# Measuring electricity use

## **Power Smart** for Schools

Name: _____ Date: _____

In the chart below, write definitions for the five terms. Include the formula you would use to calculate it, if there is one.

| Term | Definition | Formula |
|---|---|---|
| **Energy** | | |
| **Watt** | | |
| **Power** | | |
| **Kilowatt** | | |
| **Kilowatt hour** | | |

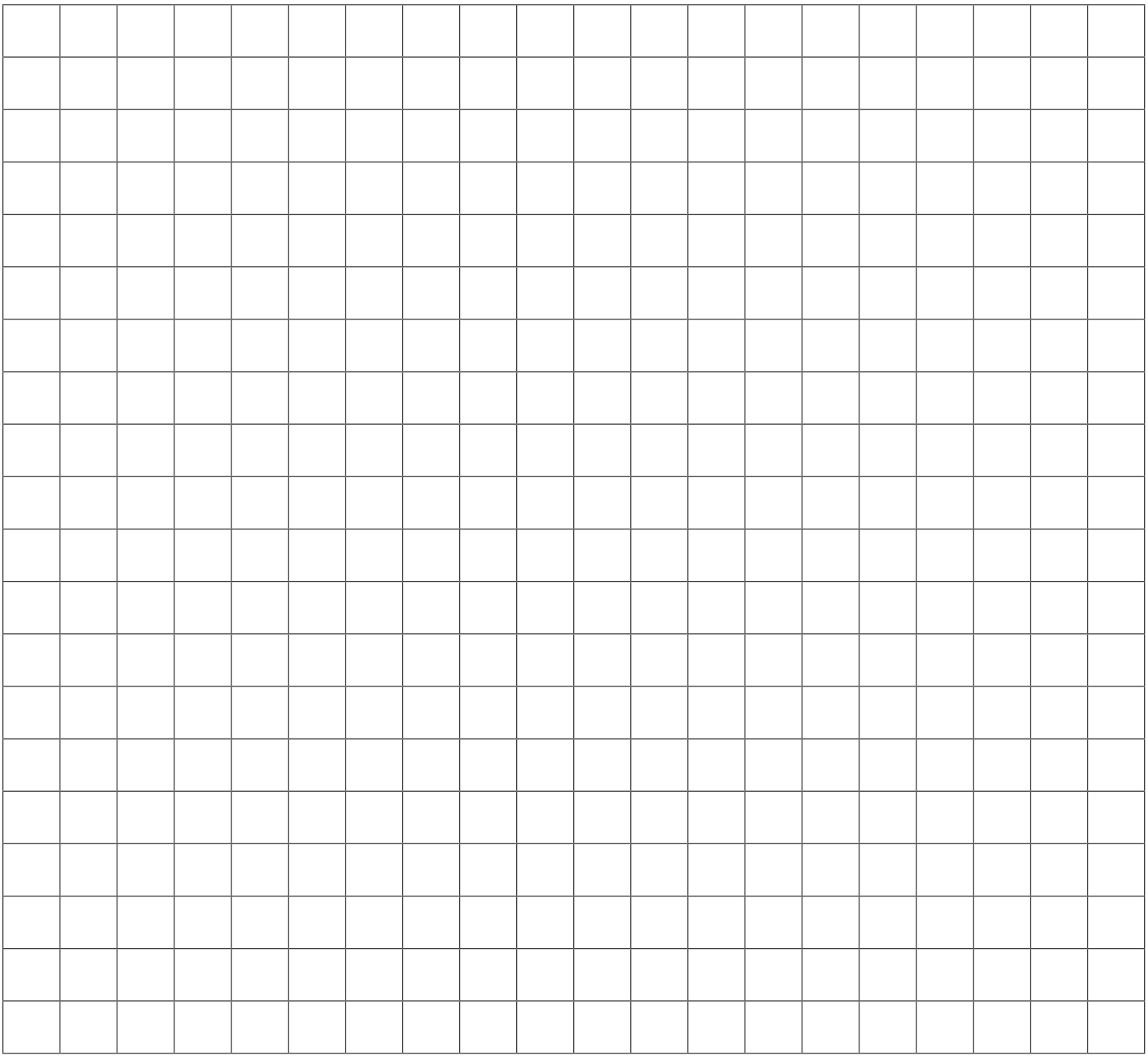
Listed below are some typical household appliances and objects. Calculate the energy used and the cost to run each over the course of a year. Calculate the annual cost using the rate of $0.0829/kWh.

- Annual energy usage (kWh) = Watts x hours per day x 365 (days/year) / 1,000
- Annual cost = Annual consumption x rate

| Appliance or object | Power (watts) | Average use (hours per day) | Annual energy usage (kWh) | Annual cost ($ per year) |
|---|---|---|---|---|
| **Vacuum cleaner** | 1,100 | 0.1 | | |
| **Hair dryer** | 1,200 | 0.25 | | |
| **Computer** | 120 | 4.0 | | |
| **Microwave** | 900 | 1.0 | | |
| **Clothes dryer** | 4,000 | 2.0 | | |
| **Incandescent light bulb** | 60 | 3.0 | | |
| **Compact fluorescent light bulb** | 14 | 3.0 | | |
| **LED light bulb** | 8 | 3.0 | | |
| **Flat-screen TV** | 200 | 5.0 | | |

# Cost comparison of appliances and objects

Create a bar graph with the appliances and objects along the horizontal axis, and the cost per year along the vertical axis.





BC Hydro
Power smart