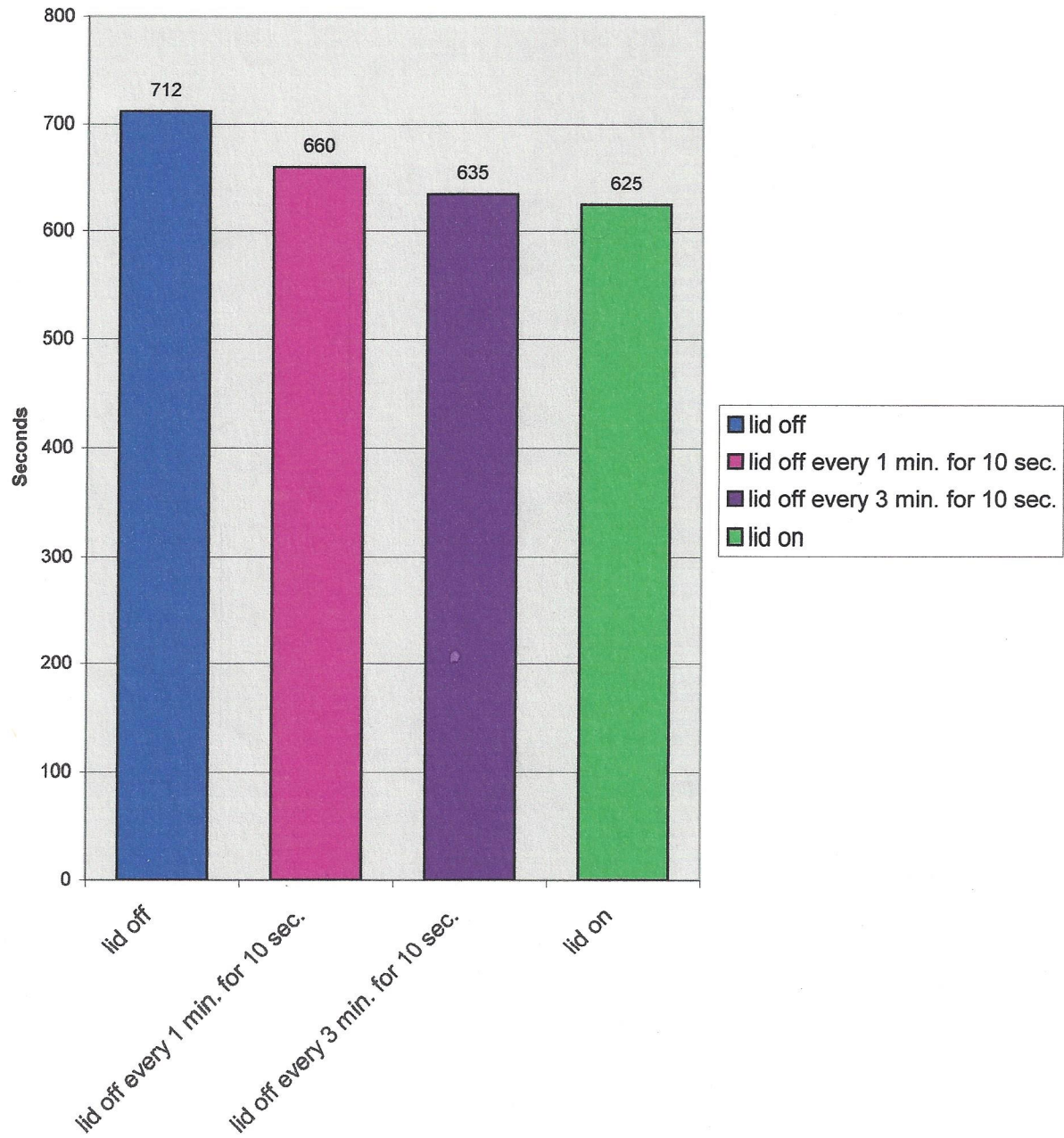
