

# Saving Energy is a



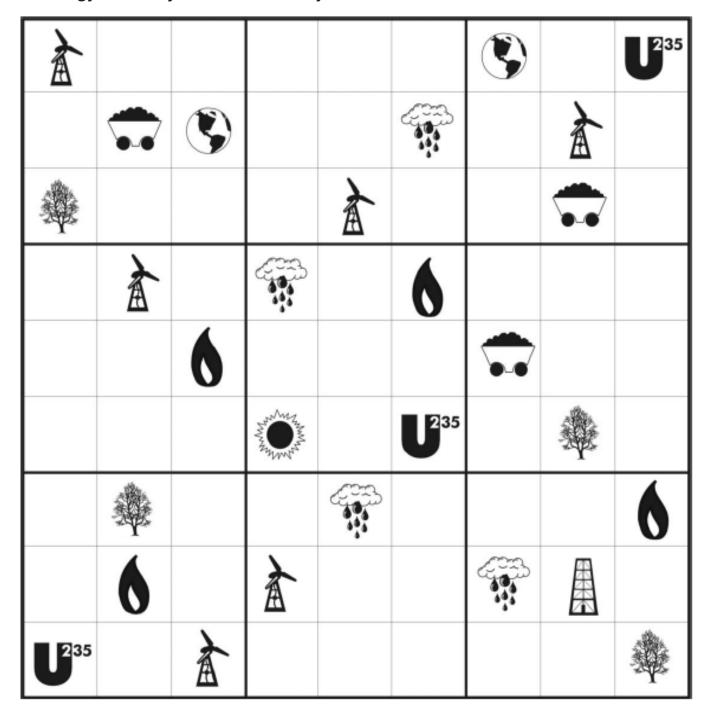


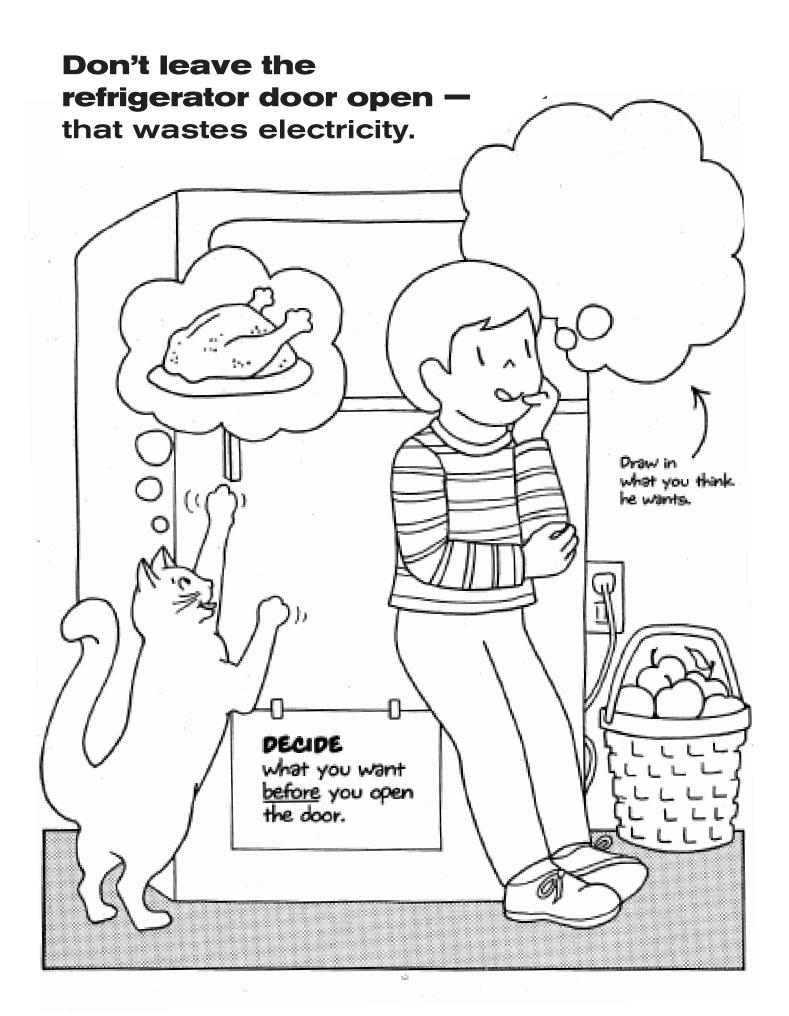
**Coloring & Activity Book** 

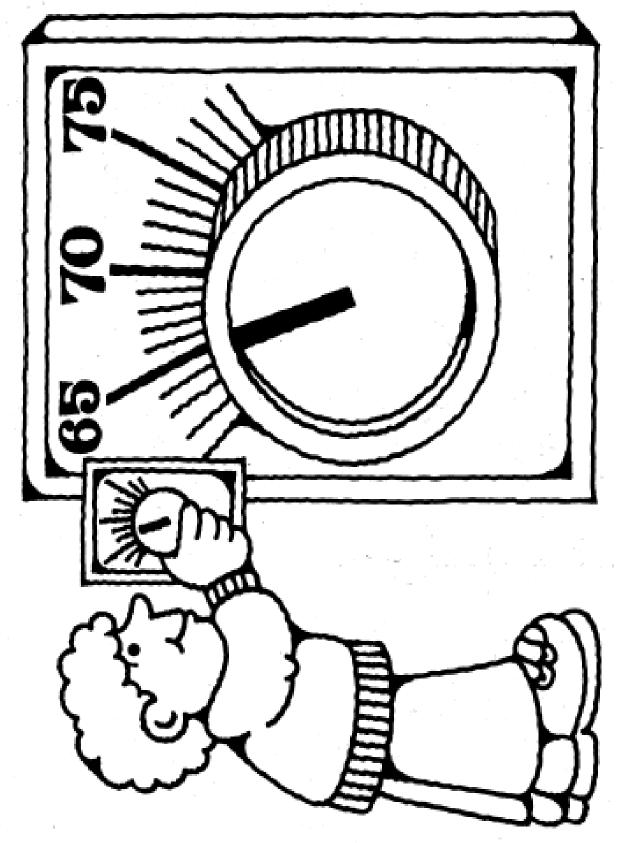
## **Energy Source Sudoku**

Sudoku is a logic-based placement puzzle consisting of a 9 x 9 grid of cells. Usually Sudoku uses numbers, but this puzzle uses energy source symbols for biomass, coal, geothermal, hydropower, natural gas, petroleum, solar, uranium and wind.

To solve the puzzle, each 3 x 3 region of the grid must contain only one of each source symbol. Each row and each column of the puzzle must contain only one energy source symbol. There is only one solution. Good luck!







can keep the thermostat down. you SO Wear warm clothes

# **The Easy Energy Action Plan**

10 simple ways to use energy wisely

Check each box 0 Turn off lights. **Use energy-saving** 2 light bulbs. **Shut off computers** 3 when not in use. **Use "smart"** 4 power strips. **Turn off entertainment** 5 devices when not in use (TV, game systems, etc.) Use natural light, heat 6 and cooling. **Unplug your phone** 7 charger when not in use. Talk to your parents about 8 **ENERGY STAR® appliances.** Talk to your parents 9 about programmable digital thermostats. Talk to your parents about home improvements. (windows, doors, roofs, etc.)

# The Case of the Fuelish Consumer



Energy Detective Crusoe was checking the outside thermometer when he heard pounding on the door. It was -1°F. He looked up to see Mrs. Doris Delores standing at the entrance to his office. She was steaming mad. Shaking a thick envelope stuffed with slips of paper, she finally spoke. "Detective," she announced, "I simply cannot believe how much electricity we used this month."

"You're letting out all my heat standing there," replied Crusoe. "Come in, please. And close the door behind you."

Detective Crusoe looked at the pieces of paper inside the envelope.

"What are you feeding your furnace with? Hundred dollar bills?" he asked. "I think I can help you. Let's meet tomorrow so we can go over this. What time is convenient?"

It was almost 11 p.m. when Detective Crusoe finished his work that evening. He decided to swing by Doris Delores' home on 111 Conservation Road. As he drove past the Delores residence, he looked the place over.

A porch light was burning brightly. One of the basement windows was missing. Through a picture window that was probably the Delores' living room, Crusoe spied a strange, flickering purple glow – the television. "Son of a gun," said the detective as he drove away.

