



The NEED Project
National Energy Conference for Educators
July 23-27, 2023
Austin, TX

July 23rd	Sunday	Registration, Introduction to NEED
2:00 p.m. – 4:00 p.m.	Registration & Refreshments	Pick up your registration packet, swag, and other materials. Light refreshments provided.
2:00 p.m. – 4:00 p.m.	Blade Design Challenge	Your world still spinning from travel? Jump in and harness that energy to create a model wind turbine and see how much electricity you can produce!
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.
4:25 p.m.	Land Acknowledgement	
4:30 p.m.	Energy Bingo Icebreaker & Door Prizes!	
5:00 p.m.	Special Guest Speaker, Tramond Baisden	
5:30 p.m.	Dinner - all together	
July 24th	Monday	Science of Energy, Sources of Energy, and Electricity
6:30 a.m. - 7:55 a.m.	Breakfast	Breakfast is free flowing each day, buffet opens at 6:30 a.m. and closes at 7:55 a.m.
8:00 a.m.	Science of Energy	These breakout sessions explore the forms of energy and energy transformations. <ul style="list-style-type: none">○ Science of Energy – Primary/Elementary○ Science of Energy – Intermediate/Secondary○ Energy Works – Elementary/Intermediate○ Thermodynamics – Intermediate/Secondary
10:00 a.m.	Brain Break	
10:10 a.m.	Connecting Energy Education to Your Science Standards	
10:45 a.m.	Forms of Energy to Energy Sources – Energy Expos	How do the forms and sources connect? Learn more about the energy sources we use, transportation fuels, electricity, and energy efficiency and conservation.
12:30 p.m.	Lunch	

- 1:30 p.m. Energy Expo Explorations**
Participants explore the Energy Expos created by fellow conference participant groups and have an opportunity to vote for their favorite Expo board!
- 1:45 p.m. Hands-On Energy Breakout Session**
Energy Escape Room -or- Peak Oil Production Challenge
- 3:00 p.m. It's Electric! Introduction to Electricity Generation**
How is electricity generated and moved to our homes and businesses? Learn how energy sources are used to generate electricity.
- 3:20 p.m. Baseload Balance**
Breakout into smaller groups and play the fast-paced Baseload Balance game, exploring how generation meets our energy demands.
- 4:00 p.m. NEED Resources, Q&A, Planning Guide Connections and Evaluation**
Review what we covered today! Be sure to complete your conference evaluation daily while activities are still fresh in your mind, which allows NEED to make improvements for the program in future years, but also provides feedback for curriculum improvements and training enhancements.
- 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. Adjourn for the Evening; Dinner on Your Own**

July 25th Tuesday Sources of Energy and Climate Science

- 6:30 a.m. Breakfast** - Breakfast is free-flowing until 7:55 a.m.
- 8:00 a.m. Exploring Energy Sources (Breakout Sessions)**
- Solar
 - Oil and Natural Gas
 - Water Can Do Work – Hydropower and Marine Hydrokinetics
- 9:30 a.m. Brain Break**
- 9:45 a.m. Introduction to Nuclear Energy**
Learn about nuclear energy and how we use uranium to provide electric power.
- 10:00 a.m. Nuclear Simulation Groups**
Participants will become part of a nuclear reactor (simulation), demonstrating how power is produced by nuclear fission.
- 10:45 a.m. Creative Engagement Through Misdirection, Presented by Robert Griegoliet**
We'll discuss strategies for creating engaging focal points that harnesses student interest/voice, presents a phenomenon, and/or builds towards real world application.
- 11:45 a.m. Brain Break**
- 12:00 p.m. Lunch**
- 1:00 p.m. Understanding Climate Science**

- 2:30 p.m. NEED Resources, Q&A, Planning Guide Connections and Evaluation**
- **Special Recognition to the 2023 Bob Thompson Excellence in Energy Education Award Winners!**
 - **Kids Teaching Kids** - See examples of the winning projects and how other teachers have used NEED.
- 3:15 p.m. Adjourn for the Evening; Dinner on Your Own**

July 26th Wednesday Energy Efficiency & Conservation and New Energy Technologies

- 6:30 a.m. Breakfast** - Breakfast is free-flowing until 7:55 a.m.
- 8:00 a.m. - 12:00 p.m. Energy Efficiency and Conservation Sessions - Participants Rotate in Groups**
- Investigating Energy Use**
Participants split into groups to investigate energy use in the conference building using simple energy management tools.
- Energy House**
Working in small groups, create the most energy efficient house!
- This Week in Energy Conservation and Energy Live!**
These activities allow for interdisciplinary integration of language arts skills. Groups make quick 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 – Breakout Session**
- Energy Literacy Activities – Primary/Elementary/Intermediate
 - Energy Careers Excursion – Intermediate/Secondary
- 2:00 p.m. Brain Break**
- 2:15 p.m. Energy Sources & New Technologies Explorations - Breakout Sessions**
- Electricity, Circuits, & Storage
 - Hydrogen
 - Wind/Offshore Wind
- 3:30 p.m. Special Guest Speaker · Dr. Scott Tinker**
Scott Tinker is the Director of the Bureau of Economic Geology and the State Geologist of Texas. He co-produced the award-winning documentary films Switch and Switch On, the talk-show Energy Switch, and founded the nonprofit Switch Energy Alliance, which inspires an energy-educated future. Dr. Tinker's research interests include the Three E's: global energy supply and demand, environmental impacts of energy, and economic drivers and scale of energy.
- 4:45 p.m. Synthesizing the Conference, Planning Guide Connections and Evaluation**
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 - all together**

July 27th Thursday Transportation, Evaluation, and Recognition

- 6:30 a.m. Breakfast** - Breakfast is free-flowing and ends at 7:55 a.m.

- 8:00 a.m. Transportation Resources**
Participants explore the nation's leading transportation fuels. Understand your carbon footprint and engage in hands-on activities on fuel efficiency, as well as modeling the energy flow from the sun to an electric vehicle.
- 8:45 a.m. Full Circle - Full Conference Group Synthesizing**
- 9:15 a.m. Exploring NEED's Website and Other Great Resources**
- 9:45 a.m. What do I get?**
Complete your order form for classroom energy resources.
- 10:00 a.m. Evaluation/Paperwork Turn In/Adjourn**
- 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.