



This Week in Energy Conservation

This Week in Energy Conservation is designed as a television show with student-correspondents reporting on a variety of energy conservation topics. This activity will introduce students to ways of saving energy both in the home and on the road.

Grade Levels

- Elementary, grade 5
- Intermediate, grades 6-8
- Secondary, grades 9-12

Preparation

- 5 minutes

Time

- 45 minutes

Get Ready

Prior to class, make copies of the six lead stories on pages 21-23 that you will be distributing among the student groups. You may also want to gather the supplies students may use in constructing props to accompany their energy stories.

Get Set

- Review with the students the structure of an actual news program. Explain the role of an anchor in providing the background information or "lead" to a news story. Ask the students to recall the various ways they have seen news stories covered in the past (in a studio, on-site, through interviews, or video recordings). This will help them understand what they will be asked to do during the *This Week in Energy Conservation* show.
- Divide the class into six groups, and distribute a news lead to each group.

Go

- Explain to the students that each group is now a team of energy reporters. They should read the introduction to their segment of *This Week in Energy Conservation*, making note of the energy conservation tips listed below each lead. Their job will be to develop a story that follows the guidelines of the anchor's introduction and includes six of the energy tips listed on their sheet of paper. Each story should be limited to two or three minutes and the groups will be allowed 20 minutes to develop and rehearse their stories.
- After each story is presented, the other groups will have one minute to try to list six energy tips from the presentation they just heard. Next, the presenting group reveals their tips. Each group grades themselves using the honor system, getting one point for every tip they remembered correctly. Tally the scores of all the groups watching the presentation, and award this amount to the presenting group. This gives the presenters an incentive to do a thorough job conveying their facts and information to the audience. The team with the highest score after all the presentations is the winner. Either you or a student from each group can serve as the anchor, providing the show's introduction and the lead-in to each news story.

OPTIONAL: This activity can be expanded to include props and costumes for actual public service announcements on school TV stations for Energy Awareness Month, NEED Week, or Earth Day.



This Week in Energy Conservation

NEWS STORY STARTERS

Hot Water Heating Energy News Team Introduction

Now for tonight's micro-cam report. We have once again miniaturized a member of our Energy News Team staff to give you an inside look at what actually goes on inside your hot water heater. Heating water is the second largest energy job in the home, so it's important to know what these drops of water are thinking while they're still inside the tank. We find their biggest fear is that their lives may be wasted by carelessness. Here's _____, who always seems to be getting into hot water, with this in-depth report.

- Do not let hot water run needlessly. About 16 percent of all the energy we consume in our homes is used to heat water.
- Use cold water instead of hot water when running the garbage disposal and when rinsing dishes before they go in the dishwasher. Using cold water saves energy.
- Repair leaky faucets promptly. A leaky faucet can waste gallons of water in a short period of time. A leak of one drip per second can cost up to \$1 per month.
- Wash and rinse clothes in cold water. Operating a washing machine takes very little energy. Most of the energy used by clothes washing machines goes to heating the water.
- Use low-flow shower heads. These easy-to-install devices save energy and still provide more than adequate shower pressure.
- Lower the water heater's thermostat to 120 degrees. Most hot water heaters are set for 140 degrees or higher. You can save on your energy bill by lowering the temperature.
- Insulate hot water storage tanks and water pipes connected to the water heater.

Home Heating Energy News Team Introduction

The theft of home heating energy is a normal occurrence. So why the next story? Because our undercover reporter has been able to infiltrate a gang of home heating energy criminals. For the first time ever, we can bring you the story from the point of view of the criminals. Seeing how they operate might help you, our Energy News Team viewer, prevent them from stealing your energy dollars.

- Keep heating equipment well maintained. To get the most from your heating fuel, keep furnace filters clean and equipment well tuned.
- Add insulation in the attic and walls where needed. Adding insulation can pay for itself within a few years.
- Plant trees to act as a windbreak. Trees act as a natural barrier to cold air in the winter and hot sun in the summer.
- During the winter, set the thermostat to 68 degrees during the day, and lower at night or when no one is home. Use a programmable thermostat to easily adjust the temperature for different times of the day. Lowering the thermostat 7 to 10 degrees for eight hours can save approximately 10 percent of your energy costs a year.
- Close off unoccupied rooms, and shut off their heating vents. Shutting heat vents in rooms that are not used every day saves fuel.
- Caulk and weatherstrip doors, windows, and other areas in the home where drafts might occur. Caulking and weatherstripping is one of the quickest energy- and money-saving tasks you can do.
- Keep draperies and shades open in sunny windows, and closed at night. Energy from the sun provides natural warmth. Close drapes in summer when you want the house cooler.



