

## Project Learning Tree Standards-Based FCAT-Style Activities



# Energy Sleuths

## Teacher Page

Students practice FCAT skills while learning about renewable and nonrenewable energy.

**GRADE LEVEL:** 3rd grade

### **ACADEMIC OUTCOMES/LESSON OBJECTIVES:**

- Students will read a selection introducing them to the concepts of renewable and nonrenewable energy.
- Students will respond to FCAT-Style questions and prompts in Reading, Writing, Math, and Science.

### **SUNSHINE STATE STANDARDS ASSESSED:**

- LA.3.2.2.2 Uses information from the text to answer questions related to explicitly stated main ideas or relevant details.
- LA.3.4.1 Develops and demonstrates creative writing.
- MA.A.3.2.3 Adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.
- SC.B.2.2.1 Recognizes the costs and risks to society and the environment caused by the use of nonrenewable energy.

### **RESOURCES:**

Florida Project Learning Tree Web site - <http://www.sfrc.ufl.edu/plt/>  
Florida Department of Education Web site - <http://www.firn.edu/doe/>

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### **Answer Key:**

1. LA.3.4.2.3 Use the 6-point writing rubric.
2. a) MA.A.3.2.3
3. a) SC.B.2.2.1
4. d) LA.3.2.2.2



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## Student Handout

Students practice FCAT skills while learning about renewable and nonrenewable energy.

### WRITING

1. Fossil fuels provide almost all the energy we use today. Think about what life might be like when our fossil fuel resources disappear. Write a story about how your life would be different if all of our fossil fuels disappeared tomorrow.

*NOTE: Write your response to question 1 on another sheet.*

### How the United States Made Its Energy During the Year 2005

Energy Source	How Much of Our Electricity Was Made From Each Source?
Coal	About 1/4 of our electricity was made from coal.
Natural Gas	About 1/4 of our electricity was made from natural gas.
Petroleum	About 4/10 of our electricity was made from petroleum.
Hydroelectric, Nuclear, Biomass, Solar, Wind, and Geothermal	About 1/10 of our electricity was made from renewable energy sources.

### MATH

In the table titled, "How the United States Made Its Energy During the Year 2005," about how much of our electricity was made from coal AND natural gas resources?

- a.  $\frac{1}{2}$
- b.  $\frac{1}{3}$
- c.  $\frac{1}{4}$
- d.  $\frac{1}{8}$

Name:

Date:



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## *Student Handout*

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### **SCIENCE**

3. Which of the following is an example of a NON-renewable energy source?
- fossil fuels
  - hydroelectric power
  - solar energy
  - wind energy

### **READING**

This article is adapted from the "Energy Primer" in the Project Learning Tree activity "Energy Sleuths":

#### **Earth's Energy Sources**

People use energy when they cook, drive, and use computers. This energy can come from different sources. Renewable energy is made from a source that will never run out. Some examples of renewable energy sources are the sun and the wind. Sun and wind energy are called "clean" energy sources because they do not make pollution.

Non-renewable energy is made from a source that WILL run out some day. Coal and oil are examples of non-renewable energy sources. They are called "fossil fuels." A "fossil" is part of a plant or animal that lived long ago. Coal and oil were made from plants and animals that lived on the earth millions of years ago. To make energy from coal and oil, people burn these fossil fuels in power plants. Burning fossil fuels DOES create pollution.

Because using fossil fuels creates pollution - and because fossil fuels will run out someday - scientists are now searching for clean, renewable energy sources to meet our future energy needs.

4. Based on the article titled, "Earth's Energy Sources," which of the following energy sources is considered "clean"?
- Coal energy
  - Fossil fuel energy
  - Oil energy
  - Sun energy

**Name:**

**Date:**