

eco@home™



IN THIS ISSUE

Time for a Tune-Up

Dishwasher Dos
& Don'ts

Locating Leaks

Add an Extra
Blanket This Fall

Tackle the 5 Biggest
Energy Guzzlers

Green Your Garage

Take the Gadget
Minimalist Challenge

try this
today...

Switch the direction your ceiling fan blades spin to clockwise when fall arrives. The fan will push warm air down, helping you feel warmer without turning up the heat.

The editors of **eco@home** want to know how you conserve energy and water and reduce your environmental footprint. Share your photos and ideas by e-mailing us at ecoeditor@lexiconconsultinginc.com with "My Projects" in the subject line. You might see your photo in an upcoming issue of the magazine.

It's back-to-school season!

Fall has arrived, and class is in session. Flip through the pages of *eco@home* to learn about ways to conserve energy and water around the house.

In this issue, we teach you how to tackle projects big and small, from sealing air leaks to adding more insulation to taking steps to improve efficiency in your garage. You'll also find simple lessons for savings. Between football practice and fall outings to the orchard, carve out time to learn the correct way to use your dishwasher, and discover how to make your home's least-efficient appliances and systems more energy-friendly. And finally, don't forget to schedule an appointment with a heating and cooling professional to have your furnace tuned-up before even colder weather arrives.

Homework doesn't go away as you get older. Add these tasks to your to-do list to curb energy and water consumption and cut your utility costs.



Time for a Tune-Up

Add a furnace tune-up to your to-do list this fall. An annual inspection can boost the efficiency of the furnace, prolong its lifespan, and help safeguard your family from harmful carbon monoxide. Professional servicing can run from under \$100 to \$200.

What to Expect

During a standard furnace checkup, an inspector will examine all working parts, such as the heat exchanger and condensate drain; check system controls; check thermostat settings; tighten electrical connections; lubricate moving parts; clean and remove dirt; check for rust; and test for carbon monoxide.

DIY Checks

While it's best to have a professional service your furnace, you can monitor your system with periodic spot checks.

Make sure your ductwork is intact and that all seams are taped.

(Dirty streaks near seams can indicate leaks.) For gas furnaces, check the color of the flame to see that it's a steady blue—not yellow or orange, which can signal a combustion issue. And see that vents and registers are clean and not covered by furniture or rugs.

did you
know...

Installing a heating or cooling system incorrectly can reduce its efficiency by as much as 30 percent. If you're replacing an old furnace with a newer energy-efficient model, have it professionally installed.



Dishwasher Dos & Don'ts

Loading the dishwasher beats tackling dirty dishes by hand—and it uses less water if you have a newer machine. But you can save even more water and energy if you're smart about dishwasher use. Here's what to know:

DO wash full loads. The dishwasher uses the same amount of water whether it's full or half-empty, so it's more energy efficient to wait for a full load. Doing so can save you 400 gallons of water per month.

DON'T prerinse dishes. Scrape them instead. The water used to rinse dishes adds up—as much as 20 gallons per load. Most modern dishwashers can easily handle heavily soiled items.

DO dry dishes without heat. Select the air-dry setting or open the door and extend the racks fully. This can cut energy use by 15 to 50 percent.

DON'T use a dishwasher made before 1994. Replace it with an ENERGY STAR® model, which uses 1,300 fewer gallons of water over its lifetime than other models.

DO load it correctly. Face the dirty side of plates and pans toward the inside so they're hit directly by the water sprayer. Place large items along the outside edges of the machine or they'll block water and detergent from reaching other dishes.

Locating Leaks

Plan to throw money out the window this winter? Probably not—but that's what you'll do if you don't fix air leaks around your home. According to ENERGY STAR®, you can save up to 10 percent on your total annual energy bill by plugging air leaks. And fall is a great time to get the job done.

WHERE TO LOOK

Start with a visual inspection of your home, including the attic, basement, and exterior. Look for cracks and gaps in door and window frames; places where different materials meet (such as brick and siding); and surfaces penetrated by pipes, vents, ducts, or wires. Don't forget mail slots; gas and electric service entrances; lines for cable, satellite TVs, and phones; outdoor water faucets; dryer vents; and room air conditioners.

