



Big Idea 21

Energy

The flow of energy drives all biological, chemical, physical, and geological systems on Earth. The transfer of energy into its many forms affects every facet of our lives. At the same time, the need for safe, clean energy sources and efficient uses of energy are global priorities that have the potential to capture students' interest and imagination.



Enduring Understandings

- The natural world is composed of matter and energy.
- There are regular, predictable patterns in the universe.
- Changes take place because of the transfer of energy.
- The sun can cause changes on Earth.
- Energy cannot be created or destroyed; the total energy of the universe remains constant.
- Humans have needs that are met through interactions with the environment.

Vocabulary List

- Chemical
- Force
- Fuel
- Heat
- Kinetic
- Light
- Magnetism
- Matter
- Motion
- Potential
- Sound
- Source
- Thermal
- Transfer
- Transformation

Essential Questions

Use these questions to help students investigate the many forms of energy at work in their lives.

- How do physical changes in our environment affect our lives?
- What role does chemistry play in our lives?
- Where do we find energy?
- How do we know if something has energy?
- How do we put the sun to work?
- How can the transfer of energy alter systems?
- How are forms of energy different or similar?
- How do all living things use energy?
- How are energy and the food chain related?
- How do humans rely on energy?
- How can humans control energy?
- What is energy efficiency?

Add your own questions!


