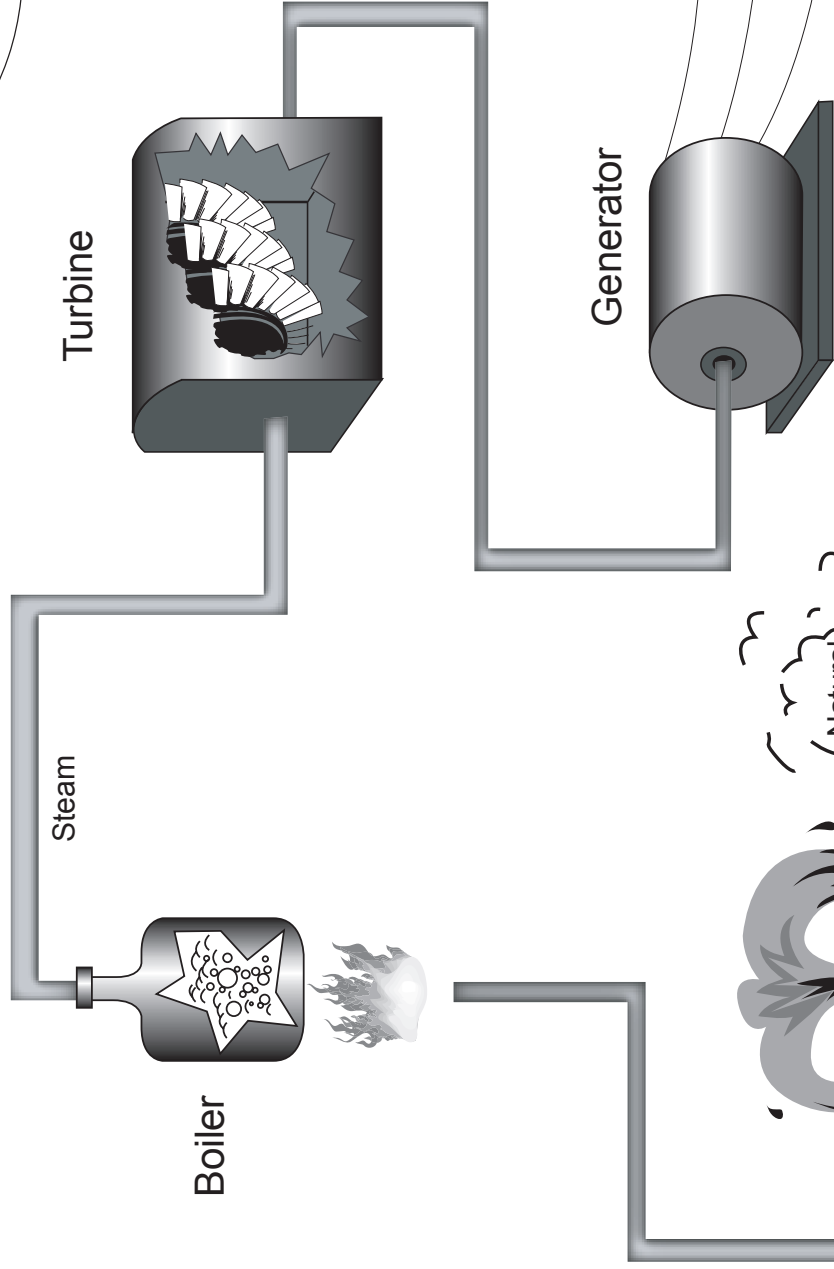


# ELECTRICAL GENERATION



**Let There Be Light**  
Study the drawing carefully.

1. List the steps shown to produce light.
2. List four ways the environment is affected by the generation of light (electricity).
3. List five things you did this morning that used electricity. Now decide how you would accomplish those same things without using electricity.

Electricity

Fossil Fuel (Oil or Natural Gas)

Natural Gas

or

Steam

Turbine

Generator

Boiler

# WATER TICKETS

## OBJECTIVE:

To see how decisions affect our standard of living and our quality of life. This will help students realize how important it is to use water wisely.

