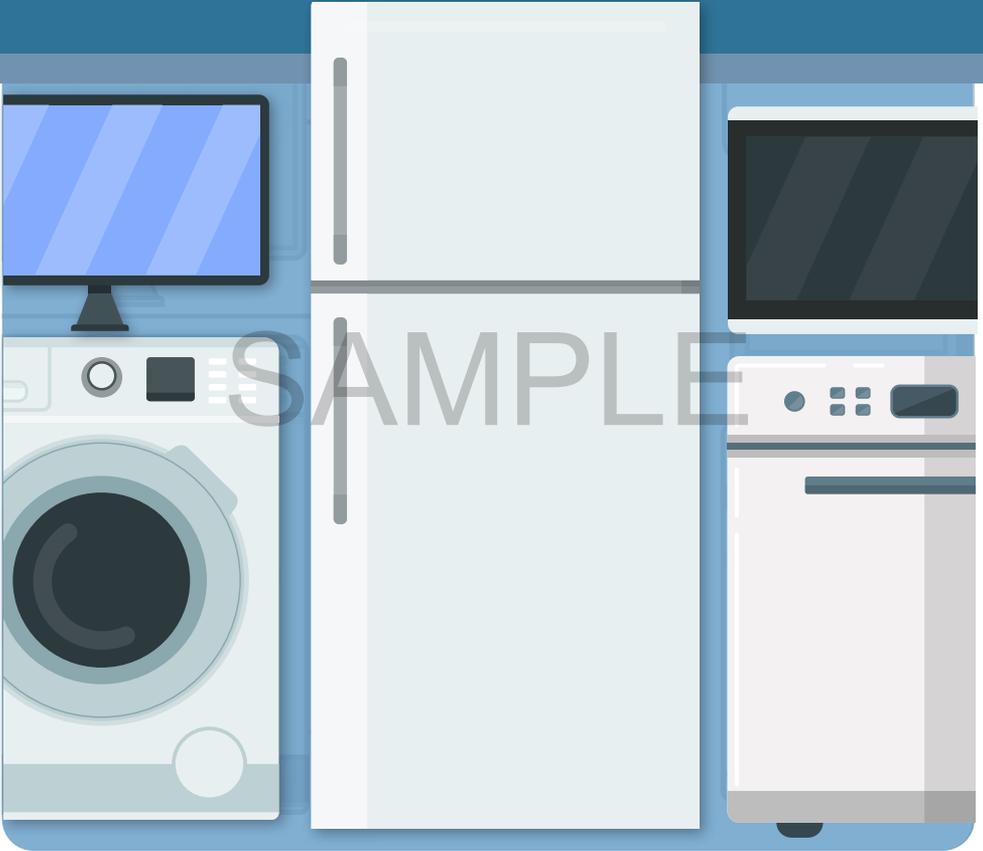
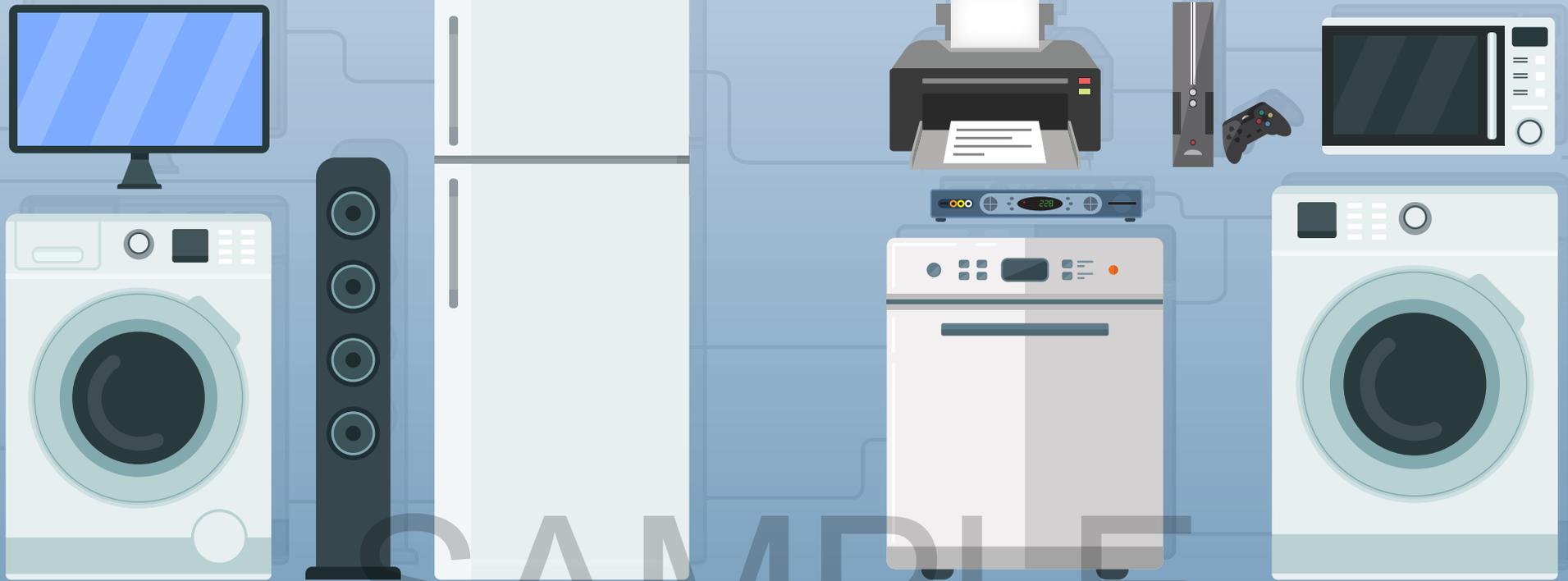


