



Lighting and Lights Out School Energy Audit

Lighting uses more electricity than anything else in your school. Using inefficient lights (lights that use a lot of electricity), or having more lights turned on than are needed, wastes electricity.

This audit has two parts, examining whether the lighting in your school is efficient and, examining whether lights are turned out when not needed.

Part one: Efficient lighting

1. Ask the caretaker to help you remove the cover from some of the lights in the school. He/she will be able to help you identify the different kinds of lighting.

Location	Room Lighting			Task Lighting
e.g. Mrs Jones' classroom, office, junior hallway	Not Efficient (NE): T-12 - tube is 1 1/2 " diameter 40 Watts per tube (including ballast)	Efficient (E): T-8 1" diameter or T-5 - 5/8" diameter 30 Watts per tube (including ballast)	Very Efficient (VE): T-8' or T-5 with reflectors (shiny metal behind lighting) 30 Watts per tube (including ballast)	NE: Incandescent or Halogen E: Compact Fluorescent Light (CFL) VE: Light Emitting Diode (LED)

2. Does your school use photocell controls for outside security lights? These lights turn on automatically when darkness falls, and turn off automatically when it gets light out.

3. Does your school use occupancy sensors to turn lights on only when someone is in a room? List areas where occupancy sensors are used.



Part two: Lights are turned out when not needed

Lights that are on when not needed waste electricity. Audit rooms in your school to find out when lights are on or off. With this information you can decide whether students and staff need to be reminded to turn out unneeded lighting.

1. Use this chart or create your own to represent the rooms and lights in your school.

Location	Time of Day (record # of switches on /total # of switches)					
	Before class	During am class	recess	lunch	During pm class	After school
e.g. Room 12	0/4	4/4	3/4	3/4	4/4	0/4
Totals: # or %						

2. Is natural lighting (from windows and skylights) used to reduce the number of electrical lights used? List areas where natural lighting is or could be used.

3. Is task lighting (e.g. desk lamps) used to reduce the number of larger overhead lights used? List areas where task lighting is used instead of overhead lighting. Does task lighting use energy efficient lamps? (CFL's or LED's)

4. To calculate savings from upgrading to more efficient lighting or from turning off lights, use the following formulas:

Energy = Power x Time
 Power = number of lights x Wattage of lights
 Time = hours/day x days/school year

Determine the change in Power by subtracting the power consumption of the old and new lights. Determine the change in Time by subtracting the time lights used to be on from how long the lights could (or should) be on.