Name_____ Period _____ Date _____

Electrical Appliances

STEM Sims

Lesson 2: Time is Money

In lesson 1, you calculated how much the electricity would cost to run an appliance for a certain amount of time. Can you find how long you can run an appliance on a certain amount of electricity?

Doing the Science

1. Start the Electrical Appliances Simulation by clicking on the "Sim" tab.
2. Select the bedroom.
3. Click on the window fan.
4. Fill in Table 1 with all of the information that is given. For this problem, the appliance is 110 watts, and it will use 1 kWh.
5. Now you must use calculations to fill out the rest of the table. Divide the watts by 1000 to get the number of kilowatts, or kW, that the appliance uses.
6. Divide the kWh by kW to get the number of hours that the fan can run.
7. Enter your answer into the simulation to see if it is correct. If it is not, check your work against the solution in the simulation to see where you made a mistake.

Table 1.

Unit	Quantity
Watts	
kW	
kWh	
Hours	

Do You Understand?

1. Using the same approach, calculate how long the air conditioner in the utility room will run using 1 kWh. Check your answer by entering it into the simulation.

2. How long would the air conditioner run for on10 kWh? What is the relationship between how long it will run on 1 kWh and on 10 kWh?