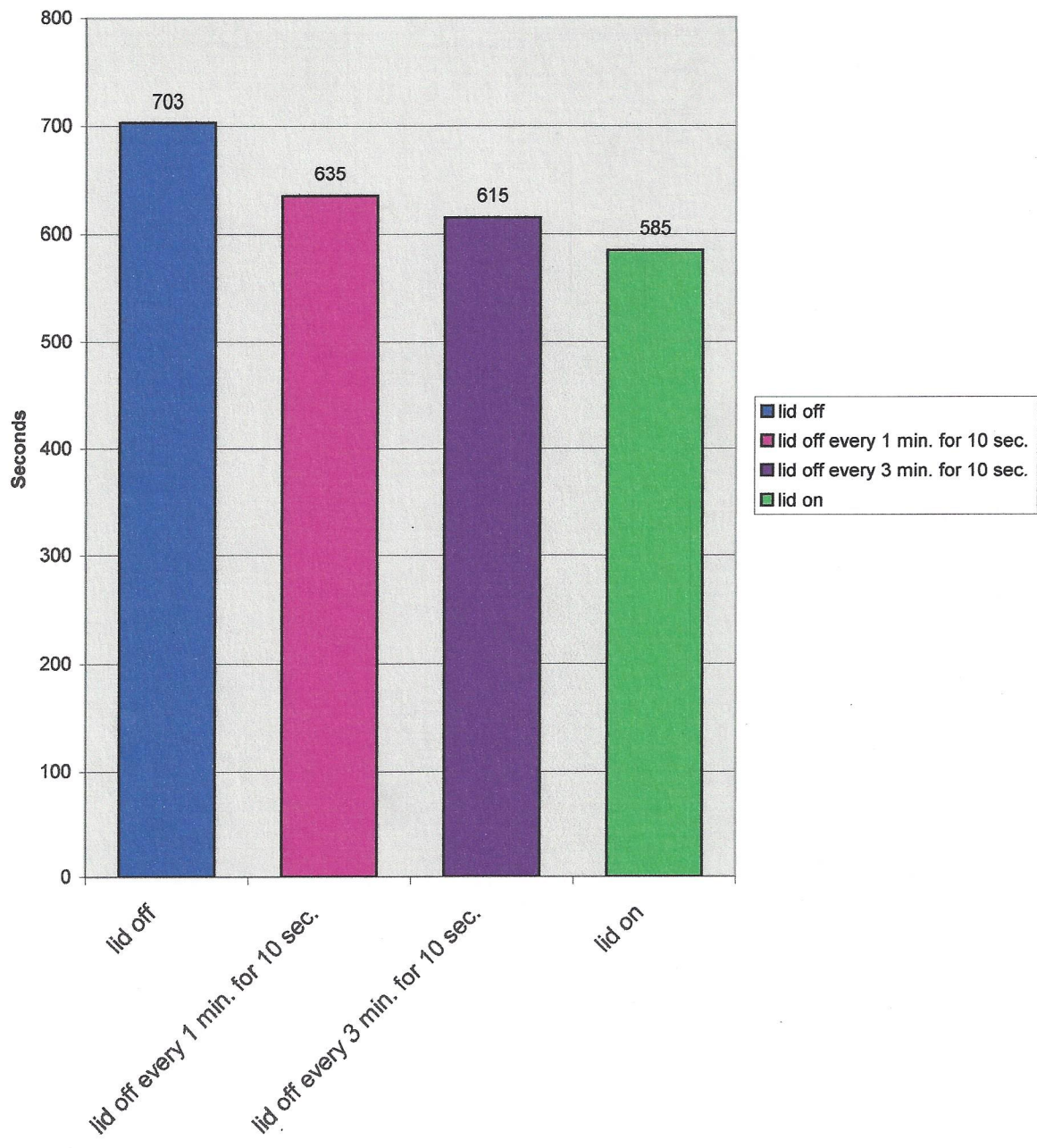


