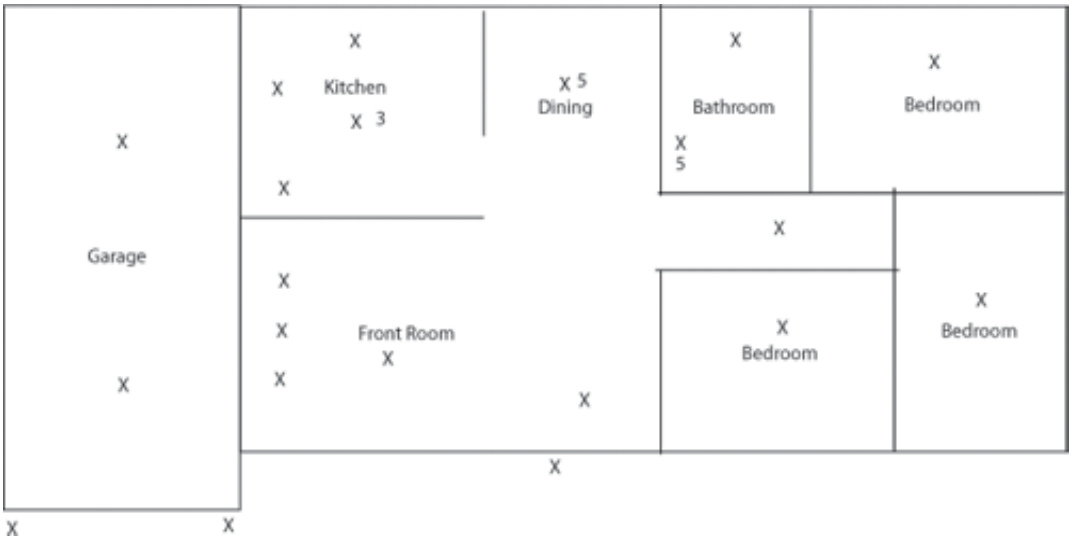
Understanding Power Measurements

1. Have students draw out a floor plan of their home.
2. Have them mark every light bulb in their home on their floor plan.



3. Assuming all light bulbs are 60 watt light bulbs, have the students calculate how many watts in takes to light their houses. (31 bulbs x 60 watts = 1860 watts)
4. Compare students' answers.
5. Convert watts to kilowatts: $\frac{1860 \text{ watts}}{1000 \text{ watts}} = 1.86$ kilowatts
   Kilowatts is a measurement of power used or generated.
6. Reinforce that power and energy are not the same! Energy has a time factor. So if the students have every light bulb in their homes turned on for one hour, they will be using 1.86 kilowatt hours.
7. Think of Watts as the speed you're running (Power) and Watt-hours as how far you've actually ran (Energy). A kilowatt-hour is the amount of energy equivalent to a power of 1 kilowatt running for 1 hour. If you leave a 60 Watt light bulb on for 1 hour, you've used up 60 watt-hours.