

## Investigation 1: Tracing Electricity to Its Source

### This investigation will help you to:

- Learn more about are fossil fuels.
- Learn more about the advantages and disadvantages of generating energy from fossil fuels.
- Learn more about electricity.
- Learn more about how does energy move from the source, through the wire and into a home or building.
- Learn more about natural resources are needed for a power plant to work.
- Learn more about how do turbines work.

To learn more about fossil fuels, visit the following web sites:

#### Learning About Fossil Fuels, **US Dept. of Energy**

Explore the Department of Energy's educational resource for fossil fuels.

#### The Origins of Fossil Fuels, **Nuteeriat**

This site provides an imaginative, in depth explanation of the origins of fossil fuels.

To learn more about the advantages and disadvantages of generating energy from fossil fuels, visit the following web sites:

#### Electricity Supply and Demand Fact Sheet, **EIA - DOE**

This site reviews the current issues facing electricity generation in the United States and explains how industry deals with these issues.

#### Electric Power Industry Overview, **EIA - DOE**

This page contains a list of links to web pages that provide information on various aspects of the electric power industry.

To learn more about electricity, visit the following web sites:

#### What is Electricity?, **Energy Information Administration**

Learn the basics about electricity, as well as investigate the brief history of electrical generation.

#### What is Electricity?, **California Energy Commission**

This web site provides information on electrical wires and batteries, as well as provides directions to a simple experiment that will help you understand the transference of electrons.

#### "Electricity" Misconceptions in Textbooks, **William J. Beaty**

Visit this web site to find information on more than 14 common misconceptions on electricity that are often perpetuated in textbooks.

To learn more about how does energy move from the source, through the wire and into a home or building, visit the following web sites:

### Electricity, **EIA - DOE**

Explore the generation and transportation of electricity, including the purpose of turbines and nonrenewable/renewable energy sources in these processes.

### Electricity Transmission System, **California Energy Commission**

Learn how electricity gets to the customers, after its production at the power plants.

### Virtual Tour of a Power Plant, **XCEL Energy**

Take a trip through this state-of-the-art power generating plant. The descriptions and graphics of real power plants make this a useful tool for learning about electricity.

To learn more about natural resources are needed for a power plant to work, visit the following web sites:

### How Electricity Is Produced, **GE**

Explore the standard process of creating electricity, regardless of the power source at this site.

To learn more about how turbines work, visit the following web sites:

### Generators, Turbines and Power Plants, **California Energy Commission**

Find out how generators, turbines, and powerplants work together to create electricity.

### Energy 101: Wind Turbines, **EREN- DOE**

Watch this video to learn how wind turbines can make electricity.

### Start Your Engines, **Thinkquest**

Check out this page to learn more about steam turbines and different turbine types.

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