



Energy and Geo-Environmental Engineering Residential Energy Consumption Activity

	kW	Hours	Total
Required:			
Dryer			
Oven			
Refrigerator			
Washer			
Water Heater			
Bedroom:			
Air Conditioner			
Clock Radio			
Lamp			
Computer			
Printer			
Ceiling Light			
Bathroom:			
Track Lighting			
Fluorescent Light			
Closet:			
Ceiling Light			
Vacuum Cleaner			

	kW	Hours	Total
Kitchen:			
Dishwasher			
Microwave Oven			
Coffee Maker			
Toaster			
Fluorescent Light			
Living Room:			
Lamp			
VCR			
Stereo			
X-Box			
Television			
Ceiling Fan			
Laundry Room:			
Iron			

Use this sheet to record Kilowatts, Estimated Hours Used, and Total kWh Consumed for the 5 required appliances and for 10 additional appliances / devices of your choice.

See page 2 for full instructions.



Procedure

- 1. Find** wattage information for the Dryer, Oven, Washer, Refrigerator, Water Heater and 10 additional appliances of your choice in the virtual house.
- 2. Record** wattage data (in Kilowatts) in the 'kW' column on the previous page.
- 3. Estimate** the amount of time (in hours) each appliance is used each day by a typical family and record your estimate in the 'Hours' column.
- 4. Calculate** the energy used in kWh for each appliance and record your answer in the 'Total' column.
- 5. Answer** questions 1-7 using the data you've collected. Use this sheet to transfer your data to the online activity.

1. Determine the total kWh consumed in ONE DAY.

Answer: _____ (Round to the nearest whole number)

2. Determine the total kWh consumed in ONE WEEK.

Answer: _____ (Round to the nearest whole number)

3. Determine the total kWh consumed in ONE SEMESTER (16 weeks).

Answer: _____ (Round to the nearest whole number)

4. Based on the U.S. average price of 8.5 cents per kWh, estimate your cost of energy per semester (total energy consumed x cost per kWh).

Answer: _____

5. What percentage of the total energy consumption is consumed by lighting?

Answer: _____ (Round to the nearest whole number)

6. What percentage of the total energy consumption is consumed by appliances /devices?

Answer: _____ (Round to the nearest whole number)

7. Identify specific ways in which you can reduce your energy consumption (for example, by turning off appliances when not needed) and estimate the reduction in energy consumption by implementing those steps.

Answer: _____
