

ENERGY STAR Home Check-Up

Use this ENERGY STAR Home Check-Up to walk through your home with your family (or someone else's home, too) and identify ways to start saving energy, money, and the planet right away. Regardless of whether you live in a single-family home or an apartment or you rent or own, there are several ideas here that can help you save—so just review and pick those that work for your home.

First you **Investigate** by checking your home for ways to save energy. Then you **Educate** your family member (that is the person(s) who lives at home with you who will join you for the checkup) on how to save energy. You can then show your family how to take action to make changes—this is the **Activate** part. And once you activate the change, you not only **Save** energy, money, and the environment, but you help change the world—one home, one family at a time.

ENERGY STAR

ENERGY STAR for the home includes ENERGY STAR certified products as well as a variety of energy-saving practices that you can implement in your home to save energy—from simple tips like turning off lights and TVs before you leave a room to bigger projects like adding insulation in the attic. ENERGY STAR certified products are third-party certified to meet strict energy-efficiency requirements set by the Environmental Protection Agency. That means they will save energy, and saving energy saves money and reduces greenhouse gas pollution that contributes to climate change.



LIGHTING

★ INVESTIGATE:

- Look for incandescent light bulbs (the old-fashioned kind of light bulbs, with filaments) as pictured on the next page.

★ EDUCATE:

With so many lighting choices these days, the best way to find an energy-saving light is to look for the ENERGY STAR label. ENERGY STAR certified bulbs use 70-90 percent less energy than incandescent bulbs and last 10-25 times longer.

- ENERGY STAR certified light bulbs come in all shapes and sizes, including Compact Fluorescent Light Bulbs (CFLs) and Light Emitting Diode (LED) bulbs. Both look different than old bulbs because they use a newer technology than regular light bulbs—you might be able to tell they're CFLs if they look swirly, but I wouldn't try to guess. Just look for the ENERGY STAR label and no matter the technology you will be getting a bulb that meets strict guidelines for maximum energy efficiency.
- ENERGY STAR also means high quality and performance. Bulbs with the ENERGY STAR label have undergone extensive testing to make sure they not only save energy, but they also perform properly. ENERGY STAR's strict performance requirements ensure that ENERGY STAR certified bulbs light up

quickly, don't flicker or hum, and maintain their brightness and light quality for a long time.

- For brightness, look for lumens, not watts. ENERGY STAR certified bulbs provide more lumens for less watts. Check out the "How Much Light Do I need" chart on page 9 for help. Manufacturers are also required to include a lighting fact label on bulb packaging with information on lumens and energy used (see image at right).
- Because there are so many different kinds of bulbs, take the time to make sure you are using the correct bulb for each fixture. The "Bulb Purchasing Guide" on page 9 will help.
- Remember to tell your family to recycle the CFL when it burns out. They can take them to most local hardware or home improvement stores, or go to www2.epa.gov/cfl or www.earth911.org to identify local recycling options.



★ ACTIVATE:

- Encourage the resident to start by changing out incandescent bulbs in lights that get used the most, to get the most savings. Typically these are the kitchen ceiling light, living room table and floor lamps, bathroom vanity, and outdoor porch or post lamp.
- Supply the resident with the "Bulb Purchasing Guide" at the end of this Check-Up so he/she can learn more about ENERGY STAR lighting, choose the right bulbs for the home, and learn how to safely handle and dispose of bulbs.

★ SAVE:

- By replacing a home's five most frequently used light fixtures or the bulbs in them with ENERGY STAR certified lighting, the resident can save \$35 each year. And if every American home replaced just one light with an ENERGY STAR light, we would save enough energy to light 2 million homes for a year and prevent nearly 6 billion pounds of greenhouse gas emissions per year, equivalent to the emissions from 550,000 cars.
- To save more energy, make sure you only have the lights on when you need them.



ELECTRONICS

★ INVESTIGATE:

	ENERGY STAR	NOT ENERGY STAR
TV		
DVD		
VCR		
Portable phone		
Cable box		
Computer		
Laptop		
Printer/Scanner/Copier		

- Ask the resident if the products listed above are ENERGY STAR certified, and check to see if there is a visible ENERGY STAR label. See pictures on the right for examples of how the label might appear. The label might be black, blue, or silver. Remind the resident that it might have been on the box or manual that came with the product. If the resident doesn't remember and no logo can be found on or related to the product, then assume that it is not certified for the purposes of this exercise.
- Find out if the computer(s) is set to "sleep" when not in use.

