

Ryan Tustin
Junior Division Environmental Sciences
Waste Not! Watt Not!

The purpose of this investigation was to discover how much electricity is wasted when different appliances are left plugged in. I hypothesized that if the size of appliance increases then the amount of standby current that is drawn when it is turned off will increase. Therefore, it will make sense to unplug the larger appliances. I observed that when different appliances are left plugged in, the appliances stay warm which means they waste electricity. The experiment consisted of choosing an appliance, and then using the test box to measure the voltage and the amperage drawn by the appliance when shut down. I repeated this on several different appliances for an accurate conclusion. The data collected supported the original hypothesis because the standby power was higher in the bigger sizes of televisions; however, one brand of the big TVs used minimal power. The average power used by the big TVs being 6.24 watts and for the small TVs being 3.20 watts. I found out that leaving computers plugged in drew more power than any of the other types of appliances. Of the different household appliances, the DVD players used the least amount of power, from 0.9 to 2.7 watts. The popular game systems were in the middle of power usage. These findings show that people should unplug appliances before leaving the house for an extended period or buy power strips that can be turned off. Also manufacturers should create appliances that have true on/off switches and so would not waste energy.