

## Student Sample 4

Plan your investigation: Do the different seasons affect the amount of electricity used each month?

Our prediction: We believe that the month of December (winter) bill will be higher than the other seasons. (Spring Summer, Fall)

Data we need: Ms. Watts, Addison Fox, and JSMS electricity bills for months, December, September, April, and July.

513 dec

504 july

492 september

429 april

So in the winter, people tend to spend more electricity, probably because they are paying for heat, which means that heat costs more than AC's. Paying for air conditioning is still expensive but not as expensive as heat. In september it starts to get colder so some people may want some heat. In april it starts to get warmer so there is no need to need AC, and you wouldn't be heating.

Ms. Watts used the most amount of energy in the winter (1,345 kWh). This is probably because of heating and lights. However, summer was a close second with 1,327. This is probably because she used air conditioning for a lot of the summer. We also noticed that she did not use as much energy, about 100 to 200 kWh less, in the fall and spring. This means that the Watts family probably didn't need much heat or air conditioning in either of these seasons.

Addison Fox also used the most energy in the winter, as apposed to any other season (1,890 kWh). This is probably because he had to use heating and turn on the lights earlier in the day because it becomes darker faster during the winter. There is also Christmas. He could have had a bunch of decorations and lights on and around the house. We were surprised that more energy wasn't used during the summer (1,550 kWh). This might mean that they weren't home a lot or they did not really use air conditioning or fans. The season that used the second most energy was the fall (1,880 kWh). That's probably because they had to turn the heating on earlier in the year, because this past fall was pretty cold.

The JSMS CMP bill wasn't really useful because the school isn't in use nearly as much in the summer as it is in the winter.

We have figured out that most people use more kWh in the winter because of heat to keep their house warm. We figured that they would use a lot more in the summer than Addison Fox did because of the air condition and fans he would use.