GET THE MOST

OUT OF YOUR APPLIANCES





INTRODUCTION

When you buy a new appliance, the sticker price is just one part of understanding what an appliance costs to own and operate. Every appliance has four major price tags:

- **The sticker price you pay at the store**
- **The price you pay to maintain the appliance**
- **The price you pay in utility bills to operate the appliance**
- **The length of time the appliance will last before replacement**

If you buy an appliance with a low sticker price and don't evaluate the other costs, you could end up paying higher utility bills and extra maintenance costs and/or having to replace it sooner than you'd like. A good maintenance plan can extend the life and efficiency of the appliance, saving money on utility bills and replacement costs. This booklet is a starting point for learning best practices and tips for getting

the most out of your appliances. Because all appliances are different, you should consult your appliances' manuals and manufacturers' guidelines. If you can't find the ones that came with the appliance, almost all manuals are an internet search away.

Some maintenance, especially anything involving electricity or gas, should be done only by a licensed professional. Save money by scheduling appointments early in the season. Many contractors will offer special deals to customers who book early.

The amount an appliance costs to run is affected by its size. The larger the appliance, the more energy it uses. Appliances come in a variety of sizes. It's important to choose the right size for your home. One that's too large will cost more to run without additional benefit. If you're planning on buying an appliance that will be used in just one room, such as a humidifier, dehumidifier, or window air conditioner, make sure to measure the room before you make the purchase.



HOW EFFICIENT IS AN APPLIANCE?

Two federal government programs can help you understand the amount of energy your appliance will use: ENERGY STAR®, which recognizes the most efficient appliances, and EnergyGuide, which labels appliances with their energy usage so consumers can make informed decisions.

ENERGY STAR: Appliances that receive ENERGY STAR certification meet energy-efficiency standards far more strict than the minimums required by law.

Before you go to the store, find out if ENERGY STAR certifies the type of appliance you're purchasing. There are also rebates and incentives for purchasing some types of Energy Star-rated appliances. Check with your state, local, and utility programs to see if there are any opportunities to save on the purchase of an ENERGY STAR appliance.

EnergyGuide: You can tell how much energy the appliance will use by looking for the yellow EnergyGuide label. It will show you an estimate of how much energy the appliance uses, how much it will cost to operate, and how efficient it is compared with similar appliances.

Older appliances? Some older appliances can cost more to operate than to replace. Energy usage guides are widely available online. Compare your model's energy usage to that of new ones and see if it's time for an upgrade.

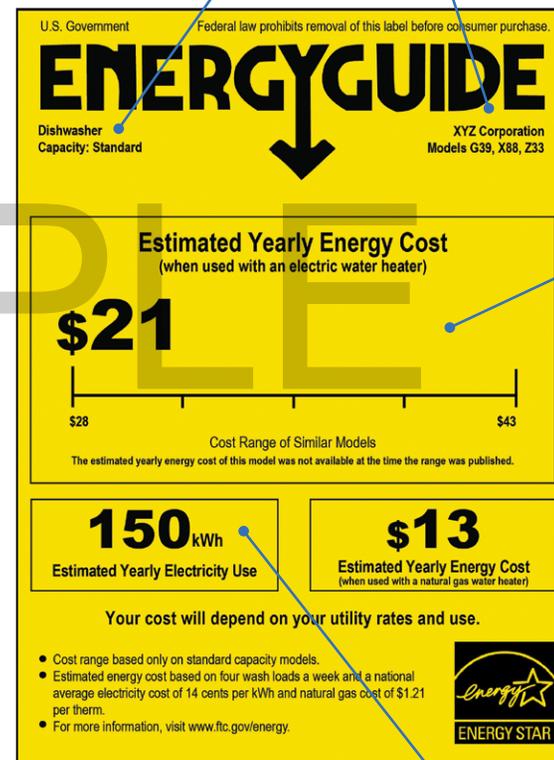
HOW TO READ AN ENERGYGUIDE LABEL

Appliance Type and Features

This information, in the upper left-hand corner, helps you compare models.