The next afternoon, Crusoe arrived promptly for his meeting with Mrs. Delores. The porch light was still burning when he arrived. Inside, Doris Delores greeted the detective warmly, but he instantly felt a chill.

Crusoe looked around him and noticed a fireplace at one end of the room and a well-worn overstuffed chair, obviously someone's favorite, next to an outside wall. The detective casually walked across the room. He put his hands on the wall. It was cold! A TV was blaring in an empty room as Boris, Mrs. Delores' 6-year-old son, crashed into the kitchen and pounced on the freezer door to get an ice-cream bar. The freezer door stayed open as Boris ran out of the kitchen. On the north side of the Delores house, Crusoe noticed several large windows with the curtains drawn open.

Mrs. Delores brought Crusoe some coffee and began to chat. "I'm so glad you could make it. You know, we stayed up until 9 o'clock last night trying to figure out what to do."

"What time did you say you went to sleep last night?" Crusoe asked. "Oh, about 9:30. Yes, that's right," she confirmed.

"Mrs. Delores, I think it's time we had a little talk. Do you mind if I sit down?"

What do you think Detective Crusoe told Mrs. Delores? Do you think Mrs. Delores will be able to do something about her problem? Do you think she'll have to sacrifice much comfort in order to cut her electric bill?

### **2 EXPERIMENTS**

#### **INSULATION**

Insulation helps keep your home cooler in summer and warmer in winter.

This experiment uses cotton to "insulate" a glass of water.

#### **MATERIALS:**

2 small water glasses (same size)

Cotton balls

Watch

Pencil

Outdoor thermometer

Plastic bag

Bag of ice

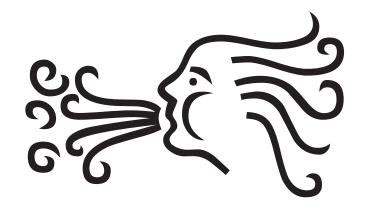
Notebook

Large pan

#### **DIRECTIONS:**

- 1. Fill glass with water. Take temperature of water and write it down.
- Put glass in a pan and fill the pan with ice.
  Put thermometer in the glass.
  Record temperature every 5 minutes for 15 minutes.
- Remove glass from the pan. Fill second glass with water and record temperature.
   Place the glass (with thermometer) in a plastic bag filled with cotton balls.
- Place bag with glass in ice. Record temperature every 5 minutes for 15 minutes.

Which glass got colder faster? Why?



#### **DRAFT TESTER**

This handy device lets you spot energy-wasting drafts in your home.

#### **MATERIALS:**

Tape

Plastic food wrap

Ruler

Scissors

#### **Directions:**

- 1. Cut a piece of plastic wrap 12 inches long by 6 inches wide.
- 2. Tape the plastic to the ruler.
- 3. Hold the "breeze buster" next to doors and windows. If the plastic moves, you know cold air is getting into your house – and that something needs to be done about it!