Cost Analysis

Complete the following table to determine the cost/energy savings of switching to more efficient light bulbs:

Light Bulb	Power (W)	Time Used in 1 Year (s)	Energy Used in 1 Year (J) $E = P \times \Delta t$	Energy Used in 1 Year (kWh)	Cost of Energy ($/kWh)	Yearly Energy Cost per Bulb	Light Bulbs in Your Residence (approx.)	Total Yearly Cost for Your Residence
Standard Incandescent								
GE energy smart CFL								
GE energy smart LED								

Standard vs. LED Comparison

Standard Light Bulb:

1) Research the cost of a standard incandescent 60W light bulb:

2) A standard incandescent 60W bulb lasts from approximately 1 year. How much will you have to spend buying these bulbs for 23 years?

3) Add in the cost of the energy for keeping these lightbulbs on for 23 years (you have the cost for one year above). How much will you pay in total to keep your lights on for 23 years?

LED Light Bulb:

1) Research the cost of a standard 13W LED light bulb:

2) An LED bulb lasts for approximately 23 years. How much will you have to spend buying these bulbs for 23 years?

3) Add in the cost of the energy for keeping these lightbulbs on for 23 years (you have the cost for one year above). How much will you pay in total to keep your lights on for 23 years?

Cost Savings?

1) Compare your answers for the cost of using each type of light bulb, for 23 years in your home. Do you end up paying more or less for the LED bulbs? By how much? How much do you save per year?

2) Write a short paragraph explaining whether you think it is worth replacing the bulbs in your home, with energy efficient LED bulbs. Why might some families be reluctant to replace all of their light bulbs with LED bulbs.