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, or power, is the strength that you need to use to complete an activity or task. The harder the task, the more energy you'll need to use.

What does consumption mean?

Consumption means using, or in some cases eating, something. For example, you could say that you 'consume an apple,' or that you 'consume energy.' The first example means that you eat the apple, the second one means that you use energy.

What is meant by 'phantom energy'?

Phantom power is the use of electricity/power even when the item is turned off but plugged in.

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.

Chromebook chargers (2)	Heating	Sewing machine	Toy Helicopter charger
Computer chargers (about 4)	Oven charger	Cake Mixer	Deep Fryer
Monitor chargers (4)	Mini oven charger	BIG cooler	Rice cookers (2)
TV charger	Digital clock charger (2)	Furnace	Kettle
Speaker charger (5)	Tablet chargers (2)	Washing machine	Homephone charger (3)
Phone charger (2)	Toaster	Drying machine	Alarm/Security system charger
Fridge	Griller-like device	AC	Inflatable Bed charger
Microwave charger	Hair dryer	Hair Straightener	Electric reclining Sofa charger (2)
Fan charger (2)	Elliptical charger	Keyboard (instrument)	Dishwasher
Lights (about 33)	Blender	Hand Blender	Router
Shredder	Printer	Christmas lights (3)	Inflatable Christmas Polar bear
Wifi Extender	Electric Griddle		

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

- Heater
- AC
- Alarm/Security system charger
- Fridge
- BIG cooler
- Furnace
- Oven Charger
- Micowave Charger
- Mini Oven charger
- Dishwasher
- Drying machine
- Washing Machine
- Fan Charger
- TV charger
- Speaker Charger
- Computer Charger (per 1 = 8.8 yearly ; total -> 3 computer/chromebooks = 26.4)
- Chromebook Charger (included in 'Computer Charger')
- Monitor Charger (per 1(including computer) = 21.9)
- Digital clock charger
- Tablet Charger
- Phone charger
- Homephone charger
- Router
- Wifi extender
- Toaster
- Deep fryer
- Rice cooker
- Electric Griddle
- Griller-like device
- Hair Straightener
- Hair Dryer
- Kettle
- Electric Reclining sofa charger
- Elliptical charger
- Lights
- Sewing machine
- Inflatable bed charger
- Cake mixer
- Blender
- Hand blender
- Printer
- Shredder
- Inflatable Christmas Polar Bear
- Toy helicopter charger
- Christmas lights
- Keyboard (instrument)

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 i**s 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 in a year.

(48.3 watts.)

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

1. We could turn off and unplug the computer's when they're not in use.
2. We could unplug the computer's when they're fully charged.
3. After they're fully charged and unplugged, we could leave them unplugged until the battery's low and needs to be recharged.