Manufacturer Model Number and Capacity

Write down this information if you want to do more research on the machine later.



Estimated Yearly Operating Cost

This number is prominently displayed in the middle of the label. Beneath the dollar figure, there should be a number line showing the cost range for operating similar models. This gives you an idea of how efficient the machine you're looking at is in comparison to similar machines.

Estimated Yearly Electricity Use

This number shows you how many kilowatt-hours of electricity the appliance is expected to use. The more kilowatt-hours you use, the higher your bill will be.

REFRIGERATORS

ORGANIZE YOUR FRIDGE

When a refrigerator is overcrowded, it has to work harder to keep food cold. It's important for air to circulate throughout.



Thermometers: Use a thermometer to test the temperature of your fridge. Use an appliance thermometer or put a thermometer in a glass of water and leave it in the fridge overnight.



Bottom shelf: This is the part of the refrigerator with the most stable temperature. Store dairy, eggs, and meats here.



Low-humidity drawer: Store produce that retains moisture (mostly fruits).



High-humidity drawer: Store produce prone to wilting, like lettuce, leafy greens, broccoli, and cucumbers.



Top shelf: This area typically is slightly warmer. Store your cooked leftovers and soda here.



Door: The temperature changes frequently. Avoid storing perishables here. It's a great place for condiments, juices, and other less perishable items.

EFFICIENCY TIPS

Keep the freezer 75%–80% full.

You want it full enough that the frozen items help keep the freezer cold but not so packed that air can't circulate. Is your freezer too empty? Try adding some bottles of water to fill up the space.

Stick to the right temperature.

Keep your fridge between 36°F and 38°F, and set your freezer between 0°F and 5°F.

Remove dust from the coils. Dust on a refrigerator's coils causes the appliance to work harder to cool your food, which uses more energy.

Check the door seals. If they're loose, replace them.

Cover and seal food. This prevents the moisture in your food from escaping into the fridge and forcing it to work harder.

HVAC

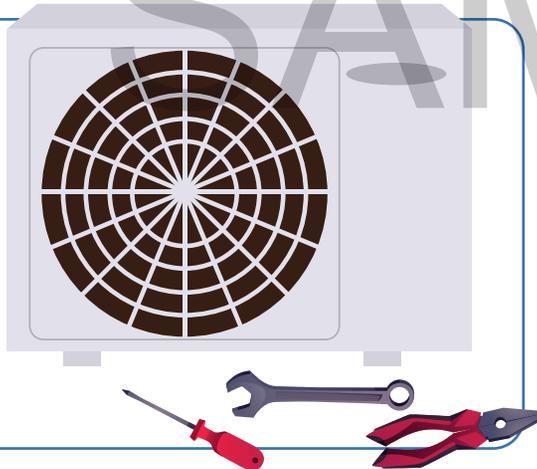
Heating, ventilation, and air conditioning (HVAC) systems are the biggest energy users in most homes. There are more options than ever: forced air, baseboard, split level, heat pumps, and many more. When replacing systems, it's important to research the most efficient system for your home. But no matter what type of HVAC system you install, there are a few basic steps you can take to get the most out of your system:

REGULAR MAINTENANCE

Regular maintenance of HVAC systems is important for increasing the life-span, efficiency, and safety of the equipment. Most of us call for a repairperson when the heating or A/C system breaks—usually during the peak of the season. Many of those calls could be avoided by cleaning and maintaining the system. Put another way, it's often less expensive to have a regular checkup than to call the company because of an emergency.

Hire a Pro

A “clean and tune” is a regular checkup conducted by a professional. The technician will test your system to see how efficient it is and then clean and adjust it to make it more efficient.



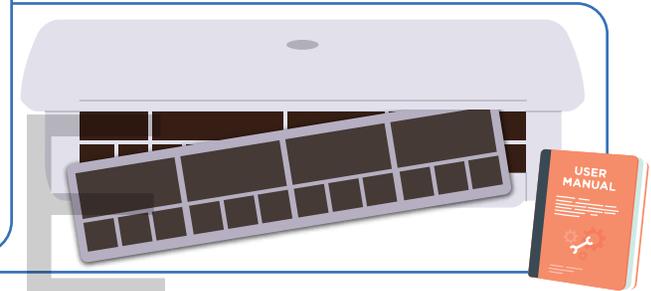
Oil-powered and kerosene heating systems should be serviced every year; gas-powered heating systems should be serviced every two years. Electric furnaces, heat pumps, and central air conditioning systems should also be serviced every two years. It's important to have this work done by a professional. An easy way to remember is to schedule preseason maintenance appointments for your heating and cooling systems near the daylight saving time transitions in spring and fall.

