

Energy Diet Challenge # 1

Phantom Power in Your Home

This activity involves doing some research, some group work and some independent work. There are several steps involved - please read each one carefully.

What is power or energy?

Energy is what is needed to do work. It can be found in many forms and can be transferred from one form to another.

What does consumption mean?

Consumption means to use something up or how much you use it. To consume energy means to use it.

What is meant by 'phantom energy'?

Phantom power, also called standby power, refers to the energy that's wasted around your home when devices are plugged in and using power, but you're not actively using them.

Step 1: Brainstorm a list of items in your home that use energy. Put them in the table below. You can expand the table if you need to by adding rows or columns.

| | | | |
|---------------------------------|----------------------------|-----------------------------------|---------------|
| Water Heater | Lights | Playstation 4 105.1 kWhYear | Lamps |
| Televisions 17.5 kWh/year | Refrigerator | Kettle | Toaster |
| Charger | Dishwasher | Landline Phone 4.4 kWh/year | Thermostat |
| Washer and dryer | Microwave | Printer 17.5 kWh/year | Google Home |
| Electric oven | Computers 17.5 kWh/year | Air Conditioning | Rice Cooker |
| Cable Box 40 kWh/year | Fans | Hairdryer | Garage Opener |
| Griller | Waffle Maker | Iron | |
| Deep Fryer | Hair-Curler | Vacuum | |

GRAND TOTAL OF YEARLY PHANTOM POWER USAGE:

$105.1 + 40 + 17.5 + 17.5 + +17.5 + 4.4 = 202 \text{ kWh/year!}$

Step 2: Now **list them below** in order of the amount of energy you think they use going from highest to lowest:

The items that use heat or cooling use the most energy including Refrigerators, Microwaves, Hair Curler, Iron, etc.

In your list, **highlight** the devices that use standby power.

Step 3: Draw a blank **map** of your home. Be sure to include each room.

Step 4: Walk around each room and record each time you find something that is using phantom power. Identify what it is and either place it on your map or on a list associated with your map (if there's too many, you can use a legend).

Colour code the rooms in your home according to the ones that use the most phantom power.

Step 5: Find out **how much power is** actually being used by these devices. You can put the amount of wattage used next to the items in your list above. You will need to do some research here.

Step 6: Calculate the amount of phantom power used by your household per year.

Concluding Question: What are **3 ways that you can reduce** the amount of phantom power used in your household?

- I can unplug charged devices such as phones
- Before buying any electronic products, I can make sure there is an Energy Star Label
- Use a power bar when plugging in devices