

School Light Survey

DO YOU LIKE TO COLLECT INFORMATION?

When energy company sales people first meet with a new customer, one of the first things they do is collect information about how that customer is using energy now. This information helps them figure out how to help the customer conserve energy better or use it more efficiently. Getting accurate and complete information is important!

Schools are big energy customers and are interested in saving as much energy as they can.

Conduct a survey of lights at your school. You can divide into teams to survey different areas.

Count the bulbs:

In the classrooms

Count the number of light bulbs (not just fixtures) in the classrooms, and multiply by the wattage. Multiply that figure by the number of hours each day the room is used.

$$(\text{Bulbs} \times \text{Wattage}) \times \text{Hours} = \text{Classroom Energy}$$

In the halls

Count the number of bulbs in the halls, multiply by the wattage, and then by the number of hours a day they are used. Some may be on 24 hours a day to keep the halls safe.

$$(\text{Bulbs} \times \text{Wattage}) \times \text{Hours} = \text{Hallway Energy}$$

In other areas

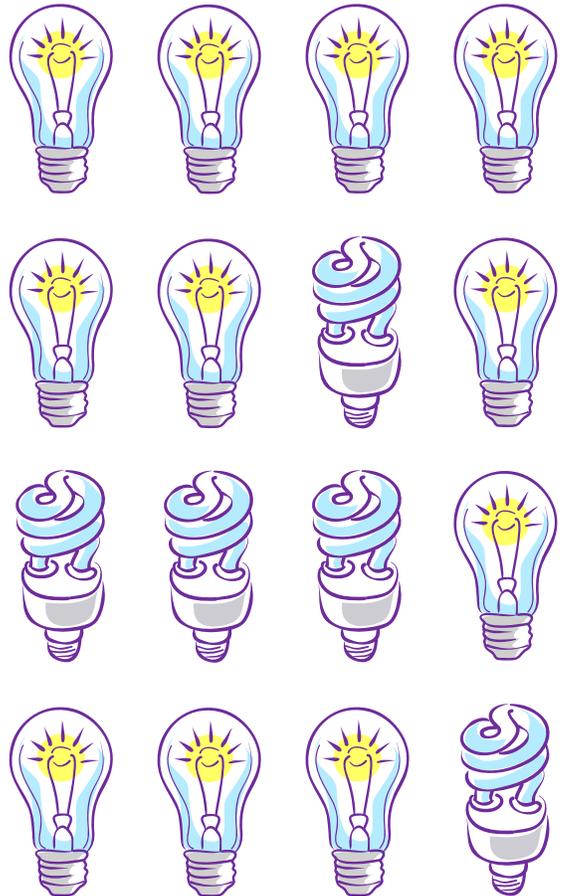
Count the number of bulbs in other areas – gym, cafeteria, office, etc. – and again multiply by wattage and by how many hours the lights are on each day.

$$(\text{Bulbs} \times \text{Wattage}) \times \text{Hours} = \text{Other Energy}$$

Add it all up

Add it all up to see approximately how much electricity is used for lighting at school each day. Are any lights left on when they don't need to be on?

$$\text{Classroom} + \text{Hallway} + \text{Other} = \text{Total Energy}$$



BONUS ACTIVITY

Find out how much the school pays your energy company per watt of electricity, then calculate the approximate cost of school lighting each day.

Ask your building engineer to talk to your class about what the school has done to save money and energy on lighting.

Note: This project is based on an activity that appears in the Conservation section of Energy Classroom.