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GobarTimes

Green Schools Network

ACTIVITY SHEET

Why talk about Electricity?



Great Music, Interesting movies, cool drinks, warm water in winters – all make our lives comfortable. But only as long as we have electricity to run our stereo, television, refrigerator or geyser. If not ! then comes the sinking feeling of having to live without electricity.

Usage of electricity is environmentally sensible as there is virtually no harmful byproduct. But there isn't enough for everyone. Many have to go without it. The capital city of Delhi faces a power shortage of 400-600 MW every day.

How is the electricity, we receive, generated? – is it coal, gas or hydel? How does it get distributed? Can we do something about power shortage? Lets explore...

Name

Class Date

ACTIVITY 1: Let us try and find out the control room or source of electricity for your house.. Ask your parents or seek help from someone senior around to locate the electricity meter of the house. The meter which tells you how much electricity have you consumed in a particular period. Be careful. Look at the electric meter carefully. How does it look. Draw here

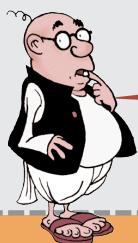
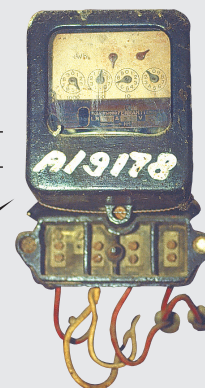


Is it a one with digital readings or do the readings change as a mechanical rim moves in the meter?

Find out which company has manufactured it?

Did you hear about the recent citizen protests about faulty meters (in Delhi). Find out what happened? What are faulty meters? How does the electricity provider ensure that the meters are not tampered?

DOES YOUR ELECTRICITY METER LOOK LIKE THIS



*Hi!
I am Pandit Gobar Ganesh.
You will find me in Gobar Times—a magazine that tells you how your everyday life is linked to the world around you. Hooked, huh? If you want to know more about me and GobarTimes visit us at www.gobartimes.org*

GT-GSP Privilege offer

The members of GT-GSP Network can now get 3 extra copies of Gobar Times with Down to Earth, for distribution and use in eco-club activities. All you have to do is mail this advertisement along with the Down to Earth subscription note.

GOBAR GYAN: Did you know that till about 40-50 years ago, electricity use in most parts of India was very minimal? Ask your grand parents or may be your parents, if electricity use started when they were kids? They would definitely have interesting stories to share on what a surprise electricity was for them ?

Even the electricity meters have a history? Based on the reading of meters, your electricity bill is finalized. Many people complain of inflated bills while there are others who tamper their meters to make them run slow. Considering the theft of electricity, the Delhi government decided to privatize the distribution of power in Delhi in 2002 and private players came in to give us our electricity bills. But still the problem doesn't seem to be resolved, with the recent agitation about faulty meters.

May be its high time to have a look at your electricity bill to see if you have an inflated bill.

ACTIVITY 2: Catch hold of the electricity bill of your home. Try and find the following:

a) Which agency has issued the bill? Is it a public or private agency?

b) What is the unit used to measure electricity consumption?

c) What is the rate of electricity per unit? How does the rate change as the units increase?

Sl. No.	Particulars	Rate	Quantity	Amount
1	Energy Charges	7.00	100	700.00
2	Meter Rent	10.00	1	10.00
3	Tax	8.00	1	8.00
Total				718.00

Get a photocopy of the bill and attach to the activity sheet.

GOBAR GYAN: Electricity can be produced through various ways

- ✓ using thermal heat using coal, electricity, gas etc.
- ✓ using solar sources – solar cell etc
- ✓ using hydel sources – dams etc
- ✓ using wind energy (visit http://www.gobartimes.org/20051031/gt_openforum2.htm for more information) and a variety of other sources

Electricity is a non polluting form of energy, which does not emit pollutants after its use. It is for this reason that environmentalists are promoting use of electricity for running trains and even automobiles. There are a few companies manufacturing automobiles using electricity. It is cheaper to run the vehicles on electricity. The only problem is that the weight of the vehicle increases due to the batteries used.

But even with electricity it is important to see how it is produced. Electricity from hydel sources does not pollute the atmosphere as there are no emissions. On the other hand thermal plants which use coal or gas emit pollutants such as fly ash and greenhouse gases like carbon dioxide. Do you know how the electricity you use is produced? Find out

ACTIVITY 3: Go to your nearest electricity board office and interview the engineer out there. See if you can get the answers to the following questions:

1. Where is electricity I get at my house produced?

2. How is this electricity produced? Is it thermal power, hydel power or some other form?

3. Why is there load shedding in my locality? What happens during load shedding?

4. How does the electricity board save electricity at a larger level? For instance with streetlights etc.

Find out everything about electricity. Read the October 2003 issue of Gobar Times. You can access it online at http://www.gobartimes.org/gt20031015/gt_covfeature.htm

GOBAR GYAN: Talking about conservation? It is the only alternative with us as huge parts of India still don't have any electricity and many cities have huge power crisis.

One option is obviously not to waste electricity by switching off unwanted fans, lights, televisions and anything, which is not being used? But the other option is to use technology and equipment which uses less electricity without compromising on output.

One of the most talked about ways to do so is to use a CFL or Compact Fluorescent Lamp. Did you know? A 22 Watt CFL has the same light output as a regular 100 watt bulb!

In fact it is said to be 75% more energy efficient than regular bulbs. Why don't you test it out?

ACTIVITY 4: Accompany your parents to your nearest store and ask for a CFL. Look carefully at what it is says on the cover. Does it claim to be more energy efficient than a regular bulb?



Compare the rates of conventional bulbs and CFLs

Normal Bulb Rs _____
CFL Rs _____

Which one is more expensive than the other? These bulbs are said to reduce your bill by 20% Ask your parents – what do they think? Would they be willing to buy a CFL? Find out if anyone in your locality is using them. Did they see any difference in their electricity bill?

List the name of the companies offering CFLs

1. _____
2. _____
3. _____
4. _____

Are there any other companies of refrigerators, ACs, washing machines, which advertise their products to be consuming less electricity than usual? Name them and find out the technology used

Product	Technology
1. _____	_____
2. _____	_____
3. _____	_____

Find out if your school is using technologies, which save electricity? Does your school have a policy on energy conservation? For more information on electricity conservation, visit www.ndplonline.com

Did you find this activity sheet interesting? E-mail us at eeu@cseindia.org or write to: Activity Sheet, Centre for Science and Environment, 41 Tughlaqabad Institutional Area, New Delhi-110062 or Call 29955124 Extension 219