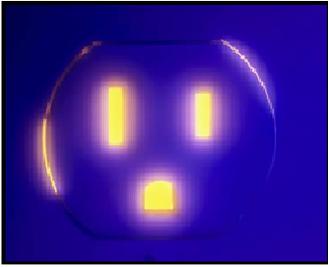


ENERGY “VAMPIRES”



Lights aren't the only devices that use electricity. Take a look around the classroom. In addition to classroom lights, what else is using electricity? Are there any computers, projectors or DVD/VCR players? Appliances suck up energy even when they are not being used – which is why they are sometimes referred to as “energy vampires.” Vampires include devices with digital clocks (like DVD players) or internal remote control sensors (like some televisions), which draw energy just from being plugged in. Reducing vampire loads is as easy as plugging the appliance into a power strip and then turning off the power strip when not in use. Because computers and other electronics are usually put to

good use during school sessions, vampires focus only on what happens to electronic equipment *after* school hours to see how much energy is being wasted. In a house, vampire or “phantom” loads can account for up to 20% of the energy use of a house.



COMMON OPERATING MODES FOR ELECTRIC DEVICES

MODE	
“Active”	Device is on and serving its primary function. (Example: a DVD player playing a movie, or a computer running a program.)
“Sleep/Standby”	Device is in low-power mode. (Example: DVD player is on but not playing a disc; computer is on but in power-save/sleep mode.)
“Off”	Device is turned off but still plugged in and ready for action. (Example: DVD player is turned off but could be activated by remote. Digital displays will be visible.)
“Power strip/ Unplugged”	Device is plugged into a power strip, which is turned off at the end of the day. Or - the electronic device is unplugged. (Example: DVD player is receiving NO power. Digital display is NOT on and cannot be activated by remote.)

During the school day, energy “vampires” and other appliances transform into useful tools to help students learn. Nonetheless, you want to know how much energy they consume during non-active use. In conducting your audit, look for the wattage of each classroom appliance and estimate how many hours each day the device is on. If the wattage is not listed on the appliance, you can still estimate it by finding the current draw (in amperes) and multiplying that by the voltage used by the appliance. Most appliances in the United States use 120 volts. The amperes might be stamped on the appliance in place of the wattage. You can also use a kill-a-watt device that you plug the appliance into. Take a reading while the device is running: this is the actual amount of current being used at that instant.

Refer back to the “Electric Nameplates Investigation” Exercise from Need’s Learning and Conserving Student Guide to refresh your memory on reading an electric nameplate on an appliance.