CLEANING FILTERS

Every house circulates small amounts of airborne debris; you'll see it as dust on tables and dust bunnies beneath the sofa. This debris also circulates through the ducts in your house when you use a forced-air heating system or a central air conditioning system. Your furnace and air conditioning filters clean the air, but they need to be cleaned or changed regularly. Dirty or clogged filters block airflow and reduce efficiency. Keeping the filter clean can lower your system's energy use by 5% to 15%. You should do this every month or two, but the filters can require more frequent maintenance if the machine is in constant use, you live in a dusty area, or you have pets that shed a lot.

Go by the Book

Filters come in many different shapes and sizes, so consult your HVAC system's manual for filter cleaning instructions.

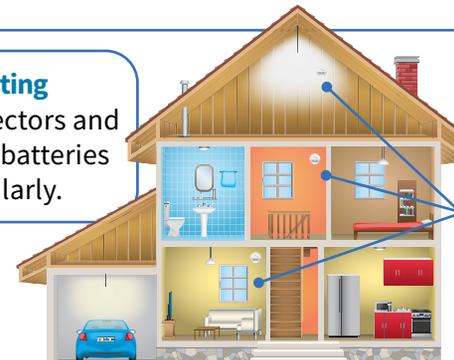


INSTALL A CARBON MONOXIDE DETECTOR

Normally, the carbon monoxide made by your furnace is vented out of your home. But if something goes wrong, this dangerous gas can build up inside your home. Other types of appliances can cause a buildup of carbon monoxide if they malfunction. Carbon monoxide is a dangerous, toxic gas, but because it's colorless, odorless, and tasteless, it's almost impossible for people to detect.

Testing

Test detectors and replace batteries regularly.



Installation Location

Carbon monoxide detectors should be installed on all levels of homes and outside all sleeping areas. Make certain the alarm is loud enough to wake you up.

PROGRAMMABLE THERMOSTATS

One of the best ways to save on your home's heating and air conditioning bill is to control the temperature you set to heat or cool your home. It's one of the simplest changes to make and leads to some of the biggest savings.

A programmable thermostat makes it easy to control the temperature in your home—and maximize your savings. Most people save enough money on their heating bill to pay for the thermostat within one year of installing it. Those who benefit most are away from their home for long periods of time during the day. That's because programmable thermostats turn down the temperature when you leave home and turn it back up before you return. The longer the temperature is set back, the more money you save.

Smart Thermostats

These devices can connect to Wi-Fi and be controlled by a phone or tablet. They allow an even greater level of customization and ensure that you can reduce your energy use for heating and cooling your home.

THERMOSTAT TIPS:

ENERGY STAR: Look for a thermostat with the ENERGY STAR rating.

Personalization: Think about your family's schedule. Reduce the temperature at times when no one will be home for four or more hours. Also think about the time you normally wake up and the time you go to sleep. Reduce the temperature an hour or two before you go to bed in the winter; you won't usually notice the house cooling off while you get ready for bed.

Timing: To use the thermostat properly, make sure it's set to save energy for long periods of time. Eight hours is a good minimum, both at night when you're sleeping and during the day when no one is home. If you need extra heating, use the manual override. It won't erase the preset schedule, but it will use more energy—and cost more—if you do this often.

Installation: Call an HVAC professional to install a new thermostat. An HVAC technician can upgrade an old manual thermostat to a programmable one and find the right unit for heating systems that use heat pumps.

Location: Thermostats should be installed on interior walls away from vents, doorways, windows, and any other heating, cooling, or vent source. If it's in a place where the temperature changes frequently, the thermostat will sense that the room is hotter or colder than it actually is and cycle on and off more often than necessary.

Zones: Consider installing multiple thermostats if you have multiple heating and cooling zones in your home.

Vacation mode: Avoid using the "hold/permanent/vacation" feature for managing day-to-day settings; use it when you're going away for a weekend or longer.

Temperature range: Avoid extreme settings. Setting your heater to 90 degrees will not heat the home any faster, nor will setting your air conditioner to 40 degrees cool it more quickly.



WATER HEATING AND WATER SAVING

Water is a key resource in your home. And you pay twice for most of the water you use. That's because you pay one bill for the water itself and another bill to heat it every time you wash your hands, take a shower, or run an appliance that uses hot water. Reducing the amount of water you use will save your family money on two bills: the water bill and the energy bill.

SAVING ON OPERATING COSTS

The first thing you can do to save money on heating water is turn down the temperature on your water heater. It takes only a minute and leads to big savings. Many water heaters are automatically programmed to heat water to 140 degrees. But in most homes, 120 degrees is more than enough. The only exception is if you have an older dishwasher without its own internal heating system. The change also prevents you from scalding yourself on extra-hot water and slows mineral buildup and corrosion in your pipes and water heater.

When you leave for vacation in summer, turn your water heater temperature down even more. Gas water heater temperature knobs often have a "vacation" setting that keeps the pilot light on but doesn't heat the water. Electric water heaters are wired to their own breaker, so an easy way to keep your electric water heater off while you're gone is to turn off the breaker—just be sure to leave yourself a reminder to turn it back on when you return!

