



**ACTIVITY**

**What's a Watt?**

The electricity we use in our homes and schools is measured in units called watts. Because power plants generate so much electricity, the electricity they make is measured in much larger units called megawatts. What's a megawatt? It's one million watts. What's a watt? Well, that's a little more difficult to explain.



To understand watts you must first understand amps and volts. Amps are a measure of the amount of electricity used. Volts measure the pressure, or force, of electricity. The amps multiplied by the volts gives you the watts, a measure of the work that electricity does per second.

Use the formula  $\text{amps} \times \text{volts} = \text{watts}$  to figure out how many watts these typical appliances use. (Most homes are served by 120-volt electricity, so we will use that as the value for volts in our equation.)

| Appliance          | Amps | x | Volts = | Watts |
|--------------------|------|---|---------|-------|
| Hair dryer on high | 12   | x | 120 =   | _____ |
| Space heater       | 10   | x | 120 =   | _____ |
| Vacuum cleaner     | 8    | x | 120 =   | _____ |
| Ceiling lamp       | 1    | x | 120 =   | _____ |
| Phone charger      | .05  | x | 120 =   | _____ |

It may help you understand watts to think of electricity like water flowing through a hose. The amount of water that can fit through the hose depends on the diameter of the hose (amps). The force of the water depends on how far open the faucet is (volts). The work that can be done (watts) depends on both the amount and the pressure of the water ( $\text{amps} \times \text{volts} = \text{watts}$ ).

