



Vampire Power - Open

Introduction:

You probably know that electrical energy is required to operate an electrical appliance when you are using it. But is electrical energy still consumed even when you are not using it?

Consider the following scenarios:

- Families that are away for a holiday for a few months, not using their household appliances for that time.
- People not using their devices in the office or at work overnight .
- Leaving your mobile, iPad, or laptop charging throughout the night.

You might think that the electricity meter doesn't record any power usage during these times. However, in many cases the meter will still register some value. But how? Is somebody stealing your electricity?

Let's investigate!

You will be given a power meter that measures the energy of appliances that are plugged into it.



Aim: Write down an aim, this can include a question, hypothesis, or prediction.

Plan

Plan your investigation.

- Consider the variables. What data will you collect? Will you conduct a fair test?
- Think about table rows, columns, and headings.
- Consider how you will analyse the data. Will you draw graphs? Will you find patterns? Will you compare and contrast?

Conduct

Carry out the investigation.

- Record the data and notes on techniques used.
- What did you modify from your plan?

Analysis

Now analyse your data.

Discussion

Communicate your findings and discuss science behind it.

- What did you find agreeing with the science you know?
- What new different things did you learn?
- What did you find surprising?
- How would you improve your investigation?
- What else could you investigate?

Conclusion

Conclude your experiment. E.g. check if you got the answers for your questions or whether your hypothesis was correct.

Image Credit

[1]Jiro Bevis: <http://www.bloomberg.com/news/articles/2012-03-08/smart-meters-help-brazil-zap-electricity-theft>