INSULATING THE HOT WATER TANK

Insulation is very important to your water heater's efficiency. If your water heater has a tank, it will be rated with an R-value. The R-value should be at least R-10. If it isn't, your tank can benefit from additional insulation.

INSULATE WATER PIPES

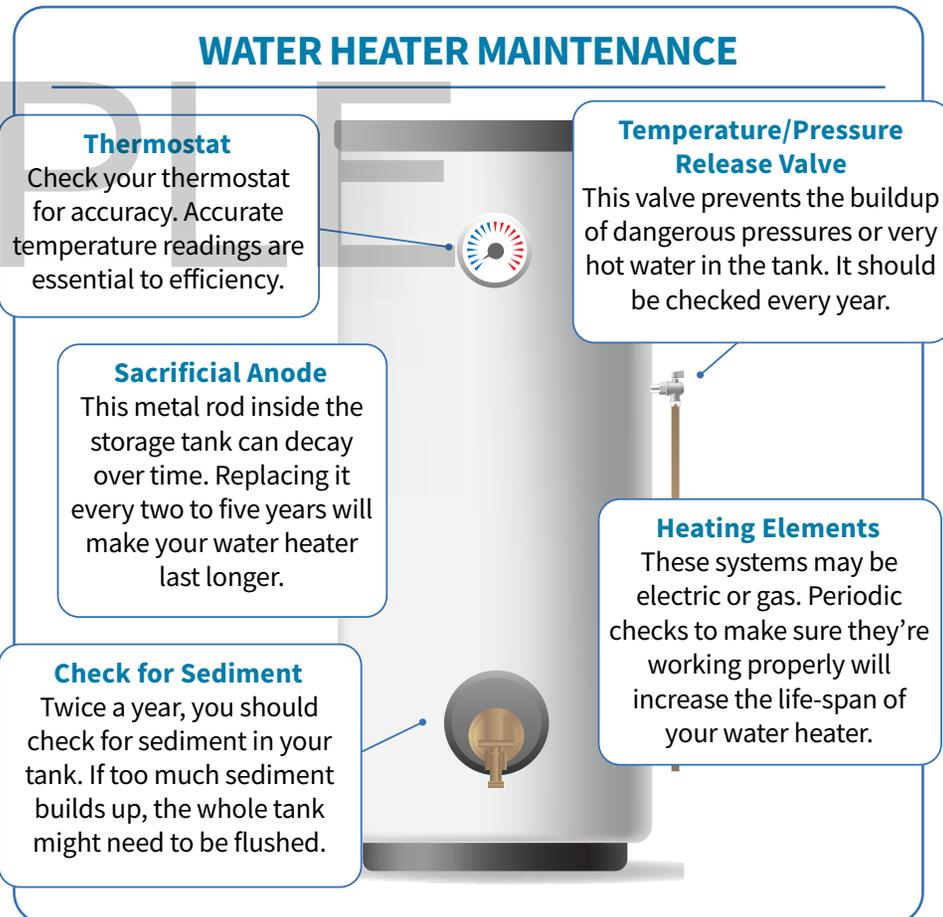
Pipes should be well insulated, especially at the point where they connect with the water heater. Insulated pipes can reduce heat loss and raise your water temperature between two and four degrees compared with uninsulated

pipes. Good insulation also helps pipes deliver hot water more quickly, so you don't have to wait as long for hot water when you turn on a faucet or shower.

On gas water heaters, insulation should be kept at least six inches away from the flue for safety reasons. The safest choice with gas water heaters is to use fiberglass pipe wrap that's at least one inch thick and without a facing. Use either wire or aluminum foil tape to secure it to the pipe.

BUYING A NEW HOT WATER HEATER?

Consider tankless water heaters, which don't store water and heat water only when hot water is being used; solar water heaters, which use solar panels to heat water; and heat pump water heaters, which use heat pump technology. All of these can have lower operating costs, depending on your home and usage.



WASHERS AND DRYERS

Getting the most out of your clothes washer and dryer is about finding the right settings to get your clothes clean while using water and energy efficiently.

