



Welcome Teachers and Parents!

Welcome to **FIND Iowa**! We are so excited that you could join us on these adventures in our great state of Iowa. Iowa PBS will take you and your students on expeditions to discover Iowa in brand new ways. You'll ask questions, wonder about our state's past, observe how our state has changed, and learn something new and unique about Iowa.

Teachers, parents and learners in grades 2-5 will explore Iowa Core, standards aligned, science and social studies virtual field trips having Fun Investigating New Discoveries in Iowa.

Every good explorer needs tools to make great discoveries. Each field trip will explore several locations across the state, using the following tools to help your learner discover Iowa:

- Overview video to activate prior knowledge and set the stage
- On-site videos related to each topic
- Interactive maps of Iowa locations, 360° videos and panoramic images

And, every good explorer needs a guide to help them learn what they do not know. To help you be that guide, each field trip will include:

- Iowa Social Studies and Science Core Standards alignments
- Discussion questions
- Suggested activities
- Additional resources

FIND Iowa: Energy in Iowa

Think about all of the energy that is used every day: the lights and appliances in your home, the fuel for cars and buses, the energy you use up as you play with your friends. That all comes from somewhere. It could be from a non-renewable resource — or a renewable one. What might be the pros and cons of using each of these? Should we be careful about how much we use? Understanding the impact that energy use can have on humans, animals and the environment can help us all become educated energy experts!

Iowa Core Standards

Science

- [4-ESS-3-1](#): Obtain and combine information to describe that energy and fuels are derived from natural resources and that their uses affect the environment.



Funding for FIND Iowa provided by Pella Corporation, Pella Rolfscreen Foundation, the Gilchrist Foundation and The Coons Foundation.



Discussion Questions

1. What might be some things that you use that require energy?
2. How might the energy that your body uses be similar and different from energy that a vehicle uses?
3. How might the energy that your body uses be similar and different from energy your house uses?
4. How might the energy that your house uses be similar and different from energy a vehicle uses?
5. Where do you think energy comes from? What might be some sources of energy?
6. What might be some pros and cons of using energy from different sources?
7. Do you think we can run out of energy?
8. What might be the difference between energy and fuel?
9. Do you think we can run out of fuel?

Suggested Activities

- [KidWind Activities](#): KidWind helps teachers and students to explore renewable energy sources in a fun and creative way. Check out their free activities and resources for mini labs to learn how renewable energy is harnessed and utilized. KidWind also offers an annual challenge in the areas of wind and solar energy.
- [How to Power the Skate Park: Cyberchase | PBS LearningMedia](#): This activity incorporates both science knowledge about solar energy and math concepts of area and ratio to help the Cybersquad to power the skate park and to have the students design their own solar dream house.
- [Non-Renewable Energy Sources | National Geographic](#): This activity has students take on roles as consumers of energy, utility companies or fuel companies to experience how resources are limited and can run out.

Additional Resources

- [Energy Kids | U.S. Energy Information Administration](#): The EIA provides information on energy basics and activities that are appropriate for an elementary school aged child. Check out their information, activities and games.
- [Maximizing Renewable Resources: Where and When to Use Solar Power | PBS Learning Media](#): This activity gets students viewing graphs showing how much solar energy is produced throughout the year in a variety of places. Use the support materials included with this resource to guide the exploration.
- [Iowa Energy Office](#): The Iowa Energy Office manages state, federal and utility-funded programs and initiatives that are energy related. This is a great resource to learn about local initiatives that exist in Iowa to improve energy use and efficiency.

Career Applications

- [Career Spotlight: Kite Designer | PBS LearningMedia](#): Meet Damon Vander Lind, a kite designer for Google X. Damon has a background in engineering and is working on a project to build a kite that works like a wind turbine in a much more sustainable way.



Funding for FIND Iowa provided by Pella Corporation, Pella Rolscreen Foundation, the Gilchrist Foundation and The Coons Foundation.



- [Scientist Profile: Renewable Energy Scientist | PBS LearningMedia](#): Sandra Begay-Campbell is a renewable energy scientist who works to provide energy resources to Navajo communities that have limited access to energy resources. She works on larger scale projects as well as with individual households and families to provide unique solutions to energy challenges.



Funding for FIND Iowa provided by Pella Corporation, Pella Rolscreen Foundation, the Gilchrist Foundation and The Coons Foundation.

