available on four reading levels and are revised and up-dated annually.

PRIMARY FLIPBOOK	2.50
ELEMENTARY INFOBOOK	2.50
CLASS SET (30) ELEM INFOBOOKS	50.00
INTERMEDIATE INFOBOOK	2.50
CLASS SET (30) INT INFOBOOKS	50.00
SECONDARY INFOBOOK	3.00
CLASS SET (30) SEC INFOBOOKS	60.00

PRIMARY ENERGY STORIES & MORE

Primary

This booklet contains a series of stories and hands-on activities for primary teachers or upper elementary students to use to introduce basic energy concepts and the major energy sources to primary students.

STORIES & MORE	3.50
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GAMES & ICEBREAKERS

Grades K–12

Games and Icebreakers offers entertaining activities to introduce energy sources to students and to reinforce energy information presented. Activities can be adapted for many grade levels.

GAMES	2.50
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GREAT ENERGY ROCK PERFORMANCES

Grades 4–12

Student rock bands write songs and sing about energy sources, electricity, and conservation and efficiency in this entertaining activity. Audiences learn more from these energy rock stars as they tell their stories to interviewers out to get the latest energy scoops. Teacher and student instructions included, along with twelve sample songs and interviews.

ONLINE ONLY

ENERGY ON PUBLIC LANDS

Grades 5–8

Students learn and teach others about how energy resources on public lands are managed with background information and hands-on activities.

ONLINE ONLY



INFOBOOK ACTIVITIES

Grades K–12

These booklets are companion student activity books for the energy infobooks. They are available on four reading levels to correspond to the infobooks and include teacher guides and answer keys.

ONLINE ONLY



ENERGY IN THE BALANCE

Elementary

This activity introduces elementary students to the advantages and disadvantages of the major energy sources through a series of charting, and graphing activities.

BALANCE	2.50
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ENERGY DEBATE GAME

Grades 6–12

Students evaluate the advantages and disadvantages of the ten major energy sources used in the United States today. Each student group represents one of the energy sources and develops arguments on the merits of its energy source over the other energy sources. Teacher instructions and transparency masters are included.

DEBATE	2.50
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TRANSPARENT ENERGY

Grades 5–12

In this activity, student groups prepare presentations on the ten major energy sources and electricity, using transparencies or PowerPoint presentations. Included are teacher and student instructions, a sample presentation on energy consumption, sample presentation scripts, and transparency masters for the energy sources and electricity. Graphics are available online for PowerPoint presentations.

ONLINE ONLY



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

STEP TWO – SOURCES OF ENERGY

ENERGY SOURCE EXPO



Grades 3–12

Students work in groups to develop exhibits and make presentations on the major energy sources to develop an expo to teach others. Teacher and student instructions and background resources are included.

ONLINE ONLY

U.S. ENERGY GEOGRAPHY



Grades 4–12

This resource includes U.S. maps covering all ten energy sources, energy production, energy consumption, and more! These transparency masters are an excellent resource for any energy-related discussion or activity.

ONLINE ONLY

MISSION POSSIBLE: ENERGY TRADE-OFFS



Grades 7–12

Mission Possible is an activity in which students are challenged to develop an energy plan for a growing country. Students consider the advantages and disadvantages of the energy sources available for them to use so that they can increase electricity production while maintaining environmental quality and quality of life.

ONLINE ONLY

ENERGY ENIGMA



Grades 7–12

Students put on their detective hats to uncover the mysteries in **Energy Enigma**. Teams use reading, brainstorming, and organizational skills to hide the identity of their energy source while trying to guess which energy sources the other teams represent. Teacher instructions and transparency masters are included.

ENIGMA

2.50

WIND CURRICULUM

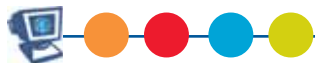


Grades K–12

The wind curriculum includes background information and hands-on kits at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE KIT DETAILS AND PRICES ON PAGE 11.

SOLAR CURRICULUM



Grades K–12

The solar curriculum includes background information and hands-on kits at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE KIT DETAILS AND PRICES ON PAGE 10.

HYDROPOWER CURRICULUM



Grades K–12

The hydropower curriculum includes background information and hands-on kits at primary, elementary, intermediate, and secondary levels.

SET OF ANY LEVEL GUIDES 5.00
SEE KIT DETAILS AND PRICES ON PAGE 12.



