



The NEED Project
2021 National Energy Conference for Educators
July 18-22, 2021 · Albuquerque, NM
TENTATIVE AGENDA

July 18	Sunday	Registration, Introduction to NEED
2:30 p.m. – 4:00 p.m.	Registration	Pick up your registration packet and other materials.
2:30 p.m. – 4:15 p.m.	Get Lit!	Try your hand at the Light-A-Bulb Challenge. Once you’ve mastered, move up to Sidekick Circuits where you’ll wire your own parallel and series circuits on one of our energy sidekicks!
4:15 p.m.	Introduction to the National Energy Conference for Educators	Learn more about NEED, who we are, why we matter, and why we are glad to have you as part of the NEED program. Meet your NEED facilitators this week. The conference sessions are designed to improve your own energy knowledge as a consumer, to provide you lessons and activities to return to the classroom with, and to allow you to explore ways to integrate more energy into your classroom programs.
5:00 p.m.	Kids Teaching Kids – Student Recognition	See examples of the winning projects and how other teachers have used NEED both in the classroom and in after school settings.
5:15 p.m.	NEED Resources, Q&A, Planning Guide Connections, Evaluation	There are note cards on each table to provide written questions to be answered for the group or individually – use them for content or process questions as well as logistical and conference questions. The NEED Resource Catalog and Planning Guide is designed as the Teacher Guide for a NEED unit. This session will connect the day’s activities to the Planning Guide in order to help participants fully utilize the guide.
5:30 p.m.	Dinner	
July 19	Monday	Science of Energy, Sources of Energy, and Electricity
6:30 a.m.	Breakfast	
7:45 a.m.	Information Booth Open	A NEED team member will be available to answer your conference questions.
8:00 a.m.	Science of Energy	These breakout sessions explore the forms of energy and energy transformations. Science of Energy for Primary/Elementary Science of Energy for Intermediate/Secondary Energy Works Thermodynamics
10:10 a.m.	Connecting Energy Education to Your Science Standards	

- 10:30 a.m. Break**
- 10:45 a.m. Forms of Energy to Energy Sources – Energy Expos**
How do the forms and sources connect? Break into small groups to learn more about the energy sources we use.
- 12:30 p.m. Lunch**
- 1:30 p.m. Guest Speaker – John Dabbar, Vice President Government Affairs of ConocoPhillips**
- 2:00 p.m. Introduction to Electricity Generation**
How is electricity generated and moved to our homes and businesses? Learn about electricity generation and then see if you can rank the ten sources of energy in *Electric Connections*.
- 3:00 p.m. Sources of Energy Sessions**
These sessions explore the sources of energy, their advantages and disadvantages and current uses of the source.
Primary and Elementary: Energy in the Balance
Intermediate and Secondary: Energy Enigma
- 4:00 p.m. NEED Resources, Q&A, Planning Guide Connections and Evaluation (Play Energy Kahoot!)**
Completing the evaluation in your packet allows NEED to make improvements for the program in future years, but also provides feedback for curriculum improvements and training enhancements. Please complete your evaluation as the conference progresses in order to provide feedback while the activities are still clear in your mind. *Don't forget to vote for your favorite Energy Expo!*
- 4:30 p.m. Synthesizing the Conference**
Working in grade level groups, participants synthesize the knowledge and process skills showcased during the day to discuss and plan integration into their classrooms.
- 5:00 p.m. Dinner on your own**

July 20 Tuesday Sources of Energy and Climate Science

- 6:30 a.m. Breakfast**
- 7:45 a.m. Information Booth**
A NEED team member will be available to answer your conference questions.
- 8:00 a.m. Exploring Energy Breakout Sessions**
Solar
Oil and Natural Gas
Hydropower
Nuclear
- 9:30 a.m. Break**
- 9:45 a.m. Breakout Activities**
Energy Escape Room
Peak Oil
- 11:00 a.m. Understanding Carbon and Climate Science**
Participants explore carbon dioxide and climate change with activities from NEED's Climate module. Greenhouse in a Beaker and Carbon Cycle Simulation.

- 12:00 p.m. Lunch**
- 1:00 p.m. Flipped Classroom Model**
Turn your classroom upside down. Learn how to use a flipped classroom model to teach about energy and maximize your activity time in your classroom.
- 2:00 p.m. NEED Resources, Q&A, Planning Guide Connections and Evaluation (Play Energy Kahoot!)**
Announcing 26 Energy Superheroes and their Careers – Hear from Conference Attendee, Erin Twamley
NEED is excited to partner with award winning children's book authors, Erin Twamley and Joshua Sneideman, to bring energy careers to teachers and classrooms with this new book and effort, [Everyday Superheroes: Women in Energy](#). Hear it here first, Erin will share ALL 26 energy careers and the Energy Superheroes that will be featured. The book will be available to NEED teachers starting in March 2022.
- 2:30 p.m. Synthesizing the Conference**
Working in grade level groups, participants synthesize the knowledge and process skills showcased during the day to discuss and plan integration into their classrooms.
- 3:00 p.m. Adjourn for the Evening; Dinner on Your Own**

July 21 – Wednesday Electricity and Energy Efficiency and Conservation

- 6:30 a.m. Breakfast**
- 7:50 a.m. Information Booth Open**
A NEED team member will be available to answer your conference questions.
- 8:00 a.m. Introduction to Energy Efficiency and Conservation**
– 12:00 pm
Energy efficiency and conservation techniques and tools allow for wise use of our natural resources. This introduction highlights simple and low-cost ways to reduce energy consumption and the science behind efficiency.
- Investigating Energy Use**
Participants will split into groups to investigate energy use in the conference building using simple energy management tools. Learn about Student Energy Teams and how to implement them in your school.
- Energy House**
Who can create the most energy efficient house?
- This Week in Energy Conservation, Energy Stories and More, Energy Rock Performances**
These activities allow for interdisciplinary integration of language arts skills by making quick and fun presentations about energy conservation at home and on the road.
- 12:00 p.m. Lunch**
- 1:00 p.m. Exploring Energy Outside the Science Classroom**
Energy Literacy Activities – Primary/Elementary
Energy Careers Excursion – Intermediate/Secondary
- 2:15 p.m. Break**

- 2:30 p.m. Energy Explorations Breakout Session**
Participants begin to synthesize and reinforce energy knowledge.
Coal
Electricity, Circuits, & Storage
Hydrogen
Wind
- 4:00 p.m. Candy Collector**
A sweet way to introduce the terms “renewable” and “nonrenewable”. Get a closer look at how long energy sources will last when using only nonrenewable sources, and when incorporating renewable sources of energy.
- 4:30 p.m. NEED Resources, Q&A, Planning Guide Connections and Evaluation**
- 4:45 p.m. Synthesizing the Conference**
Working in grade level groups, participants synthesize the knowledge and process skills showcased during the day to discuss and plan integration into their classrooms.
- 5:00 p.m. Dinner**

July 22 Thursday Transportation, Evaluation and Recognition

- 6:30 a.m. Breakfast**
- 8:00 a.m. Transportation Resources -**
Participants explore the nation’s leading transportation fuels.
- 9:00 a.m. Exploring NEED’s Website and Other Resources (Play Energy Kahoot!) –**
- 9:45 a.m. What do I get and Evaluation Wrap Up**
Complete your order form for classroom energy resources.
- 10:15 a.m. Planning Your Energy Unit**
Have a later flight? Stick around for a little while and work with conference attendees and the facilitators to continue to refine your energy unit.
- 11:00 a.m. Adjourn**

THANK YOU TO OUR CONFERENCE SPONSOR, CONOCOPHILLIPS!