This Week in Energy Conservation

NEWS STORY STARTERS

Cooking Energy News Team Introduction

Do you hate to cook? If slaving over a hot stove isn't your idea of a good time, tonight's Energy Gourmet segment is for you. Imagine telling your family, "We're having microwaved pizza for dinner tonight because I'm trying to save energy." The Energy Gourmet has a few simple tips that will save you energy and money. Who knows, you may even save enough money to eat out more often.

- Always boil water in a pan that is covered. Water will boil faster and use less energy in a covered pan.
- Whenever possible, use a toaster oven or microwave instead of a regular oven. These smaller appliances take less time to cook food so you save energy.
- When baking, keep the oven door closed rather than opening it to look inside — use the oven light to see inside. An open door lets valuable heat escape; maintain the heat by keeping the door shut.
- Clean range pans (under the burners) regularly. A clean range pan reflects more heat than a dirty one.
- Only preheat the oven for five minutes or not at all. It's also a good energy practice to cook several dishes in the oven at once to make maximum use of this concentrated heat source.
- Use the right size pan for each burner. A small pan on a large burner wastes energy because the air surrounding the pan will be heated, too.

Lighting Energy News Team Introduction

And now for the segment of the show that enables you, the viewer, to help put a dangerous energy criminal behind bars. It's time for America's Most Wanted Energy Criminals. The FBI has just put Killer Kilowatt-hour on its most wanted list. He has been terrorizing homes throughout the nation by forcing families to waste energy in lighting their homes. Recently, he forced a family to leave ten 100-watt light bulbs on for an hour. If you recognize him from this next segment, please don't try to apprehend him yourself, just call our toll-free number, 1-800-TURNOFF. Remember, he's very dangerous because he's very bright.

- Make sure lights are turned off in rooms where you don't regularly go, such as the basement or attic. Consider installing indicator lights to tell you when those unseen lights are on.
- Use outdoor lights only when needed. Consider using an automatic timer that switches off outdoor lighting in the morning.
- Use LED lights whenever possible. They last up to 25 times longer, are more durable, and use less energy than other bulb types.
- Dust bulbs and light fixtures frequently because dirt absorbs light. Clean fixtures and bulbs give you more light.
- Reduce light in non-working areas. Lighting needs vary with each task. Over-lighting an area wastes lots of energy. Adjust your lights accordingly.
- Turn down three-way light bulbs to the lowest setting when watching television. Dimmer light reduces glare on the TV and saves energy.
- Use one large bulb, instead of several small ones, in areas where bright lights are needed. Concentrate lighting in study areas and in stairwells where it's needed for safety.



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NEWS STORY STARTERS

Auto Driving Habits Energy News Team Introduction

Our next story may have some of you saying that group therapy sessions have gone too far. This time it's automobiles. Their operators have very bad driving habits, and these habits are driving the cars crazy. We visited one of these sessions to learn what can be done to reduce this conflict between cars and their drivers.

- Drive the speed limit and don't exceed it. Driving faster than 50-60 mph decreases gas mileage. Slow down to save fuel.
- Do not overfill the gas tank. To avoid spilling gasoline, consider your tank full when the automatic valve shuts off.
- Eliminate unnecessary or frequent starts and stops. Aggressive driving can lower highway gas mileage by 33 percent.
- Be a carpooler, and share a ride. Carpooling can save energy, reduce pollution, and make your car last longer.
- Do not let an automobile idle for more than one minute when waiting for someone. Idling equals zero miles per gallon in fuel economy.
- Eliminate unnecessary trips, and plan trips carefully. Combining errands can use less gasoline than several independent trips.
- Use public transportation. Try to substitute another means of transportation (bus, subway, bicycle, walking) for your automobile at least once a week.

Auto Maintenance Energy News Team Introduction

I've just been handed a bulletin. American automobiles have just called a wildcat strike. They refuse to operate again until their list of demands is met. Their major concern is health care. They feel that their previous owners did not give them the maintenance they deserved. An Energy News Team mobile unit brings us this late breaking story from a used car lot, where used cars are refusing to leave the car lot with their new owners until they are promised better care. That's right folks, these autos are demonstrators.

- When replacing tires, look for ones with low rolling resistance. This type of tire will use less energy to roll along the road.
- Keep the oil and air filters clean. For older cars with a carbureted engine, clean air filters can increase gas mileage 2 to 6 percent. For fuel-injected, computer-controlled engines, a clean air filter can improve acceleration time.
- Remove unnecessary weight from the car. A heavier car uses more gas to reach its destination. The lighter the load, the better the gas mileage will be.
- Check tire pressure every two weeks. Properly inflated and aligned tires improve gas mileage.
- Have the car's engine tuned regularly. A well-tuned engine can improve gas mileage.
- Select the correct gasoline octane and grade of oil for your car. If you change the oil yourself, take the used oil to a service station for recycling.