KidWind Turbine



Solar Balloon



STEP THREE – ELECTRICITY & MAGNETISM



ENERGY INFOBOOKS & INFOBOOK ACTIVITIES

Grades K–12

Energy Infobooks have extensive information on electricity. Infobook Activities have student worksheets to accompany the electricity factsheets. All levels of the Energy Infobooks are in the NEED Resource Packet. The Energy Infobooks are online as separate factsheets and the Infobook Activities are online according to topic.

PRIMARY FLIPBOOK	2.50
PRIMARY ACTIVITIES	ONLINE ONLY
ELEMENTARY INFOBOOK	2.50
CLASS SET OF 30 ELEM INFOBOOKS	50.00
ELEMENTARY ACTIVITIES	ONLINE ONLY
INTERMEDIATE INFOBOOK	2.50
CLASS SET OF 30 INT INFOBOOKS	50.00
INTERMEDIATE ACTIVITIES	ONLINE ONLY
SECONDARY INFOBOOK	3.00
CLASS SET OF 30 SEC INFOBOOKS	60.00
SECONDARY ACTIVITIES	ONLINE ONLY

CURRENT ENERGY AFFAIR

Grades 7–12

Students act as TV correspondents to report on electric power generation. They explore how electricity is made and transported, what energy sources are used to make it, the history of electricity, and more. Teacher instructions and backgrounders are included.

ONLINE ONLY

MISSION POSSIBLE: ENERGY TRADE-OFFS

Grades 7–12

Mission Possible is an activity in which students are challenged to develop an energy plan for a growing country. Students consider the advantages and disadvantages of the energy sources available for them to use so that they can increase electricity production while maintaining environmental quality and quality of life.

ONLINE ONLY

ELECTROWORKS

Grades 4–7

A backgrounder and hands-on experiments explore the basic concepts of atomic structure and electricity.

ELECTROWORKS GUIDES 5.00
SEE PAGE 8 FOR KIT DETAILS AND PRICES.

PRIMARY STORIES & MORE

Primary

This booklet contains a series of entertaining stories and hands-on activities for teachers and upper elementary students to use to introduce basic energy concepts, energy sources, and electricity to primary students.

STORIES 3.50

GAMES & ICEBREAKERS

Grades K–12

Games and Icebreakers offers activities to introduce energy and electricity to students, as well as reinforce the information that has already been presented.

GAMES 2.50

H₂ EDUCATE

Grades 6–12

This intermediate/secondary unit introduces students to hydrogen as an important energy carrier for the future, both as a fuel for distributed electricity generation and as a transportation fuel.

H₂ EDUCATE GUIDES 6.00
SEE PAGE 12 FOR KIT DETAILS AND PRICES.

SOLAR, WIND & HYDROPOWER

Grades K–12

The solar, wind, and hydropower curricula provide students with information and hands-on activities demonstrating how electricity is generated with photovoltaics, wind and hydropower turbines. Materials are available at four levels.

SEE PAGES 10, 11, & 12 FOR DETAILS AND PRICES.

STEP FOUR – TRANSPORTATION

WHAT CAR WILL YOU DRIVE?



Grades 4–6

Students explore conventional and alternative transportation fuels such as petroleum-based fuels, ethanol, electricity, biodiesel, compressed natural gas, and propane. Student backgrounders and suggested activities are included.

WHAT CAR?

2.50

TRANSPORTATION FUELS EXPO



Grades 4–12

Students work in groups to develop exhibits and make presentations on conventional and alternative transportation fuels. Teacher and student instructions are included.

ONLINE ONLY

BIODIESEL



Grades 4–12

Students explore biodiesel with backgrounders on three reading levels and suggested activities.

ONLINE ONLY

TRANSPORTATION FUELS ROCK PERFORMANCES



Grades 4–12

Student rock bands write songs and sing about alternative fuels in this entertaining activity. Audiences learn more from these energy rock stars as they tell their stories to interviewers out to get the latest scoops. Teacher and student instructions are included, along with sample songs and interviews.

ONLINE ONLY

TRANSPORTATION ENIGMA



Grades 7–12

Students put on their detective hats to uncover the mysteries of transportation fuels in this cooperative learning activity. Teams use reading, brainstorming, and organizational skills to hide the identity of their transportation fuel while trying to guess which fuels the other teams represent. Teacher instructions and transparency masters are included.

ONLINE ONLY

THE FUTURE IS TODAY



Grades 7–12

Students explore conventional and alternative transportation fuels such as petroleum-based fuels, ethanol, electricity, biodiesel, compressed natural gas, and propane. Student backgrounders and suggested activities are included.

FUTURE IS TODAY

2.50

TRANSPORTATION FUELS DEBATE



Grades 6–12

Students evaluate the advantages and disadvantages of conventional and alternative transportation fuels. Teacher instructions and transparencies are included.

