Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lesson 9: Measuring Electrical Energy**

p. 252-255

**Electrical energy use is measured in two main ways**:

 **Electrical Power:**

* The \_\_\_\_\_\_\_\_\_ at which electrical energy is used by a \_\_\_\_\_\_\_\_\_
* Measured in \_\_\_\_\_\_\_\_\_\_ (\_\_\_) or \_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_)
* 1 kW = \_\_\_\_\_\_\_\_\_\_\_ W
* Appliances are given \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_

E.g. an appliance with a power rating of 100 W will consume energy \_\_\_\_\_\_ times faster than an appliance with a 1 kW rating

 **Kilowatt-Hours:**

* The electrical energy used by an appliance over \_\_\_\_\_\_\_\_\_
* Measured in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_) which combines units of \_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_
* E.g. if you use an appliance rated 1000 W for one hour, you will have used \_\_\_\_\_\_\_\_\_\_ of electrical energy

**Reducing your energy usage:**

 **Smart Meters:**

* Track your energy usage through the day
* Information sent to \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_

**EnerGuide and ENERGY STAR**

* The \_\_\_\_\_\_\_\_\_\_\_\_ of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ requires new

appliances be labelled to show how much energy they use

 in a typical \_\_\_\_\_\_\_\_\_\_\_\_

 **Phantom Loads:**

* The electrical energy a device uses when it is turned off
* Many electrical devices go into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mode rather than switching off
* Phantom loads account for about \_\_\_\_\_\_\_\_\_\_\_\_\_\_ of electrical energy use each year in the average home
* Examples of devices that have phantom loads: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_