HOW TO FIND THEM

To detect less obvious leaks, wait for a cool, windy day, close up the house, turn off the furnace, turn on exhaust fans, and hold a lit incense stick or a smoke pencil near suspect areas. If the smoke travels horizontally instead of straight up, air is getting in or out. For more precise detection, use a thermal leak detector or infrared thermometer (available at home centers).

WHAT TO DO

Once you've found leaks, seal narrow cracks with caulk. Use foam sealant (it comes in a spray can) to fill larger gaps. Install foam gaskets behind switchplates and electrical outlet covers.

try this
today...

Prep your windows for colder weather by installing exterior or interior storm windows. These simple additions can reduce heat loss by as much as 50 percent.

Add an Extra **Blanket This Fall**

Whether your goal is conserving energy, saving money, or improving your comfort, fall is a great time to add more insulation where you need it. Here's how:

BEGIN WITH AN AUDIT

Assess your home's need for insulation by performing a do-it-yourself audit or contacting your local utility company or energy office for assistance. You'll discover where your home is leaking air.

CHOOSE THE FORM

Insulation comes in several varieties:

- **Blanket** – Batts and rolls of fiberglass, mineral (rock or slag) wool, or fibers are all good choices for DIY installers adding insulation between rafters or under floors and above ceilings.
- **Foam board** – These relatively thin, rigid pieces of insulation are good for walls and ceilings. They must be covered by a ½" piece of gypsum board after being installed.
- **Loose fill** – Made of cellulose, fiberglass, or mineral wool, this insulation may be poured or blown into spaces such as attics and crawl spaces.
- **Spray foam** – Polyurethane insulation is pressure-sprayed into existing wall cavities or around structural obstructions in your home.

In addition, new green materials are showing up in the insulation industry. Among them: recycled cotton fiber and paper content in loose-fill form;

environmentally friendly foam; and composite boards made of water, flour, minerals, and mushroom spores.

SELECT THE R-VALUE

The insulation's R-value tells you its resistance to heat flow. The higher the R-value, the more insulative the material is. Find out what the recommended R-value is for your area of the country at ornl.gov/sci/roofs+walls/insulation/ins_16.html.

EXTRA PLACES TO INSULATE

Add insulation in less obvious places:

- **Switchplates** – A thin, inexpensive foam sheet behind switch and plug plates can stop subtle air leaks.
- **Pipes and chimneys** – Expanding foam insulation seals around objects that cut into your home's frame. Seal around chimneys and flues with high-temperature silicone caulk.
- **Basement toppers** – Batts of insulation installed where concrete block and wood frame come together block heat transfer.

Most homeowners can complete basic insulation projects. For more complicated projects, or for those involving structural changes to your home, contact a professional contractor.

did you know...

If your home was built before 1980 and you haven't added insulation, you may need to. Only 20% of houses built before 1980 are considered well-insulated.

Tackle The **5** Biggest Energy Guzzlers

To make a sizable dent in your home's energy consumption—and your energy bills—start at the top. In general, appliances that heat or cool are going to use the most energy. Tackle them first.

1. HEATING & COOLING SYSTEMS

Energy use:

- Approximately 54 percent of a household's total energy costs*

Ways to save: Dial down your furnace and dial up your air conditioner by two degrees. Install a programmable thermostat. Clean filters monthly. Seal all ductwork.

If you're shopping: Select the highest efficiency rating you can afford. Compare warranties and performance ratings. Choose units that automatically adjust blower volume. Pair a new system with a programmable thermostat.

2. WATER HEATERS

Energy use:

- Up to 18 percent of your utility bills*
- 4,500 to 5,500 Watts*

Ways to save: Dial water temperature down to 120 degrees. Add an insulating heater blanket. Regularly drain water from the bottom of the tank to reduce mineral buildup.

