ENERGY EFFICIENCY ACTIVITY WORKSHEET

1. Define power (use examples):

2. Define energy (use examples):

3. Unit Conversions (Remember, 1 kW=1,000W and 1 MW=1,000,000 W)
   a. 1500 W = _____ kW
   b. 500 kW = _____W
   c. 1000 kW = _____ MW

Using data from the worksheet:

4. Which light bulb uses the most power?

5. Which light bulb uses the most energy?

6. Name one appliance that would be called an energy vampire. Why is it using energy even when it seems to be turned off?

7. How much energy would the following devices use?
   a. 15-watt compact fluorescent that is on for 10 hours: _____Wh
   b. 60-watt incandescent bulb that is on 5 hours: _____Wh
   c. 1200-watt oven that is used for 1.5 hours: _____Wh

8. Which uses more energy in one month (30 days)?
   a. Energy vampire that uses 5 watts for 24 hours a day
   b. 100-watt stereo that is used for 1 hour each day
   c. 1000-watt toaster that is used for 0.1 hour each day

9. What is one way you can save energy at home through conservation?

10. What is one way you can save energy at home through efficiency?

11. Answer the following questions based on the graph at the end of the worksheet.
    a. People in what country use the most electricity per year?

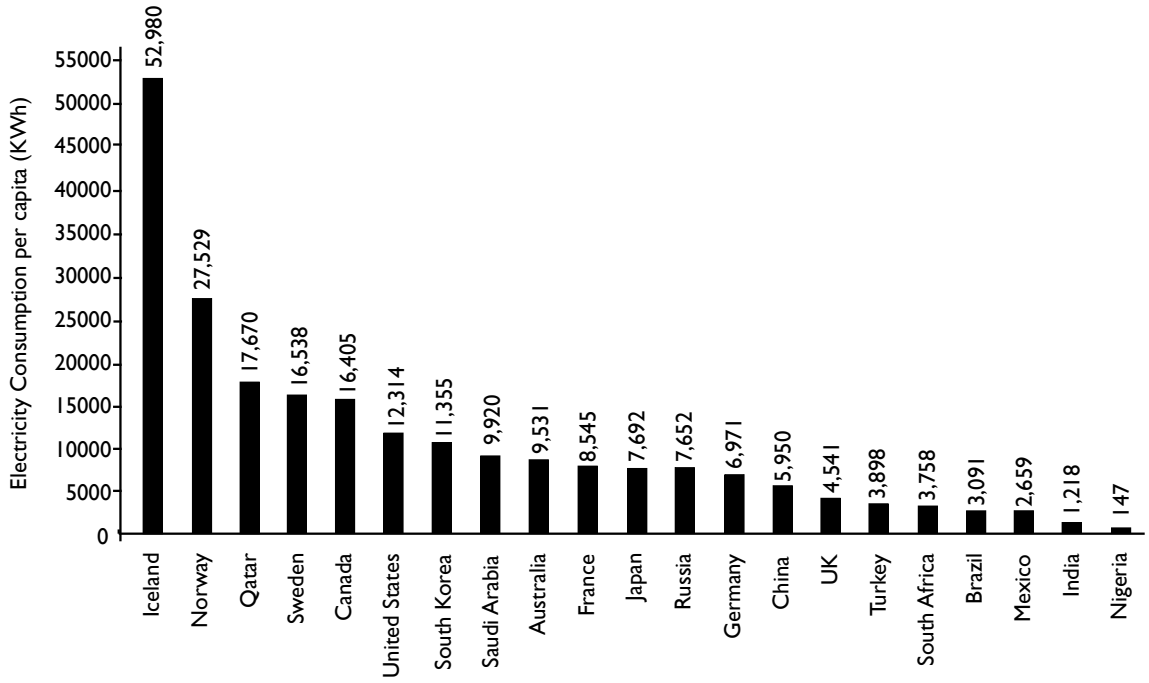
    b. People in what country use the least electricity per year?

    c. Why might there be such great differences in electricity use among different countries?

d. Do you think that people in Europe (such as France, Germany, and the United Kingdom) have a lower standard of living than people in the United States and Canada? Why?

e. How many people in India could live their daily lives using the electricity consumed by one person in the United States?

PER CAPITA ANNUAL ELECTRICITY USE, AROUND THE WORLD[7]



(Data Source: Our World in Data, 2021)

Because of Iceland's industrial sector and small population of 320,000 people, the country has the highest electricity consumption per capita in the world. This is similar for Norway's manufacturing industry and its need to use electricity for heating.

In India, a lack of investment in the energy sector and use of traditional fuels like charcoal make energy consumption per capita much lower compared to other countries. Nigeria also has poor energy infrastructure, as well as a lack of water and gas supply, making electricity consumption very low.