ONLINE ONLY

ETHANOL



Grades 4–12

Students explore ethanol with backgrounders on three reading levels and suggested activities.

ONLINE ONLY

H₂ EDUCATE



Grades 6–12

This intermediate/secondary unit introduces students to hydrogen as an important energy carrier for the future, both as a fuel for distributed generation and as a transportation fuel.

H₂ EDUCATE GUIDES

6.00

SEE PAGE 12 FOR KIT DETAILS AND PRICES.



STEP FIVE – CONSERVATION & EFFICIENCY

SAVING ENERGY AT HOME & SCHOOL

Grades K–1

Introduces students to basic concepts of energy use and conservation at home with a flipbook and suggested activities.

SAVING ENERGY FLIPBOOK 5.00

BUILDING BUDDIES

Grades 2–3

Introduces students to basic concepts of energy use and conservation, beginning with activities focused on home energy use and extending to school energy use and conservation measures.

BUILDING BUDDIES GUIDES 5.00
SEE PAGE 13 FOR KIT DETAILS AND PRICE.

MONITORING & MENTORING

Grades 4–6

Introduces students to methods of measuring energy usage, determining costs, and quantifying environmental effects. Students conduct surveys of the school building and school energy consumption—gathering, recording and analyzing data, and monitoring energy usage.

MONITORING & MENTORING GUIDES 6.00
SEE PAGE 13 FOR KIT DETAILS AND PRICE.

LEARNING & CONSERVING

Grades 7–12

Students learn about energy consumption and conservation and conduct surveys of the school building and school energy consumption—gathering, recording and analyzing data, and monitoring energy usage, then develop an energy management plan for the school.

LEARNING/CONSERVING GUIDES 6.00
SEE PAGE 13 FOR KIT DETAILS AND PRICE.

SCHOOL ENERGY SURVEY

Secondary

Students conduct a comprehensive energy audit of their school.

ONLINE ONLY

TODAY IN ENERGY

Grades 1–4

This primary/elementary activity introduces students to the concepts of choice, trade-offs, and costs, using math and critical thinking skills.

ONLINE ONLY

TRASH FLIPBOOK

Primary

Primary students are introduced to trash and energy, with an emphasis on recycling.

ONLINE ONLY

TALKING TRASH

Elementary

Elementary students learn and teach others about trash, natural resources, energy, recycling, landfilling, and incineration. Background information and suggested hands-on activities are included.

ONLINE ONLY

MUSEUM OF SOLID WASTE

Grades 6–12

Students create exhibits on solid waste and energy topics, such as recycling, landfilling, and burning of waste. Teacher and student instructions, backgrounders, and evaluation tools are included.

MUSEUM 3.00

SAVING ENERGY EXPO

Grades 4–12

In this cooperative learning activity, student groups create eight expo exhibits on ways to save energy.

ONLINE ONLY

CONSERVATION CONTRACT

Grades 4–12

In this outreach activity, students ask their families to sign contracts in which they agree to save energy at home and on the road for a one month period, then calculate the energy savings.

CONTRACT 1.50

ENERGY HOUSE

Grades 4–8

In this activity, students insulate a cardboard box house with a variety of insulating materials, learning about energy conservation, energy savings, and diminishing returns. Teacher and student guides are included.

HOUSE 1.00



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

STEP SIX – SYNTHESIS & REINFORCEMENT

ENERGY FAIR

Grades 1–5

This activity is a guide to teaching students experimental design with an emphasis on developing energy-related science fair projects. Sample science projects are available on the NEED website.

ONLINE ONLY

THIS MINE OF MINE

Elementary

This activity, developed by the Ohio Energy Project, allows students to explore the formation, geology, recovery and uses of coal, as well as reclamation of mine sites.

ONLINE ONLY

ENERGY ON STAGE

Grades 4–12

New and up-dated plays and poems on energy sources and and energy conservation, with individual teacher guides that have expanded vocabulary and extensions.

ON STAGE

3.50

OCEAN ENERGY

Intermediate

In this activity, students learn and teach others about sources of energy (such as tides, waves, winds, and ocean currents) found in and under the ocean.

ONLINE ONLY

ENERGY CARNIVALS

Grades K–12

NEED's popular carnival games are an excellent way to encourage students and adults to think about energy. The **Energy Carnival** contains complete instructions for ten carnival games including Energy Pictionary, the Wheel of Energy, Top Five, Energy Knockdown, and Energy Taboo. The Carnival is ideal for elementary or middle school students and makes an excellent activity for an energy fair or Earth Day celebration. The **Primary Energy Carnival** contains nine games appropriate for students in grades K-3.