## MATERIALS NEEDED:

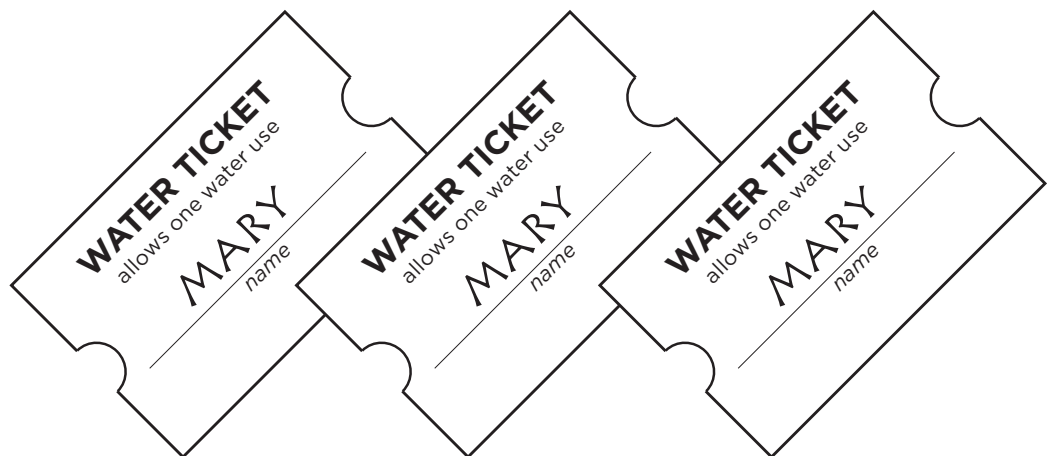
- Water Tickets - 25 per student
- Box to use for toll box to collect tickets

## PROCEDURE:

1. Introduce the game to the students by listing several places the students use water in the school, like a drinking fountain, restroom, lunchroom, and sinks.
2. Provide students with 25 Water Tickets each and instruct them to write their name on all of their Water Tickets.
3. Every time students use water, they are to put a Water Ticket in the Toll Box. If a student uses heated water, it will cost two tickets, because both water and energy are being used. It also costs two tickets if a student wastes water unnecessarily. For example, letting the water run while washing hands or letting it run to get a colder drink.
4. Keep a record of how many tickets the students have left each day.

## DISCUSSION:

- What would happen if there was a real water shortage in the community and families were only issued a certain number of Water Tickets?
- What if, after they used them, all of their water was shut off?
- What would they do to adjust their use of water?
- What do people do for fresh water when rivers flood their communities, dams break, or city water is contaminated?



# WATER TICKETS

**WATER TICKET**  
allows one water use  
\_\_\_\_\_ name

**WATER TICKET**  
allows one water use  
\_\_\_\_\_ name

**WATER TICKET**  
allows one water use  
\_\_\_\_\_ name

**WATER TICKET**  
allows one water use  
\_\_\_\_\_ name

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allows one water use  
\_\_\_\_\_ name

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allows one water use  
\_\_\_\_\_ name

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\_\_\_\_\_ name

**WATER TICKET**  
allows one water use  
\_\_\_\_\_ name

# MYSTERY PICTURE GRAPH

## INSTRUCTIONS:

- Plot and connect the points in each section on the grid using the ordered pairs. Connect the points as you go until you reach STOP.
- Color in the plotted sections when you are directed to do so.
- When the picture is finished, color the rest blue. Write a slogan about what being energy efficient means to you.

(A, 8)

(A, 14)

(C, 18)

(G, 20)

(I, 20)

(M, 18)

(O, 14)

(O, 8)

(M, 4)

(I, 2)

(G, 2)

(C, 4)

(A, 8)

**STOP.**

(O, 12)

(N, 12)

(M, 13)

(L, 14)

(I, 13)

(I, 14)

(J, 14)

(J, 15)

(K, 15)

(J, 17)

(K, 18)

(M, 18)

**STOP, Color Green**

(G, 20)

(H, 19)

(G, 17)

(F, 14)

(F, 12)

(E, 14)

(D, 14)

(C, 12)

(E, 10)

(H, 10)

(I, 9)

(I, 8)

(H, 7)

(H, 6)

(G, 2)

(F, 5)

(D, 6)

(D, 8)

(E, 9)

(D, 10)

(A, 11)

**STOP, Color Green**

(M, 13)

(K, 13)

(J, 11)

(J, 9)

(L, 8)

