

# Home Energy Survey

## How much energy does your home need?

Did you know saving energy at home can help the environment and save your family money all at the same time? The less energy we use to heat, cool, and light our homes, the less pollution is put into the air and water by power plants, which make the energy for our homes. And the less energy we use, the less we have to pay for our energy bills.

So how can you save energy at home? Do a home energy survey and find out what is costing more money and using more energy than it should. Below is a simple survey you can start with. Once you've practiced, you can go to Web sites listed at the end of this activity to find more thorough surveys.

## Before you start

Before you start your survey, it may be helpful to go over what do you do each day that uses energy in your home. Look at the sample schedule below and then make a schedule for yourself to show how many times you need energy throughout the day.

Time	Activity	Time	Activity
7:00	Turn off alarm clock, turn on light. Take shower, brush teeth, get dressed, turn off light.	3:00	Take bus home.
7:30	Turn on kitchen lights, drink orange juice, make toast. Turn off lights.	3:15	Turn on lights and TV in living room. Turn on kitchen lights, get snack from fridge.
8:00	Ride bus to school.	4:15	Do homework on computer while listening to music.
8:15	Go to class in lighted classroom.	6:00	Eat dinner and help clean up kitchen.
12:00	Eat lunch in cafeteria.	7:30	Do more homework on computer, listen to music.
12:30	Go to lighted classroom.	9:30	Turn on bathroom lights, brush teeth. Turn on bedroom lights, turn off lights, go to bed.

As you fill out your schedule, ask yourself these questions:

- What do we need energy for (for example, cooking; hot water for showers, doing dishes, and washing clothes; lighting, watching TV, powering the refrigerator, etc.)
- Is my home heated with electricity, natural gas, or another source of energy; for example, solar heat, propane, or geothermal heat?
- Where does that energy come from, and how much does it cost?
- Is the cost of energy going up or down?
- How does using energy in my home cause pollution?
- What are some things we think we can do to save energy?

# Home energy survey

Now that you have an idea of when and where you use energy in your home, it's time to work with your family and complete the home energy survey\*. This survey will help you find out where your family already saves on energy and what it can do to save more energy. Ask an adult for help with anything you don't understand.

**Safety first!** Be sure an adult helps you to check appliances.

Ways to save energy in my home	Always /Mostly	Sometimes /Usually	Rarely /Never
We use fluorescent light bulbs.			
We turn off the lights when we leave a room.			
We turn off computers, televisions, radios, games, etc. when they are not being used.			
We turn the surge protector or power strip off when the computer or stereo is not in use, and we unplug cell phone charger when not in use.			
We turn down the thermostat in the winter or up in the summer at night or when we are not at home.			
We open curtains to let the sun in or close them to keep the sun out.			
We use rechargeable batteries.			
Our windows and doors are well sealed and there are no drafts.			
We use energy-saving settings on our refrigerator, dishwasher, washing machine, computer, and clothes dryer, etc.			
We have energy saving appliances (refrigerator, dishwasher, washing machine, clothes dryer, etc.			
When possible we hang clothes outside to dry.			
We run the washer, dryer, and dishwasher only when we have a full load.			
We use a microwave or toaster oven for cooking small amounts.			
Our water heater temperature is set low (close to 120° F).			
We have a low-flow showerhead.			
We take 5-minute showers.			
The faucets are in working order (no drips or leaks).			
We have dual-pane windows.			
We have good insulation in the attic.			
The fireplace damper is closed when there isn't a fire going.			
We check the furnace regularly to be sure it is working well.			

\*Adapted from "Inspiring Change" lesson plan developed by Climate Change North (<http://www.climatechangenorth.ca>).

---

## Evaluation

When you are done with the survey, answer the following questions:

- How often is energy in your home wasted? (For example, the computer is on when no one is using it, or the heat is on when no one is home.)
- How can you reduce your energy use for these energy wasters? Does it seem difficult or easy to make this change?
- Will everyone in the home help to make this change?
- What things can't be changed? (For example, you shouldn't turn off the refrigerator.)
- How can you keep track of your energy use so you know where and when to cut your use?
- Can you buy something now that will save money in the future? (For example, replacing an old air conditioner with a new, Energy Star® rated air conditioner will save a lot of energy—and money.)
- If you can, take a look at the household power bills for the last year.
  - What did you find out about your energy use from these bills?
  - How do the bills change throughout the year?
  - Which month had the highest bill? Why was this so?
- Would it be better to try to save energy in just one area or in several different ways?
- What was the most important thing you found out about your energy use from the survey? From the power bills?

---

## Next steps

### Step one

Now that you know how you use energy in your home, you can make a plan to save energy. The Energy Commission's Consumer Energy Center (<http://www.consumerenergycenter.org/>) can help you with energy-saving tips as you make your plan. Make sure everyone in your home is aware of the plan and will follow it. You can check your power bills each month to see how your plan is working. How will you have to change your plan as the weather gets warmer or cooler? Most important—what can you do with the money you save?

## Step two

You can also take the energy survey one step further. Now that you have done a basic home energy audit, you can do a more detailed audit using online energy calculators. Visit the Web sites below for the steps. The Web sites listed here will help you to do your survey:

Lawrence Berkeley Laboratory has created the Home Energy Saver, which lets you do your survey online and calculate actual energy costs based on the prices charged by your local power company. <http://hes.lbl.gov/>

Complete a home profile at the Sacramento Municipal Utility District's Web site to receive energy-saving ideas just for your home.

<http://www.energyguide.com/ha/HomeProfile.aspx?referrerid=71&zipcode=95691>

Thirteen Ed Online will help you create your own home energy survey.

[http://www.thirteen.org/edonline/wue/energy2\\_procedures.html](http://www.thirteen.org/edonline/wue/energy2_procedures.html)

The Alliance to Save Energy can help you save energy, and you can learn about energy-saving superheroes. <http://www.ase.org/section/audience/consumers/kids/>

You can also learn more about energy wasters and how to tame them at Earth Care.

<http://www.earthcarecanada.com/>.

Redding Electric Utility has home energy, appliance, and lighting calculators on its Web site. Note: Energy costs on this site are based on Redding Electric Utility prices only.

<http://www.reupower.com/energysvc/energycalcs.asp>

High School students can use the Environmental Protection Agency's Climate Change Emission Calculator Kit to study the link between everyday actions at their school, greenhouse gas emissions and climate change.

<http://www.epa.gov/climatechange/wycd/school.html>

## Step three

Ask your teacher, your group leader, your parents, or another adult to see how you can help friends, family, or people in your community, such as the elderly, to do energy audits in their homes to help them save money, energy and the environment. Check your local power company's Web site to see if it has more information on home energy audits.

## Step four

Audit your school. Earth Team can show you how.

[http://www.earthteam.net/projects/action\\_projects/energy/school\\_audits.html](http://www.earthteam.net/projects/action_projects/energy/school_audits.html)

*Note: This activity has been adapted from Earth Care's Home Energy Audit for Kids, which is available at <http://www.earthcarecanada.com/>, and the "Inspiring Change" lesson plan developed by Climate Change North, <http://www.climatechangenorth.ca>.*

**Saving energy saves money and the environment!**