Name_____Date_____Period_____

Student Sheet #3: How Much Energy Do You Use?

Part 1: Energy Predictions for Household Devices

Directions: For each of the devices below, fill in the **second** column, "Predicted Power Ranking" by ranking each of the devices below on a scale of 1 to 4.

Rating	Power Used	Description
1	1-10 W	Low Power
2	11-100 W	Moderate Power
3	101-500 W	High Power
4	501-2000 W	Very High Power

Device GET CURRENT DEVICES	Predicted Power Ranking (see chart above for ratings)	Actual Power Used (Watts)	Estimated Number of Hours Device is Used in a Day	Total Energy Used per Day (Kilowatt Hours)
Incandescent bulb				
Fluorescent bulb				
LED light bulb				
Sony PlayStation 4				
Xbox 360 One				
Nintendo Wii				
iPhone 6 Charger				
42" LCD Television				
Laptop Computer				
Desktop Computer				
Clothes Dryer				
Space Heater				
Dishwasher				
Window Fan				
DVD Player				
Refrigerator				
Hair Dryer				
Room Air Conditioner				

Part 2: Notes for "Energy and Power Lesson" PowerPoint

1. What is the definition of energy?

2. What is the definition of power?

3. What does the 1st law of thermodynamics teach us?

4. Give one example of an energy transformation

5. In your own words, what is the difference between power and energy?

6. Look at the analogy below demonstrating the difference between "power" and "energy".

Figure 1. Picture adapted from: http://photocreatures.com/faucets-and-buckets-a-practical-way-to-achieve-good-exposures/

   a. What does the water flowing from the faucet represent?

   b. What does the bucket full of water represent?

Try the following problem:

A 100-Watt light bulb operates for 20 hours

1. How many Watt-hours of electrical energy were transformed into light and heat?

2. How many kilowatt-hours were used?

Part 3: Making Sense of the Data

1. Were any of your predictions correct for the device that used the most power? Least power? (Be specific)

2. Which Device used the most power? _____
   Would this device also use the most "total" electricity? Why or why not?

3. What are at least 2 ways you could reduce the amount of electricity you use?