DRYER

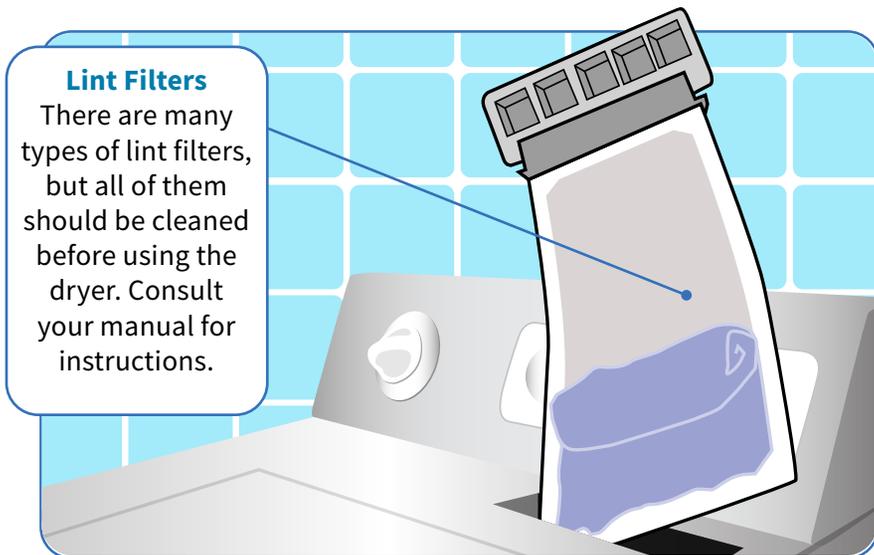
Make sure your vent hose isn't clogged. Also make sure your outside dryer vent damper is closing completely and lint isn't blocking the damper from closing. Check and clean it regularly.

Use a drying rack or hang your clothes outside to dry. Air drying helps your clothes last longer and doesn't use any energy.

Don't overload the dryer. One washer load is one dryer load. The clothes should tumble freely. But take care not to underload the dryer, which wastes energy.

Sort clothes by drying time. Wash and dry similar fabrics together so you run the dryer only as long as you need to.

Clean the lint filter. Removing lint after every load improves air circulation, which increases the efficiency of your dryer.



WASHING MACHINE

The energy a washing machine uses is almost directly proportional to the amount of hot water it uses—so the more hot water you can save, the more money you can save.

Wash only full loads. Wait until you have enough clothes or other items needing the same wash cycle to fill up the washer.

Don't use the sanitary cycle. This is an extra-hot setting available on some models that increases energy use significantly.

Use the high-speed spin. If your clothes washer has this option, use it. Or choose the extended spin. This feature reduces the amount of moisture in your clothes after they're washed, decreasing the time and energy needed to dry them.

Select the temperature. The right water temperature is essential to help prevent colors from bleeding and preserve fabrics. The best temperature depends on the color, the fabric, and how dirty your clothes are. For items with stains, warm water is usually the best option.

Cold Water:

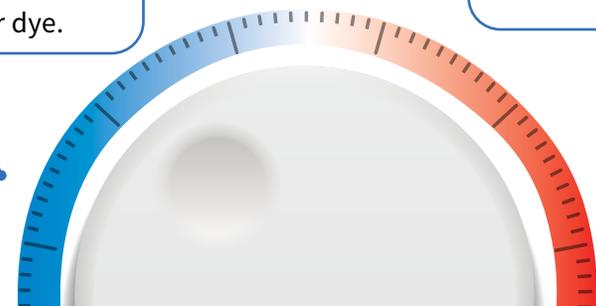
Best for washing delicates, fabrics likely to shrink, bright or dark-colored fabrics, linens, shoes, and mixed loads. Cold water is also great for removing tough stains like hair dye.

Warm Water:

Use for fabrics like nylon and poly-blends, blouses, dresses, pants, and fabrics that shouldn't be ironed.

Hot Water:

Wash towels, sheets, heavily soiled items, and preshrunk fabrics with hot water. Hot water can help remove stains like sweat, nail polish, makeup, grass, and lipstick.

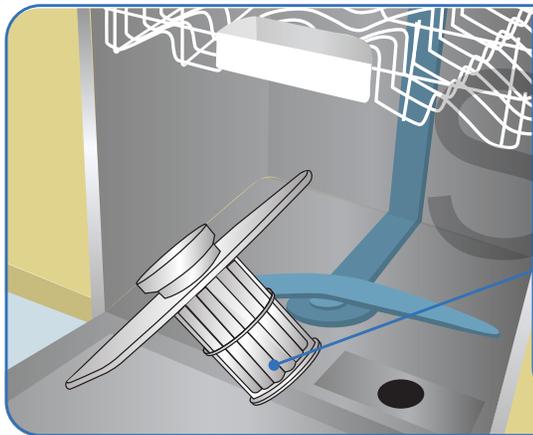


DISHWASHERS

Running your dishwasher has two price tags: the cost of energy to run it and the cost of the water it uses to clean the dishes.

Getting the most out of your dishwasher is a combination of understanding your dishwasher and understanding organizational strategy. Because each model is different in its configuration and settings, it's important to review your dishwasher's manual for advice specific to your model. However, some strategies apply to most dishwashers:

Clean your dishwasher: At least once a month, take out removable parts and clean them to remove food debris and mineral buildup. Consult your dishwasher's manual for the best ways to clean your model.



Filters

Most dishwashers have a filter that can be removed and cleaned to improve efficiency and effectiveness. Consult your dishwasher's manual for instructions.

