Waste/Energy Reduction Challenge 6: Conduct an energy audit (2 Credits)

Reducing the cost and environmental impact of energy usage is essential in the quest for going green. Completing an energy audit allows students to monitor energy usage as well as provide specific avenues for energy reduction.

To perform an energy audit, students and teachers should take inventory of different rooms in the school building. Make sure to complete at least four unique room types. Some examples include a classroom, office space, gym, and cafeteria. We also encourage students to conduct interviews with those who use the rooms. The goal is to get a better idea of the energy needs of a space. There is an example chart below, along with other [resources](#) and [tips](#).

After taking inventory, students can evaluate the data and make reports consistent with their grade level. For example, younger students may only make observations and compare the energy efficiency of different rooms in the school building. Older students may try converting light/appliance usage to kilowatt-hours to get a more accurate idea of energy operation. It is ultimately up to the school to discern what is appropriate and feasible for their students.

To receive credit, submit a report that includes the energy audit data collected, a summary of the findings, and at least five recommendations for energy reduction at the school.

To complete this challenge while distance learning, students can perform similar audits in various rooms of their households. Two to three different types of rooms are acceptable. Some examples are a bedroom, bathroom and kitchen. To receive credit, while distance learning, submit a report that has a summary of student data as well as at least five recommendations for at-home energy reduction.

Energy Audit Sample Worksheet

Room Type: _____

Lights

Light Source Name (e.g., light 1, 2).	Light Source Type (e.g., lamp, overhead light).	Bulb Type.	Estimated Hours in Use.	Watts/Kilowatts per Bulb.

1. Do occupants turn the lights off when they leave the room?
2. Do occupants turn the lights on when there is sufficient natural daylight in the room?

Windows

Window Name (e.g., classroom 1, 2).	Window Type.	Blinds Open or Closed.	Window Open or Shut.

Sample Interview Questions:

1. Do occupants leave the window open when the air/heat is on?
2. Is this room hotter or colder than other rooms in the building?

Computers

Computer Name (eg., computer 1, 2).	Type of Monitor (CRT or LCDs).	Power Saving Settings in Use?	Screen Saver in Use?	Estimated Hours in Use.

Sample Interview Questions:

1. Do occupants turn the monitors off when they leave the room?
2. Do occupants turn off monitors when they are not in use?

Appliances (e.g., printers, A/C, projector, coffee machine)

Type of Appliance.	Turned On or Off?	Plugged In or Out?	Estimated Hours in Use.	Estimated Watt/Kilowatts.

Sample Interview Questions:

1. Do/can occupants turn off appliances when not in use?
2. Do/can occupants unplug appliances when not in use?

This worksheet has been modified using information from powersaveschools.org