PRIMARY CARNIVAL (K–3)
ENERGY CARNIVAL (4–12)

5.00
5.00

PROJECTS & ACTIVITIES

Grades K–12

This booklet includes a workplan and suggestions for energy outreach activities to other classes, schools, families, and communities, as well as the **Youth Awards Guide** and application form.

PROJECTS

2.50

GAMES & ICEBREAKERS

Grades K–12

Games and Icebreakers offers entertaining activities to introduce energy, efficiency, and conservation to students, as well as reinforce the information that has already been presented.

GAMES

3.50

EXPLORING ENERGY

Grades 4–6

This booklet contains articles and hands-on explorations on energy-related topics such as composting, solar cooking, refrigeration, microwaves, and the greenhouse effect.

ONLINE ONLY

ROCK PERFORMANCES

Grades 4–12

Student rock bands write songs and sing about their energy sources in this entertaining activity.

ONLINE ONLY

GREAT ENERGY DEBATE GAME

Grades 6–12

Students evaluate the advantages and disadvantages of the major energy sources in a debate game format.

DEBATE

2.50

FOSSIL FUELS TO PRODUCTS

Grades 7–12

Students learn about exploration, production, refining, chemical manufacturing, transportation, marketing, and uses of petroleum, natural gas, and their products in the industrial sector.

ONLINE ONLY



STEP SIX – SYNTHESIS & REINFORCEMENT

MYSTERY WORLD TOUR

Grades 4–8

In this activity, developed by the Ohio Energy Project, students create 12 murals depicting energy sources and terms as they learn about how other countries use energy.

ONLINE ONLY



ENERGY JEOPARDY

Grades 4–12

Students enjoy NEED's spin on the popular game show. Jeopardy categories include More MPGs, Famous Americans in Energy, and Leading Nations.

JEOPARDY

2.50

ENERGY MATH CHALLENGE

Grades 3–12

The **Energy Math Challenge** strengthens students' math and critical thinking skills while increasing their knowledge of energy. Students work individually and in teams to solve energy math problems.

ONLINE ONLY



YESTERDAY IN ENERGY

Grades 4–12

This activity allows your students to travel back in time without leaving the classroom. Students conduct interviews and do research to learn and make exhibits about energy use in the good old days.

ONLINE ONLY

MARINE ENERGY

Grades 7–12

Students construct topographical maps of the U.S. that shows the major land and underwater formations. Students also conduct hearings on the development of energy resources and/or minerals in offshore areas.

ONLINE ONLY



GLOBAL TRADING GAME

Grades 4–12

In this activity developed by the Ohio Energy Project, students become economic advisors, geologists, and miners as they learn about their assigned country's resources and needs, then trade resources with other countries.

ONLINE ONLY

ENERGY AROUND THE WORLD

Grades 5–12

This booklet includes maps and energy information for 60 countries. Student groups research assigned countries and make presentations to the class.

ONLINE ONLY



NEED SONGBOOK

Grades K–12

Sing along to NEED's favorite songs, including the NEED Clap, E-N-E-R-G-Y, and What Do You Do With An Energy Waster?

ONLINE ONLY

ENERGY ANALYSIS

Grades 7–12

This activity emphasizes research and analysis of information in graph format to discern energy trends using the Energy Information Administration's *Energy Perspectives* publication and a teacher guide with additional graphs.

ONLINE ONLY



GREEK MYTHOLOGY & ENERGY

Grades 4–8

This on-line guide provides resource materials and a teacher guide for incorporating Greek mythology into your science curriculum relating to forms of energy. This innovative interdisciplinary activity was developed by Donna Quillen of NC.

ONLINE ONLY



ONLINE



PRIMARY



ELEMENTARY



INTERMEDIATE



SECONDARY

STEPS SEVEN & EIGHT – EVALUATION & RECOGNITION



ONLINE QUESTION BANK

Grades 1–12

The new **Online Question Bank** provides questions on the topic steps of the NEED program on four reading levels (primary, elementary, intermediate, and secondary) for educators to use to design evaluation tools to assess student knowledge of information and concepts covered in the activities used in their energy units. Questions are included on three learning levels—knowledge, comprehension, and application.



BLUEPRINT FOR SUCCESS & ENERGY POLLS

Grades K–12

The **Blueprint for Success** contains the **Energy Polls**, which are designed to assess basic understandings about energy before and after energy units in the classroom. Newly developed energy polls are available on four reading levels—primary (K-3), elementary (4-6), intermediate (6-8), and secondary (8-12). The polls include knowledge, attitude, and behavior questions and are included in the **Blueprint for Success** or can be taken on-line with results e-mailed to the teachers. E-mail info@need.org for more information about using the on-line poll option.