Analysis and Conclusions

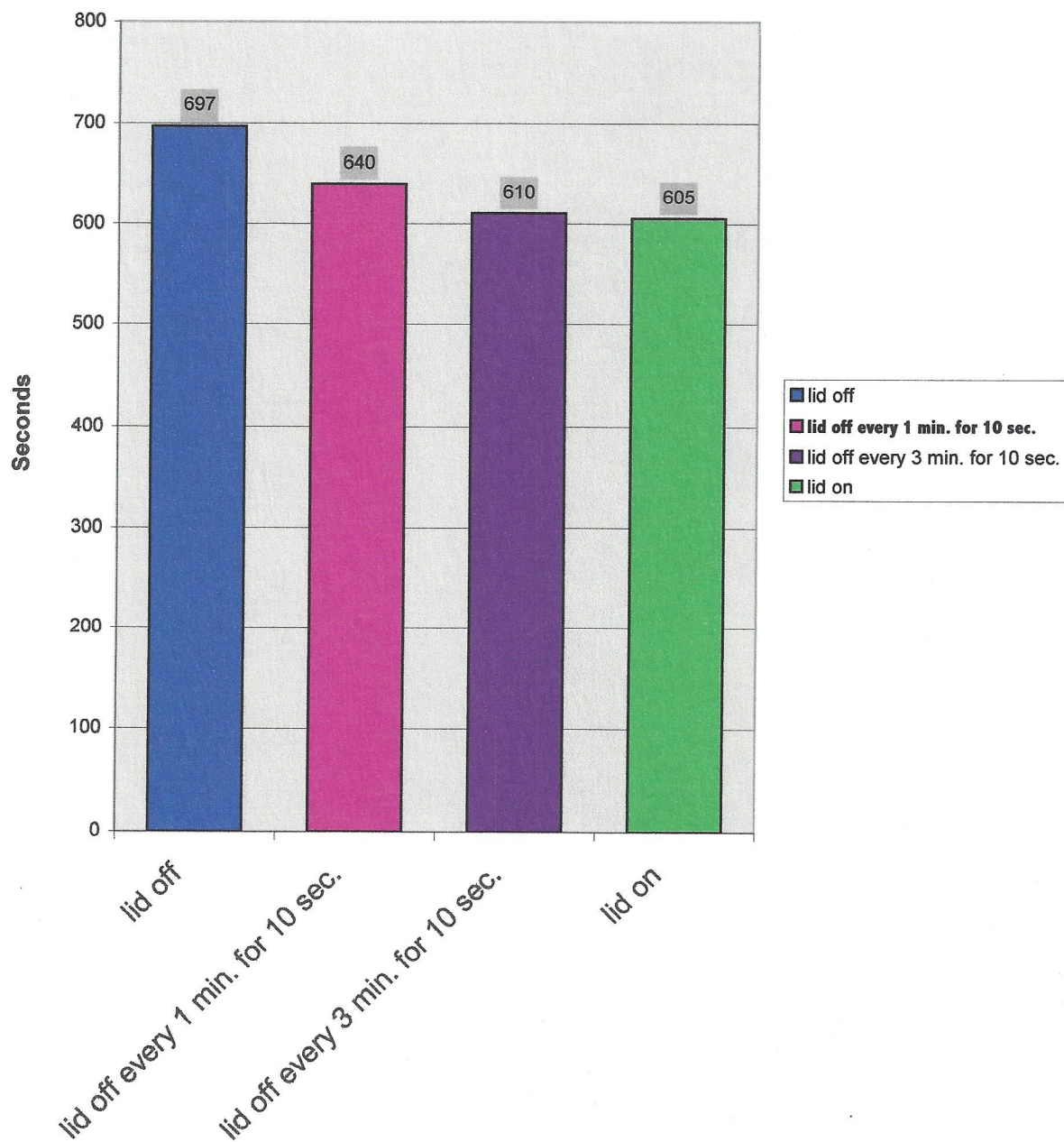
Trial 1



Trial 2



Trial 3



Conclusion

My hypothesis was correct. Water boiled faster when the lid was on the pot, than when the lid was off the pot. The more often the lid was off of the pot, the longer the water took to boil. For example, in Trial 1, when I took the lid off of the pot every 3 minutes, the water took 635 seconds to boil. When I took the lid off of the pot every 1 minute (more often), the water took 660 seconds to boil.

The biggest difference in the amount of time for the water to boil was between having the lid off for the whole time and taking the lid off every 1 minute. In Trial 1, the difference in time was 52 seconds; in Trial 2, the difference was 68 seconds; and in Trial 3 the difference was 57 seconds. This big difference may be because I went from no lid to having the lid on the pot most of the time (50/60 seconds).

The smallest difference in the amount of time for the water to boil (in Trials 1 and 3) was between having the lid on the pot for the whole time and taking the lid off every 3 minutes. In Trial 1, the difference in time was 10 seconds; and in Trial 3 the difference was 5 seconds. (a difference in 30 seconds in Trial 2) This small difference may be because when I took the lid off of the pot every 3 minutes, it was only off of the pot for a total of 30 seconds. This amount is not much different than having the lid on the pot the whole time.

It is helpful that I learned about how long water takes to boil with the pot lid on and off because the next time I make macaroni and cheese I will know to keep the lid on the pot of water until it boils. This way, I will get to eat faster and I won't get yelled at by my parents! It is also helpful to know the results of this experiment, because I know it uses less energy to boil water with the lid on the pot.

Ideas for Future Study

It would be fun to find out how long water takes to boil at different room temperatures or at different water temperatures. It would also be fun to find out if different amounts of water take different amounts of time to boil.