Skip the prerinse: Most enzymatic dish detergents cling to food particles and soils on the dishes. And most modern dishwashers sense how dirty the dishes are, so if they're too clean when they go in, the dishwasher might not clean them well enough. Save yourself time and water by not prerinsing them in the sink.

Run only full loads: It costs you money to run the dishwasher whether it contains one fork or a full load. Always make full loads your priority.

Don't overload: However, you can go too far. Overloading the dishwasher will prevent dishes from getting clean.

LOADING THE DISHWASHER

Educate yourself and your family members about the correct way to load the dishwasher by reading the manual that came with your machine. Your manual will recommend a loading method that works best for your dishwasher. In general, you can follow these instructions:

Cups and Glasses

Place these items upside down so they don't fill with water.

Top Rack

Use this area for plastic and delicate items that are dishwasher safe.

Middle Spray Arm

This part spins around to clean the top rack. Don't block its movement by placing items that are too large on the bottom.

Pots and Pans

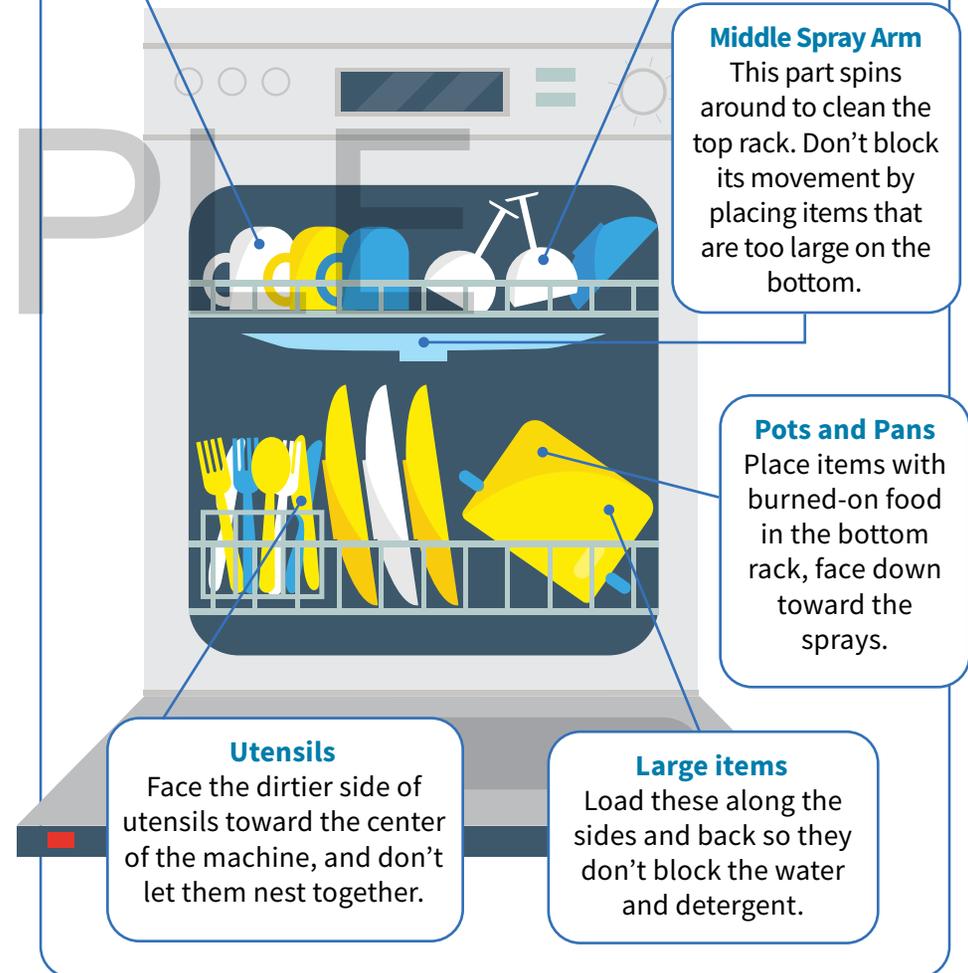
Place items with burned-on food in the bottom rack, face down toward the sprays.

Utensils

Face the dirtier side of utensils toward the center of the machine, and don't let them nest together.

Large items

Load these along the sides and back so they don't block the water and detergent.



ELECTRONIC DEVICES

You may use these devices for working from home or for relaxation. Either way, computers, printers, televisions, and stereo systems use a lot of electricity, but there are ways to reduce the amount they use.