BLUEPRINT WITH ENERGY POLLS

2.50



YOUTH AWARDS GUIDE

Grades K–12

The **Youth Awards Guide** gives students and teachers step-by-step instructions and an application form to participate in the Youth Awards Program for Energy Achievement. The Youth Awards Guide is included in **Projects and Activities**.

PROJECTS AND ACTIVITIES

2.50

2009 YOUTH AWARDS CONFERENCE REGISTRATION

525.00



ENERGY EXCHANGE AND CAREER CURRENTS NEWSLETTERS

NEED's Energy Exchange newsletter is published four times a year and sent to NEED members and sponsors. Successful NEED programs and activities are highlighted in the newsletter, as well as new NEED curriculum. The **Career Currents** newsletter is published four times a year and sent to NEED members and sponsors. Careers in the energy industry are spotlighted. Back issues of both newsletters are available on the NEED website in PDF format.



NEED ANNUAL REPORT

NEED's **Annual Report** gives summaries of the best state and national Youth Awards projects for 2007–2008, as well as information about the NEED Project and our state affiliates.

ANNUAL REPORT

UPON REQUEST

TRAINING & PROFESSIONAL DEVELOPMENT

ENERGY CONFERENCES FOR EDUCATORS

Every summer, NEED conducts five-day conferences for educators—teaching about energy and how to implement NEED programs in the classroom. Graduate credit is available from Virginia Commonwealth University for teachers participating in the programs. For more information, contact NEED at 1-800-875-5029.

NEED REGIONAL WORKSHOPS & CONFERENCES

NEED conferences, workshops, and in-services are conducted throughout the year in many areas of the country. For information on availability in your area, contact the NEED Coordinators listed below or NEED at 1-800-875-5029.

CALIFORNIA

Barry Scott
(209) 482-5663
bscott@need.org

FLORIDA

Carolyn Wuest
(850) 469-5607
cwuest@escambia.k12.fl.us

INDIANA

Karen Reagor
(859) 578-0312
kreagor@need.org

KENTUCKY

Karen Reagor
(859) 578-0312
kreagor@need.org

MAINE

Peter Zack—Maine Energy Education Program
(207) 625-7833
meep@psouth.net

Nancy Chandler—Maine Public Service Company
(207) 768-5811
nchandler@mainepublicservice.com

MICHIGAN

Keith Etheridge
(517) 410-8795
ketheridge@need.org

MISSISSIPPI

Lisa Campbell
(601) 359-6600
lcampbell@mississippi.org

MISSOURI

Glenda Abney
(314) 577-0288
glenda.abney@mobot.org

NEBRASKA

Diana Luscher
(308) 236-2230
dllusch@nppd.com

NEVADA

Lisa Davis
(702) 895-1367
lisa.davis@unlv.edu

NEW YORK

Todd Rogers
(315) 655-3507
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NORTH CAROLINA