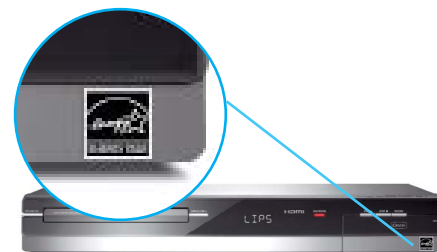
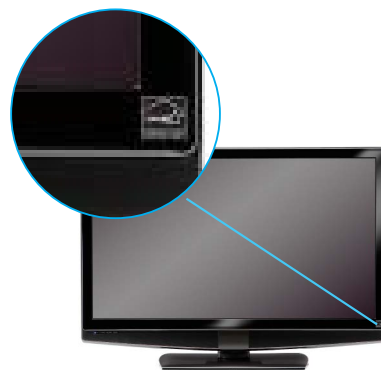
★ EDUCATE:

- The ENERGY STAR label on any of these products means it uses less energy than a standard model, which means fewer greenhouse gas emissions.
- Suggest that the resident look for the ENERGY STAR the next time he/she replaces one of his/her electronic products.
- Turning off computers when they're not in use doesn't hurt them, and it's a great way to save energy!
- Enabling an ENERGY STAR certified desktop computer and monitor's power management features, which put them to sleep when not in use, can save up to \$50 per year.

★ ACTIVATE:

- If the resident has a computer and/or monitor, suggest enabling the power management or "sleep" settings, following the directions included in the "How to Power Manage Your Computer" sheet at the end of this Check-Up.
- Suggest that the resident plug office products and home entertainment equipment into power strips so everything can be turned off with the flip of a switch. Turn off equipment at night or when not in use.
- Suggest that the resident pick the "home" or "standard" or "regular" setting on the set-up menu of his/her television that is most appropriate for home use. Reducing the brightness of a TV set cuts its energy use by as much as 30 percent.

Use these examples to look for the **ENERGY STAR**:



- Walk around the home with the resident and suggest unplugging any power adapters that are not charging products.

★ SAVE:

- If every TV, DVD, and home theatre system purchased in the U.S. this year were ENERGY STAR certified, we would save nearly \$150 million and prevent nearly 2 billion pounds of greenhouse gas emissions per year, equivalent to the annual emissions of more than 175,000 cars.
- If every home office product purchased in the United States this year earned the ENERGY STAR, we would:
 - Save more than \$130 million in annual energy costs.
 - Prevent 1.6 billion pounds of greenhouse gases, equivalent to emissions from 161,000 cars.
 - Save more than 1.1 billion kWh of electricity.

APPLIANCES

	ENERGY STAR	NOT ENERGY STAR
Refrigerator		
Clothes washer		
Clothes dryer		
Dishwasher		
Dehumidifier		

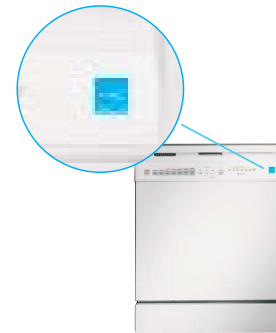
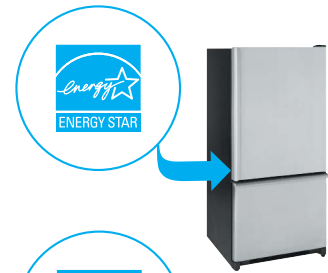
★ INVESTIGATE:

- Ask the resident if the products listed above are ENERGY STAR certified, and check the products for an ENERGY STAR label. See pictures on the right for examples of where the label might appear. Look on the front of the appliance as well as inside the door. Remind the resident that it might have been on the box or manual that came with the product. If the resident doesn't remember and no logo can be found on or related to the product, then assume that it is not certified for the purposes of this exercise.
- Find out if there's an old, pre-1993 refrigerator in the basement or garage.

★ EDUCATE:

- The ENERGY STAR label on any product means it uses less energy than a standard model, which means lower utility bills and fewer greenhouse gas emissions.
- Next time the resident wants to replace an appliance,

Use these examples to look for the **ENERGY STAR**:



recommend looking for the ENERGY STAR.

- Think twice before putting an old refrigerator to use in the garage or basement—operating a refrigerator manufactured before 1993 uses over 1,000 KWh per year to operate.
- The average household spends \$260 per year on water heating—one of a home's highest energy costs, behind heating and cooling.

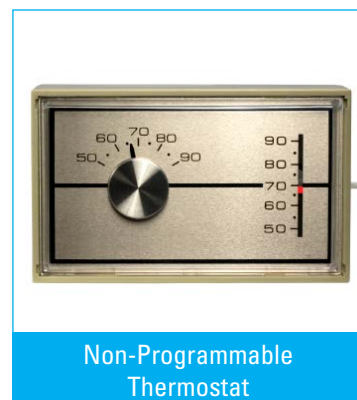
★ ACTIVATE:

Suggest that the resident:

- Wash laundry with cold water whenever possible, and wait until there's a full load to start washing.
- Run the dishwasher with a full load, and use the air-dry function if available.
- Scrape food off of plates instead of rinsing them before loading the dishwasher. It will save water and energy.
- Save energy with your water heater by turning down the thermostat to 120 degrees and wrapping it with an insulating jacket, which can save more than \$30 per year in excess heat loss.