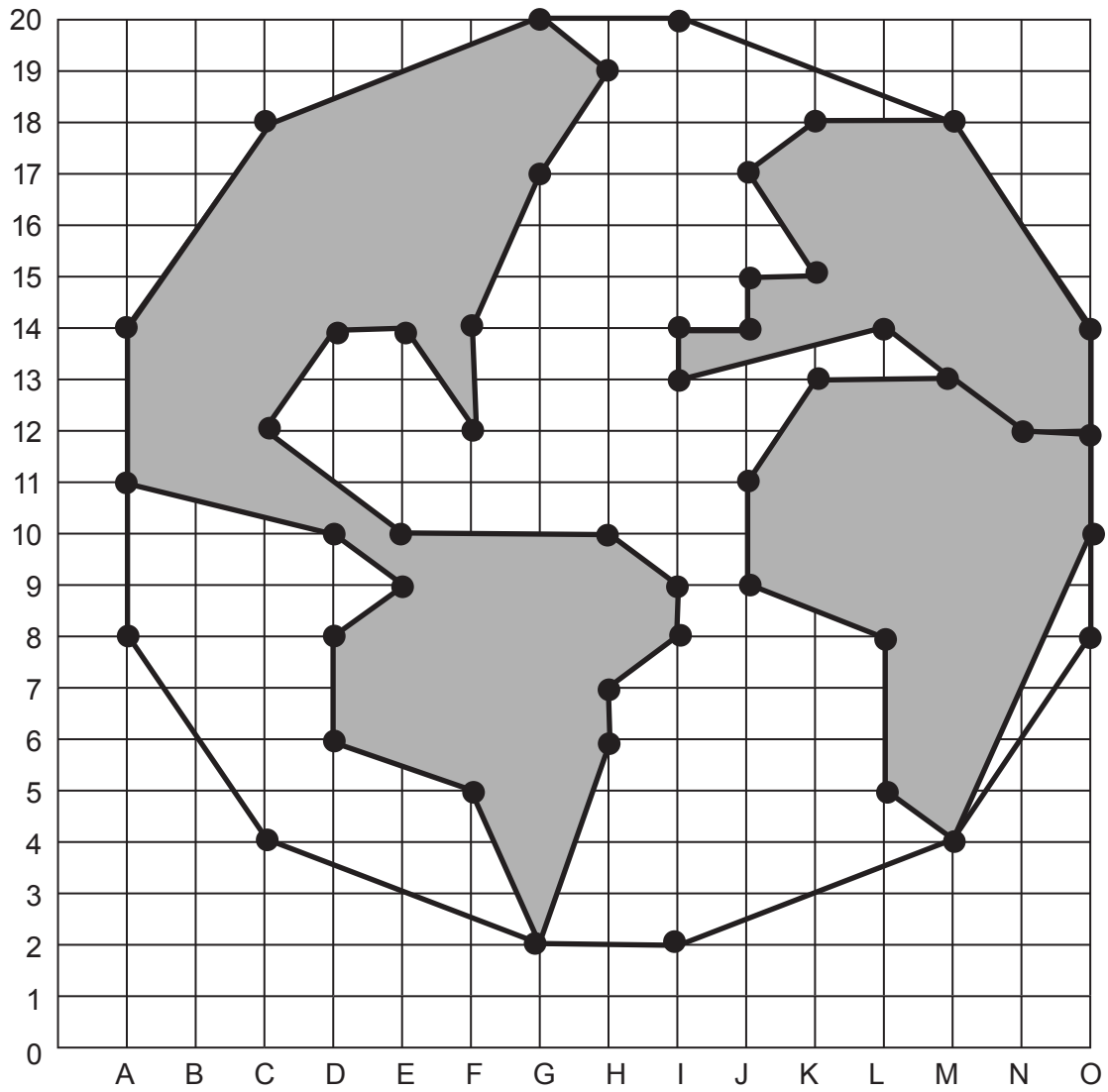
(L, 5)

(M, 4)

(O, 10)

**STOP, Color Green**

# MYSTERY PICTURE GRAPH



## BRAIN TWISTERS

1. Jessie saved more energy than Michael.  
Michael saved more energy than Maggie.  
Maggie saved less energy than Jessie.  
Karen saved more energy than Jessie.

List the kids' names in order of how much energy they saved, least to most:

- Jessie, Karen, Maggie, Michael
- Maggie, Michael, Jessie, Karen
- Michael, Jessie, Maggie, Karen
- Maggie, Karen, Michael, Jessie

2. The Maher family used 57,000 gallons of water a year, costing them \$525 to heat. Estimate how much money they would save in a year if they cut their water use by 30,820 gallons.

- \$100
- \$240
- \$284
- \$525

3. If each person in a house uses a 60-watt bulb in his bedroom four hours a day, and there are three people living there, how many watts will be used per day?

- 20 watts
- 240 watts
- 650 watts
- 720 watts

4. For every 10 degrees the water heater setting is turned down, you can save 6 percent of the energy used. If Charles turns his water heater down by 15 degrees, about what percent savings in energy will he save?

- 6 percent
- 9 percent
- 12 percent
- 15 percent

# HOUSE POSTER

## **MATERIALS:**

1. House Poster found on the next page.
2. Packages of colored markers or pens.

## **INSTRUCTIONS:**

1. Have students add or color the items below.
  - Add a bicycle.
  - Add some recycling bins in the garage.
  - Add some trees to shade the house.
  - Add a renewable or green power energy source in the upper left corner.
  - Put an orange star (for ENERGY STAR® products) on the refrigerator, television, and air conditioner.
  - Color the energy efficient showerhead green.
  - Color all items that use electricity yellow.
  - Color all items that use natural gas red.
  - Color the thermostat brown.
  - Color the incoming freshwater pipes blue.
  - Color the wastewater pipes black.
  - Draw a purple water drop next to all items in the house that use water.
2. This activity can be done throughout the Program or as one exercise.