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aconstant@need.org

OHIO

Deb Yerkes
(614) 785-1717
swenergy@infinet.com

PUERTO RICO

Ariel Roman
(787) 999-2200
arielmh2001@yahoo.com

RHODE ISLAND

Julie Capobianco
(401) 222-3373
juliec@gw.doa.state.ri.us

TENNESSEE

Chyrall Dawson
(615) 741-6671
cdawson@mail.state.tn.us

VIRGIN ISLANDS

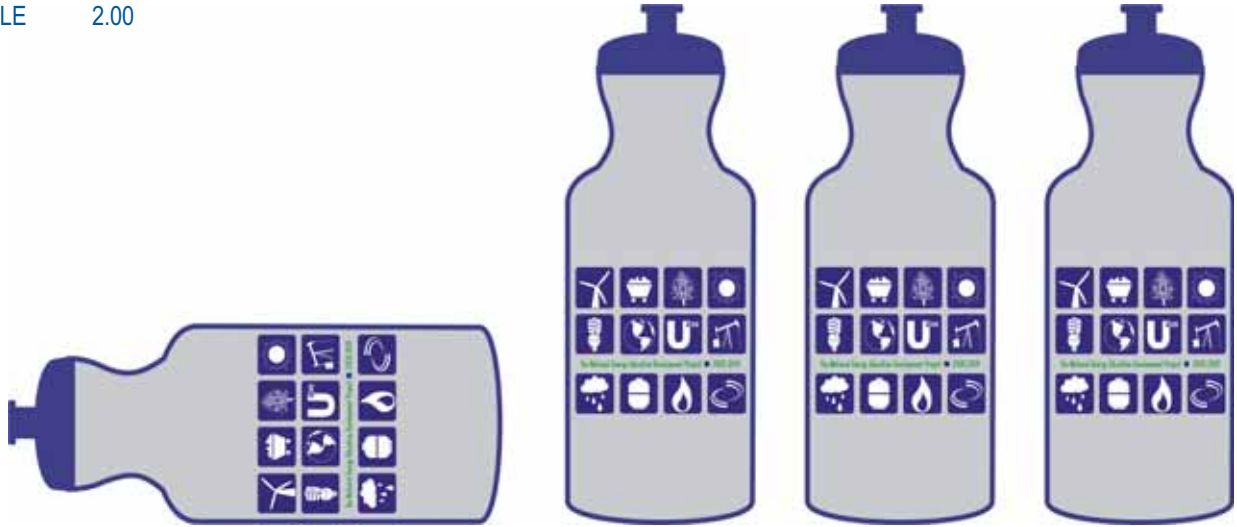
Leila Muller
(340) 773-1080

NEED MERCHANDISE

NEED BIKE BOTTLES

NEED Bike Bottles are 20-ounce recycled, granite-colored bottles with blue pop-up spouts and the **NEED 2008** logo on the side.

NEED BOTTLE 2.00

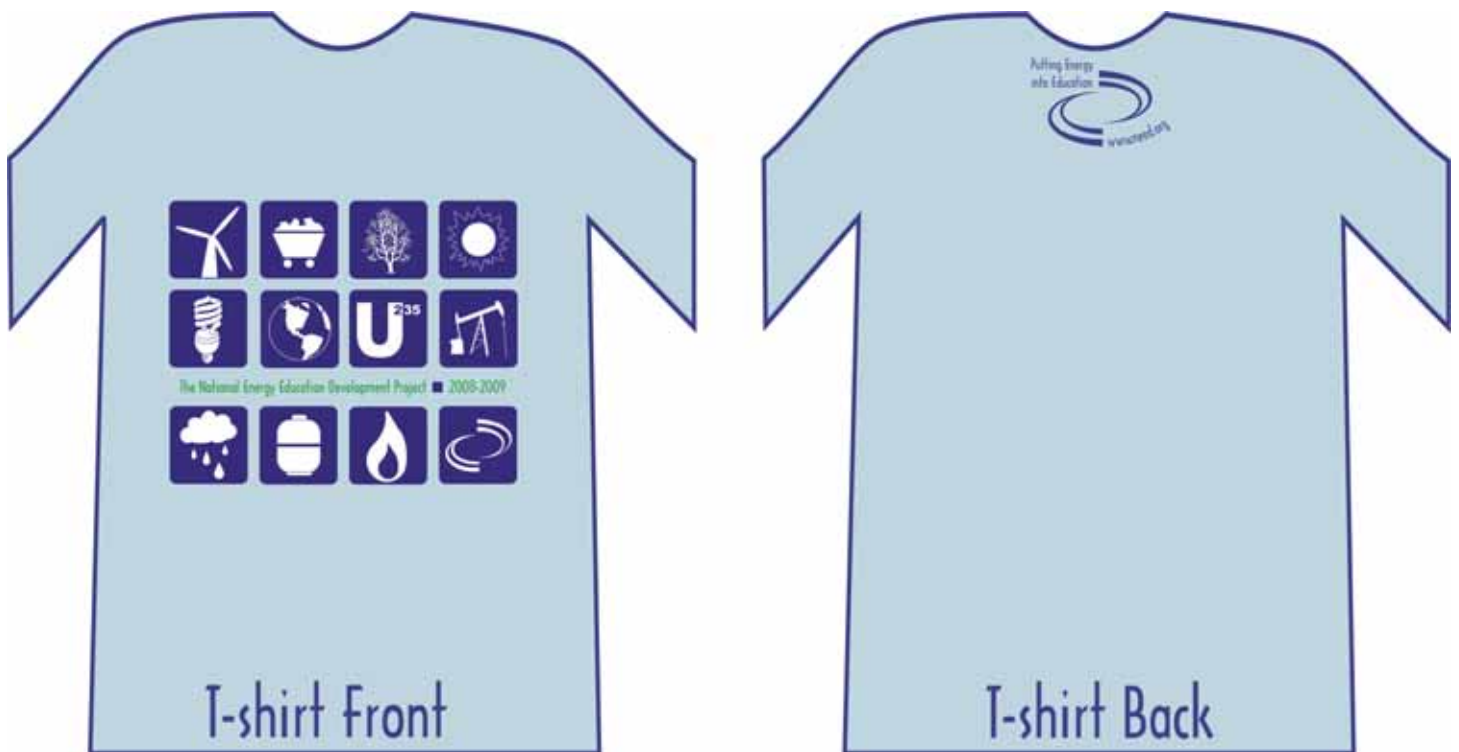


NEED T-SHIRTS

NEED T-shirts are light blue heavyweight short-sleeve shirts with the **NEED 2008** logo on the front and the NEED logo on the back. Adult sizes Small, Medium, Large, X-Large, and XX-Large.