If you're shopping: The storage tank is the most common model, but tankless, solar, and other options also are available. Look for high-efficiency ratings and solid warranties.

continued on next page

3. CLOTHES WASHERS & DRYERS

Energy use:

- 1,800 to 5,000 Watts for a dryer; 350 to 500 Watts for a clothes washer*

Ways to save: Only run full loads. Make sure the moisture sensor or thermostat is working so loads don't overdry. Clean the lint trap each time. Line-dry clothes.

If you're shopping: Buy the highest efficiency rating you can afford. Select the standard full-size capacity unless your family is very large. Choose a moisture sensor feature over a thermostat.

4. REFRIGERATORS

Energy use:

- 725 Watts*

Ways to save: Keep your refrigerator full. Keep coils clean on older models. Defrost the freezer unit. Get rid of units older than 10 years—they cost twice as much to operate.

If you're shopping: Select a unit with the highest efficiency rating you can afford. Match the size to your family's current and projected needs. Skip energy-wasting add-ons, such as ice dispensers, if you won't use them.

5. DISHWASHERS

Energy use:

- 1,200 to 2,400 Watts*

Ways to save: Let dishes air dry or select the "no heat" drying option. Keep the filter clean for efficient operation, and only run full loads.

If you're shopping: Choose a high-efficiency unit that has low water consumption. Compare noise levels among units. Soil sensor features enhance cleaning performance.

*According to the U.S. Department of Energy

Green Your Garage

It may not be a living space, but your garage can make a big impact on your home's utility bill—especially if the garage is attached. Drive energy savings home with improvements to this often overlooked space.

ADD AN EXTRA LAYER

- Insulate common walls between an attached garage and your home's interior to reduce heat transfer.
- Install fiberglass or mineral wool insulation under the floors in rooms above unheated attached garages.
- Upgrade your garage door with a DIY insulation kit, or invest in a new insulated model. Keep your garage door closed whenever possible.

SEAL IT UP

- Caulk gaps where air could be leaking into or out of your garage, such as windows, doors, outlets, cracks in cement floors, and where walls meet the garage door.
- Block airflow into your home by installing sweeps at the bottom of entry doors. Replace weather stripping if it is cracked, torn, or rigid.
- Seal holes and disconnected joints on exposed ducts to keep warm air from escaping as it moves through a forced-air heating system.

WEAN YOUR WATTS

- Unplug a garage refrigerator to cut up to \$150 from your annual energy bill.
- Install motion sensor lights in your garage so you won't accidentally leave overhead lights on for long periods.



Take the Gadget Minimalist Challenge

An hour without a cell phone? A day without a computer? A week with no TV? That may be exactly what your life needs.

A study by the International Energy Agency found that energy used by household electronic devices could triple by 2030. There's no better time than now to become a gadget minimalist. Drop your electronic addiction in these three easy steps.

1. Consolidate your gizmos.

You could watch TV on a plasma, crank music on a stereo, and surf the Net on a desktop computer. Or you could do all of those things and more on your laptop and shut down those other electronics.

You also can turn to your cell phone for more electronic needs. Your smartphone uses approximately 5 watts when charging, and by making it your MP3 player, Web browser, alarm clock, camera, and more, you'll unplug many single-use electronics.

While you're consolidating, switch to non-electronic devices when possible. Use a French press instead of a coffeemaker, hang your clothes on a line instead of using the clothes dryer, and brush your teeth with a manual toothbrush instead of an electric one.

2. Make the most of what you have.

American households spend close to \$1,000 a year on gadgets, according to a recent study from the Consumer Electronics Association. But you can

keep your electronics running longer—and avoid purchasing replacements—by maintaining them.

Clean your favorite toys regularly, mend scratches immediately, and read manuals to learn basic repair techniques. If one of your devices has a mishap, browse the free advice available online and learn to fix your gadget yourself.

3. Put the kibosh on a craving.

If you're tempted to buy the hot new electronic on the market, ask yourself a few questions. Do you use your current model to its fullest potential? Is it still functional? Do you need a new one? More often than not, you'll find your current appliance still suits you just fine.

