



## SCHOOL ENERGY REVIEW

# ELECTRONICS AND APPLIANCES

This assignment gives you the opportunity to learn more about the things that consume energy in your school. Your team will be reviewing your school's electronics and appliances by following these steps:

1. Read all the information and instructions for this assignment before beginning your review, filling out the table on page 3, and answering the presentation questions.
  2. Determine the rooms your team will review.
  3. Complete the review and record your findings in the table on page 3.
- **Your group will use a portable electricity usage monitor to complete your section.**
  - If you have permission from your teacher, take photos during your review. They can be added to your presentation to help your classmates better understand your points and make your presentation more visual.
4. Complete any necessary additional research.
  5. Revisit and answer the questions in the "For your presentation" section on page 2 to prepare a presentation for your class. In this presentation, you'll include recommendations to reduce the electricity required for electronics and appliances in your school.

## HELPFUL INFORMATION

### WATTAGE

Wattage is a measurement of the amount of power used by an electrical device to function. For example, a 100-watt light bulb requires 100 watts of electricity to illuminate. You can typically find the wattage on the back or bottom of the appliance or electronic. Choose one appliance per room.

Here are some examples of electronics and appliances you could look for:

- Monitors
- Printers/copiers
- Televisions
- Projectors
- Microwaves
- Coffee makers

**Note: 1,000 W (watts) = 1 kW (kilowatt)**

### ENERGY STAR®

You may see a blue "ENERGY STAR" label on some electronics and appliances. ENERGY STAR is an internationally recognized program that labels the most energy-efficient products on the market. This label helps consumers shop for products that can help them save energy and money.



### PHANTOM POWER

Some electronics and small appliances use energy even when they go into standby mode. We call this phantom power. To reduce phantom power, certain electronics, like your gaming system at home, should be physically unplugged or plugged into a power strip. Power strips with timers or automatic shut-off are great to make the process easy, but you can also turn off the power strip yourself. Depending on the electronic device or appliance, this may make more sense to do at the end of the day rather than right after each use.



Here are a few examples of electronics and appliances that may use phantom power:

- Computers
- Gaming consoles
- Printers
- Kitchen appliances with built-in clocks or digital displays, like microwaves

## USING YOUR PORTABLE ELECTRICITY USAGE MONITOR

You'll use the provided portable electricity usage monitor from your kit to determine if some of the electronics and appliances in your chosen rooms are still using energy even when they're turned off or in sleep mode.

### SAFETY CHECK!

- Don't force the device plug you're testing in the electricity usage monitor. Some plugs won't fit properly.
- Don't use the electricity usage monitor near water.
- Don't plug in any electronic or appliance if its cord looks damaged.
- Don't plug in any electronic or appliance if it uses more than 1800 watts. Check the label!

## HOW TO USE A METER

(pictured to the right)

<b>Step 1</b>	Plug the meter into a wall outlet.
<b>Step 2</b>	Plug an electronic device or appliance directly into the meter.
<b>Step 3</b>	Push the "menu" button until you see "volt."
<b>Step 4</b>	Push the "up" button until you see "watt."



If the meter shows 0 watts, the device isn't pulling power. If it's giving you a reading even when the device is turned off or in sleep mode, the device is using phantom power.

## FOR YOUR PRESENTATION

After your review, use these questions to help summarize your data and prepare your presentation:

1. Were the appliances and electronics generally unplugged when not in use?
2. Are any of these appliances and electronics ENERGY STAR certified?
3. Were power strips being used? How are power strips useful for saving energy?
4. Were there any appliances plugged in that weren't being used?
5. Which electronics and appliances were using phantom power? Did this surprise you?
6. Did the wattage found on the labels of any of the electronics or appliances surprise you? Why or why not?
7. Based on the collected data, what specific changes could be made in your school to reduce the electricity required for electronics and appliances?

**SCHOOL ENERGY REVIEW**

# ELECTRONICS AND APPLIANCES

Room/area					
<b>Electronic device/ appliance of your choice</b>	Type:  On    Off  Unplugged: Yes    No  Wattage:	Type:  On    Off  Unplugged: Yes    No  Wattage:	Type:  On    Off  Unplugged: Yes    No  Wattage:	Type:  On    Off  Unplugged: Yes    No  Wattage:	Type:  On    Off  Unplugged: Yes    No  Wattage:
<b>Phantom power (use the electricity usage meter!)</b>	Type:  Sleep mode or Off  Wattage reading:	Type:  Sleep mode or Off  Wattage reading:	Type:  Sleep mode or Off  Wattage reading:	Type:  Sleep mode or Off  Wattage reading:	Type:  Sleep mode or Off  Wattage reading:
<b>Are power strips being used?</b>	Yes    No	Yes    No	Yes    No	Yes    No	Yes    No
<b>If not in use, are the power strips turned off?</b>	Yes    No	Yes    No	Yes    No	Yes    No	Yes    No
<b>Were the computers off?</b>	Yes    No Sleep mode N/A	Yes    No Sleep mode N/A	Yes    No Sleep mode N/A	Yes    No Sleep mode N/A	Yes    No Sleep mode N/A

**If you don't have enough room in your table, add additional notes and observations below!**

Date:	Team members:
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