T-SHIRT (S, M, L, XL) 10.00

T-SHIRT (XXL) 12.00



NEED MERCHANDISE

NEED TOTE BAGS

NEED Totes are large, sturdy black nylon carry-alls imprinted with the **NEED** logo shown to the right.

TOTE 10.00



NEED BALLOONS

NEED balloons are 11-inch rounds imprinted with the **Kids Teaching Kids** logo shown to the right.

BALLOON 0.25



NEED PENCILS

NEED pencils are made from recycled currency and come in a multitude of bright colors imprinted with **Kids Teaching Kids About Energy**.

PENCIL 0.25

FLICKER CHECKERS

Spin the Flicker Checker and discover whether the fluorescent lights in your school have magnetic or electronic ballasts. Which ballasts save valuable energy dollars?

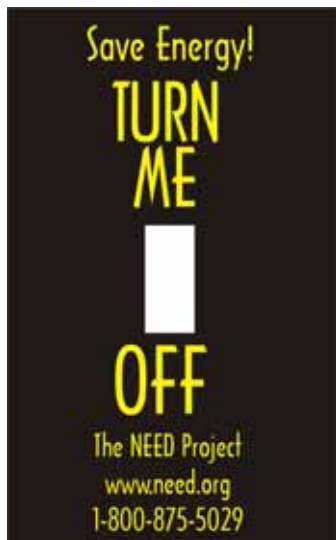
FLICKER CHECKER 2.00



NEED STROBES

NEED strobes are flashing gold lightbulbs with the NEED Project website on the front, as shown to the right, and an on/off button on the back.

STROBE 2.00



NEED SWITCH PLATE COVERS

NEED switch plate covers are removable vinyl stickers to remind students to turn off the lights.

SINGLE SWITCH PLATE COVER 1.00
DOUBLE SWITCH PLATE COVER 1.50



NEED MERCHANDISE



POLAR BEAR & FISH BUTTONS

Polar Bear and Fish Buttons for those who can figure out the answers to the riddles. *Polar Bears Around an Ice Hole...*

POLAR BEAR BUTTON	0.50
FISH BUTTON	0.50
RIDDLES ARE ONLINE	



ENERGY SOURCE PUZZLES

Mind challenging 4" x 4" foam puzzles with renewable and nonrenewable energy sources.

NONRENEWABLE PUZZLE	1.00
RENEWABLE PUZZLE	1.00



NEED PENS

NEED pens made of recycled cardboard and blue recycled plastic with the NEED logo, as shown below.

NEED PEN	1.50
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THE NEED PROJECT
 PO BOX 10101
 MANASSAS, VA 20108

FAX ORDER FORM TO 1-800-847-1820
 FOR QUESTIONS CALL 1-800-875-5029

ORDER FORM

Bill To: Purchase Order # _____

Name _____

School/Organization _____

Address _____

City _____ State _____ Zip _____

(Area Code) Telephone Number _____

Email _____

Ship To: Same

Name _____

School/Organization _____

Street Address (No Post Office # - we ship UPS) _____

City _____ State _____ Zip _____

(Area Code) Telephone Number _____

Email _____

DID YOU ATTEND A NEED WORKSHOP? _____ IF SO, PLEASE GIVE THE LOCATION: _____

NEED EDUCATORS MAY ORDER ONE BASIC CURRICULUM UNIT OR ANY SIX SUPPLEMENTAL BOOKLETS FREE OF CHARGE.