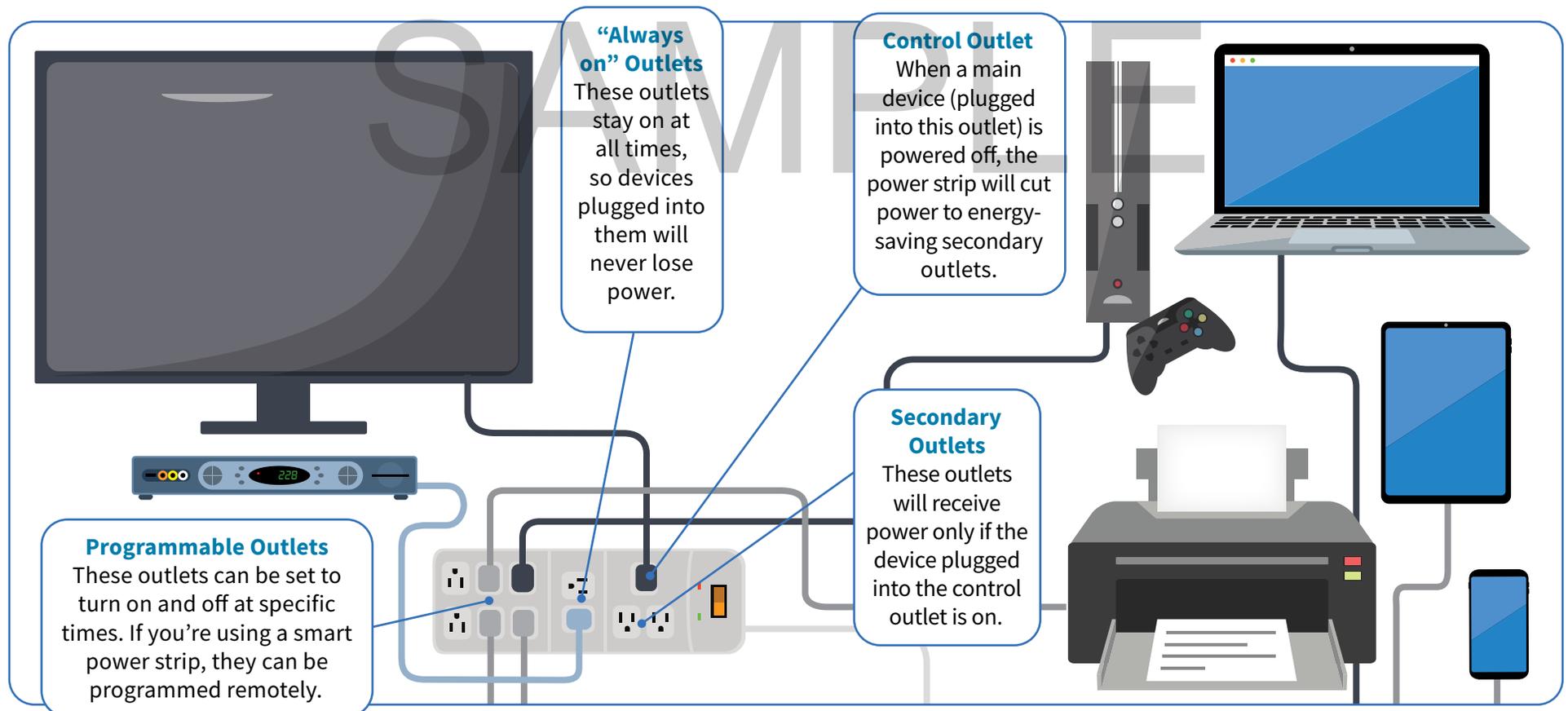
Sleep mode: The number one thing you can do is make sure your computers and other devices have sleep mode settings turned on. After a period of not being used, they'll shift to a low-power state.

Energy vampires: Many devices use power when they're plugged in but not in use. The surefire way to prevent energy vampires, sometimes called phantom loads, is to unplug the devices, but for most situations, plugging and unplugging individual devices is impractical. That's where power strips, advanced power strips, and smart power strips come in handy.

Power strips: Plug a set of devices used together into a power strip. When in use, turn it on; when not in use, turn it off. This applies to systems that can be turned off entirely when not in use.

Advanced power strips: These are designed for systems, such as a TV and cable box or a computer and accessories such as a monitor and printer. You may want to turn off power to some components to save energy but leave the power to others on. For example, you may want to cut power to the TV and speakers but leave the cable box with power to record a show. When you turn off a key item on an advanced power strip, it cuts power to the devices you've designated while continuing to provide power to others. Essentially, it lets you cut power to energy vampires that won't affect your use of the system while keeping others powered.

Smart power strips: Some advanced power strips can connect to Wi-Fi, which allows you to control them from your phone or computer.



RESOURCES

Visit these sites for additional information:

ENERGY STAR

www.energystar.gov

THE AMERICAN COUNCIL FOR AN ENERGY-EFFICIENT ECONOMY

www.aceee.org

THE U.S. DEPARTMENT OF ENERGY

www.energy.gov

THE U.S. DEPT. OF ENERGY'S OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY

www.eere.energy.gov

ALLIANCE TO SAVE ENERGY

www.ase.org

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