

# Continue Your Exploration

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Check out the path below or go online to choose one of the other paths shown.

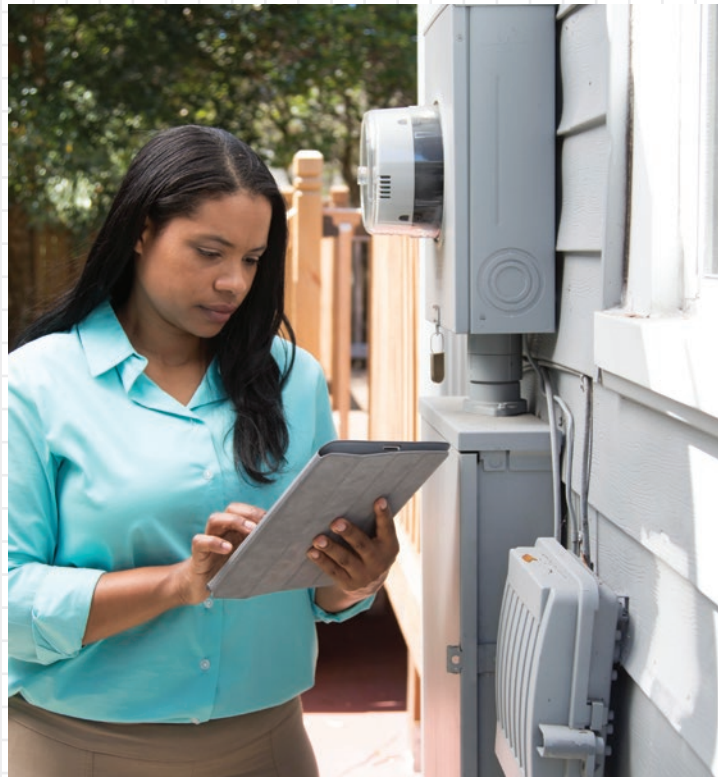
## Careers in Engineering

- Hands-On Labs 
- Maximizing Heat Transfer
- Propose Your Own Path

Go online to choose one of these other paths.

## Energy Conservationist

Many modern systems, such as buildings, transportation networks, and lighting systems, consume a lot of energy. This energy usage is expensive, consumes a large amount of natural resources, and causes pollution that contributes to global climate change. Energy conservationists work to develop solutions to reduce energy consumption. An energy conservationist may also be an engineer, an environmental scientist, or a building designer. The main goal of the job is to increase the efficiency of systems, so they use less energy but still function well. To do this, the energy conservationist has to understand how energy is generated and transmitted, and how it is used in the system. The best solution to the problem of energy conservation often saves money, even if it requires new equipment. Energy conservationists have to find ways to save energy in industries such as hotels, commercial properties, municipalities, and even in private homes. Then they make recommendations to solve the engineering design problem of reducing energy consumption.

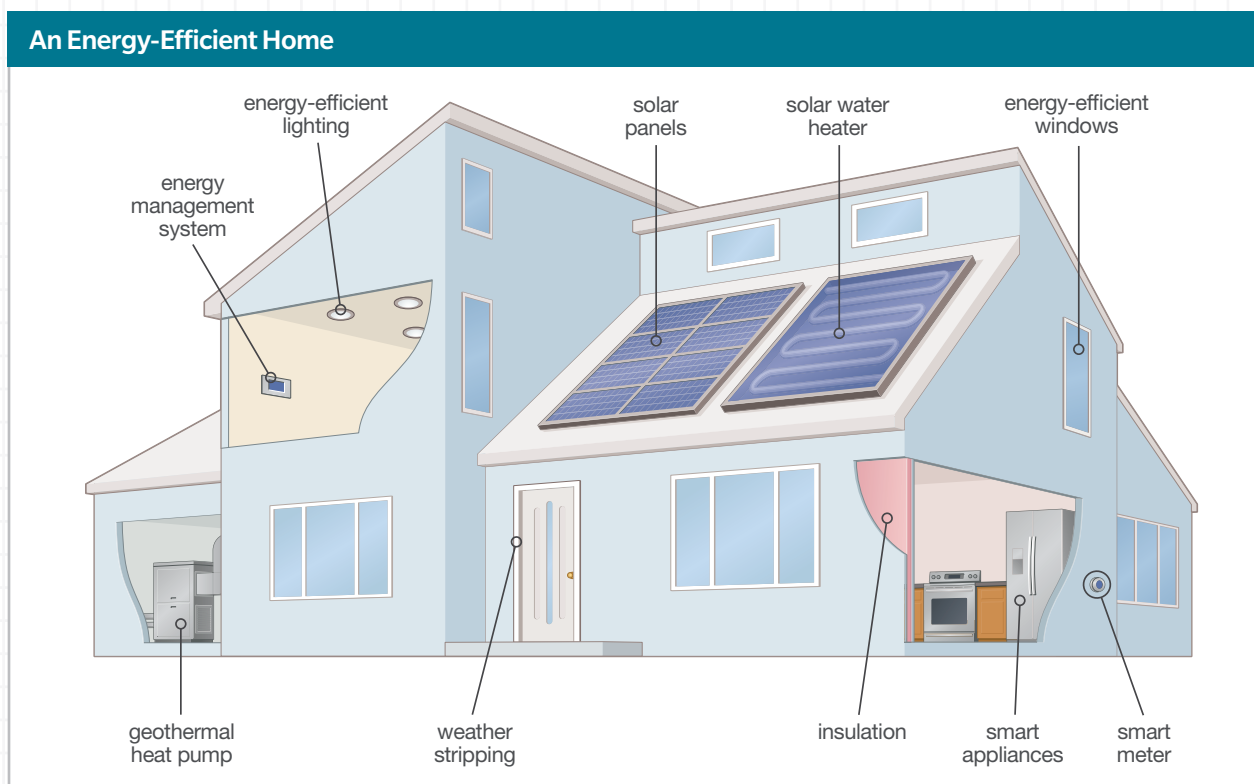


An energy conservationist measures energy usage and designs ways to reduce it.

1. An energy conservationist often works as a consultant who makes recommendations that other people use to make decisions. What type of information would the energy conservationist have to consider in order to convince people that changes are a good idea?

## TAKE IT FURTHER

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One way to improve home energy usage is to use renewable resources such as solar energy or geothermal energy and reduce fuel and electric usage. Another approach is to reduce energy use. Efficient appliances, insulation, and well-designed windows and doors reduce impacts on the environment and the costs of providing energy.

2. Which of these changes might be suggested by an energy conservationist to reduce the transfer of thermal energy to a home's surroundings? Select all that apply.
  - A. Add more insulation to the attic of the home.
  - B. Use renewable energy sources instead of fossil fuels to heat the home.
  - C. Install the most energy-efficient appliances available.
3. An energy conservationist studies a home and makes a suggestion that each room should have a separate thermostat instead of having one temperature control device in a central room. How could this suggestion help reduce energy usage in the home?

**4. Collaborate** Discuss with a group how you and your families can be “energy conservationists” in your own everyday lives. What steps do you take to make sure your use of energy is most efficient? As a group, make a poster showing things that you can do to minimize your energy use and share your ideas with the class.