ITEM	QUANTITY	SIZE	UNIT PRICE	TOTAL
PRIMARY UNIT				
ELEMENTARY UNIT				
INTERMEDIATE UNIT				
SECONDARY UNIT				

<input type="checkbox"/> Check is enclosed payable to NEED Project <input type="checkbox"/> Purchase Order Enclosed Date Needed _____	SUBTOTAL	
	SHIPPING 5% of subtotal	
	TOTAL	

<input type="checkbox"/> VISA <input type="checkbox"/> MASTERCARD <input type="checkbox"/> AMEX	CARD # _____ EXPIRATION DATE _____ SIGNATURE _____
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American Association of Blacks in Energy
American Electric Power
American Electric Power Foundation
American Petroleum Institute
American Solar Energy Society
American Wind Energy Association
Aramco Services Company
Armstrong Energy Corporation
Association of Desk & Derrick Clubs
All Wild About Kentucky's Environment
Robert L. Bayless, Producer, LLC
BP Foundation
BP
BP Alaska
BP Solar
Bureau of Land Management–
U.S. Department of the Interior
C&E Operators
Cape and Islands Self Reliance
Cape Cod Cooperative Extension
Cape Light Compact–Massachusetts
L.J. and Wilma Carr
Center for the Advancement of Process
Technology–College of the Mainland–TX
Chesapeake Public Schools–VA
Chesterfield County Public Schools–VA
Chevron
Chevron Energy Solutions
City of Melrose–MA
Colorado Energy Science Center
ComEd
ConEd Solutions
ConocoPhillips
CPS Energy
Cypress-Fairbanks Independent School
District–TX
Dart Foundation
Desk and Derrick of Roswell, NM
Devon Energy
Dominion
Dominion Foundation
Duke Energy Kentucky
Duke Energy Indiana
Duke Energy North Carolina
Duke Energy South Carolina
East Kentucky Power
EnCana
Energy Information Administration–
U.S. Department of Energy
Energy Training Solutions
Energy and Mineral Law Foundation
Energy Training Solutions
Equitable Resources
Escambia County School District–FL

FPL Energy Encounter–FL
First Roswell Company
Florida Department of Environmental
Protection
Foundation for Environmental Education
Robert Gorham
Guam Energy Office
Halliburton Foundation
Gerald Harrington, Geologist
Houston Museum of Natural Science
Hydropower Research Foundation
Illinois Clean Energy Community Foundation
Illinois Department of Commerce and
Economic Opportunity
Independent Petroleum Association of
America
Independent Petroleum Association of New
Mexico
Indiana Office of Energy and Defense
Development
Interstate Renewable Energy Council
Iowa Energy Center
Kentucky Clean Fuels Coalition
Kentucky Office of Energy Policy
Kentucky Oil and Gas Association
Kentucky Propane Education and Research
Council
Kentucky River Properties LLC
Keyspan
KidWind
Llano Land and Exploration
Long Island Power Authority–NY
Maine Energy Education Project
Maine Public Service Company
Marianas Islands Energy Office
Maryland Energy Administration
Massachusetts Division of Energy
Resources
Michigan Energy Office
Michigan Oil and Gas Producers Education
Foundation
Minerals Management Service–
U.S. Department of the Interior
Mississippi Development Authority–Energy
Division
Montana Energy Education Council
Narragansett Electric–
A National Grid Company
NASA Educator Resource Center–WV
National Alternative Fuels Training Center–
West Virginia University
National Association of State Energy
Officials
National Association of State Universities
and Land Grant Colleges
National Hydropower Association
National Ocean Industries Association

National Renewable Energy Laboratory
New Jersey Department of Environmental
Protection
New York Power Authority
North Carolina Department of
Administration–State Energy Office
Nebraska Public Power District
New Mexico Oil Corporation
New Mexico Landman's Association
New York State Energy Research and
Development Authority
Offshore Energy Center/Ocean Star/
OEC Society
Offshore Technology Conference
Ohio Energy Project
Pacific Gas and Electric Company
Petroleum Equipment Suppliers
Association
Poudre School District–CO
Puerto Rico Energy Affairs Administration
Puget Sound Energy
Roswell Desk and Derrick Club
Roswell Geological Society
Rhode Island State Energy Office
Sacramento Municipal Utility District
Saudi Aramco
Schlumberger
Sentech, Inc.
Shell Exploration and Production
Snohomish County Public Utility District–
WA
Society of Petroleum Engineers
David Sorenson
Southwest Gas
Spring Branch Independent School
District–TX
Tennessee Department of Economic and
Community Development–Energy Division
Toyota
TransOptions, Inc.
TXU Energy
University of Nevada–Las Vegas, NV
United Illuminating Company
U.S. Environmental Protection Agency
U.S. Department of Energy
U.S. Department of Energy–Hydrogen,
Fuel Cells and Infrastructure Technologies
Virgin Islands Energy Office
Virginia Department of Mines, Minerals
and Energy
Virginia Department of Education
Virginia General Assembly
Wake County Public Schools–NC
Western Kentucky Science Alliance
W. Plack Carr Company
Yates Petroleum

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