



# HOME ENERGY USE WORKSHEET

Carl Pedersen, NDSU Energy Educator  
North Dakota State University

A rough estimate of the cost to use an appliance can be determined by using the wattage the appliance needs, the cost of electricity and the amount of time an appliance is used.

The worksheet walks the students through these calculations. By filling in the worksheet starting on the left hand column and working to the right, the yearly cost for an appliance can be determined.

## Procedure

1. The first step is to enter the watts used by the appliance in column A. An appliance's watt rating generally is stamped on the bottom or back or on a label. For fixed voltage appliances that do not have a watt rating, watts (W) can be determined by multiplying current (A or amps) x voltage (V). ( $W = A \times V$ )

Power Max	240W
Frequency Range	50-60 Hz
AC Voltage	120V
Current Max	2A

2. A Kill-A-watt™ home electricity monitor can also be used to determine energy use by appliances.
3. Enter the number of appliances in column B. For example, if you have 10 75-watt light bulbs, you would enter 75 in column A and 10 in column B.
4. Enter the number of hours the appliance is in use during the day in column C.
5. The information for column D is determined by multiplying  $A \times B \times C$ . This gives you watt-hours per day.
6. Electricity is sold by kilowatt-hours, so a conversion from watt-hours to kilowatt-hours (kWh) is done in column E.
7. To determine the daily cost of an appliance, multiply the daily energy use by the cost for each kWh. An average cost of 10 cents per kWh is used as an example, but if you know the rate in your area, that number can be used in column F.
8. Then to determine the cost per year, multiply the daily cost (F) by 365 and enter that information in column G.

