

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 makes change happen and can be transferred from one object to another. Power is the rate at which energy is transferred. It is not energy but is often confused with energy.

What does consumption mean?

Consumption: the using up of a resource.

What is meant by 'phantom energy'?

Phantom energy is when something is plugged in/on and not being used.

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.

TV	Fans	Toaster	Xbox
Water Heater	Oven	Panini Press	Printer
Lights	Stove	Freezer	Amazon Alexa
Fridge	Wifi Router	Vacuum	Smart Diffuser
Dishwasher	Microwave	Blow Dryer	Water Cooler
Washing Machine	Desktop Computer	Hair Straightener	Computer Monitors
Clothes Dryer	Lamps	Hair Curler	Landline
Chargers	Led Lights	PS4	Toaster Oven

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

(based on what I have most of as well)

Lightbulbs

TV

LED light strips

iPhone Chargers

Desktop Computer

Printer

WiFi Router

Dish Washer

Fridge

Washing Machine

Dryer

Stove

Oven

Microwave

Water Cooler

Toaster Oven

Xbox

PS4

PS2

Coffee Machine

Chromebook Chargers

Lamps

Macbook Chargers

Smart Diffuser

Fan

Fairy Lights

Computer Monitors

Computer Charger

Panini Press

Amazon Alexa

Smart Watch Chargers

Landline

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.

254 kwh/year (that is what the website said)

Step 6: Calculate the amount of phantom power used by your household in an hour/a week/a month.

(based on the website kwh/year)

Month - about 21 kwh

Week - about 5 kwh

Hour - about 0.03 kwh

(I am not sure if I did the last two parts right because the website confused me a bit)

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

A way that you can reduce phantom power in your household is by unplugging things instead of leaving them plugged in and not being used. Another way that you can reduce the amount of phontome energy in your home is by turning off anything unnecessary. You can also turn off lights that are not in the room you are sitting in.