★ SAVE:

- If all refrigerators sold in the United States were ENERGY STAR certified, the energy cost savings would grow to more than \$420 million each year and nearly 8 billion pounds of annual greenhouse gas emissions would be prevented, equivalent to the emissions from 755,000 vehicles.



HEATING AND COOLING

HAVE YOU:	YES	NO
Changed the air filter in the last 3 months?		
Removed leaves, dirt, and other debris from around the outdoor components of the system?		
Had a contractor inspect the duct system for signs of leaks, tears, and disconnections?		
Had the heating and cooling equipment inspected by a professional in the last year?		

★ INVESTIGATE:

- Does the home have central air conditioning and/or a forced-air heating system (which means there will be air vents in the home instead of radiators or baseboard heaters)? If yes, go to the next bullet. If no, skip to the third bullet.
- If yes, ask the resident these questions about his/her heating and cooling system:
- If the home does not have central air conditioning and/or forced-air heating, suggest that the resident choose ENERGY STAR when purchasing a new furnace or boiler.
- Ask the resident if he/she has installed a programmable thermostat and programmed it properly. You'll

know it's a programmable thermostat if it allows you to digitally program in temperatures for specific times of the day throughout the week using a screen and buttons. The home might have a manual thermostat instead, which just has a dial or lever. See the pictures on the right for help.

★ EDUCATE:

- Heating and cooling costs the average homeowner a lot of money—about \$875 a year! That's nearly half of his/her total energy bill.
- With proper use, programmable thermostats can save over \$180 in energy costs. (See directions on how to properly program a thermostat on the following page.)
- Using a ceiling fan is a really great way to save energy by circulating the air inside of a room. You can save by turning your thermostat up a little in the summer since the ceiling fan will make you feel cooler. Don't forget to turn off the fan when leaving the room since ceiling fans cool YOU, not the room.
- The air filters on the furnace need to be checked every month. Replace them if they look dirty, or at least once every 3 months.
- It's a good idea to have a tune-up on the home's air conditioning system each spring and on the furnace or boiler each fall; it helps the home's heating and cooling system work better.
- In homes with forced-air heating or cooling systems, ducts move air to the rooms around the home and return it to the central unit. These ducts are often big energy wasters! You can save up to \$200 a year in heating and cooling costs (or 10 percent on your energy bill) by sealing and insulating your home with guidance from ENERGY STAR.

★ ACTIVATE:

- If there is a programmable thermostat, encourage the resident to program it based on whether he/she is at home, away from home, or asleep per the chart on the next page. Staying within a range of these recommended temperatures will provide the most savings. If the home has a manual thermostat, the resident can also manually change the temperature throughout the day based on the same recommendations, but he/she must do this every time to get the savings.
- If the resident has a ceiling fan, suggest that he/she check to make sure that it is blowing air downward in the summer to help feel cooler. Fans can also be used to pull air up and help circulate warm air in the winter.
- Look around the home at the heat registers and vents—they should be clear of any furniture or rugs. If they are covered or blocked, recommend that the resident keep them clear to improve air flow and comfort.
- When the furnace/air conditioner is on, suggest that the resident go around the home and check how much air is coming out of each register or vent. If there is no air or very little coming out, it could indicate a leak in the system, and the resident should hire a contractor to investigate further.
- Work with resident to remove leaves, dirt, and other debris from around the outdoor components of the system to improve efficiency.
- Have the resident order EPA's "A Guide to Energy-Efficient Heating and Cooling" from the ENERGY

PROGRAMMABLE THERMOSTAT SETPOINT TIMES & TEMPERATURES

SETTING	TIME*	IN WINTER	IN SUMMER
Wake		≤ 70° F	78° F
Leave		Set back at least 8° F	Set up at least 7° F
Return		70° F	78° F
Sleep		≤ Set back at least 8° F	Set up at least 4° F

*If the resident would like to program the thermostat with you, ask him/her what times best coincide with these settings and use the table to re-program the thermostat.

STAR publications website listed on the Resources hand-out at the end of this Check-Up for more information on how to save energy and money and keep his/her home comfortable.

★ SAVE:

- If a home's heating and cooling equipment is more than 10 years old, or is not keeping the home comfortable, consider replacing it with a model that has earned the ENERGY STAR. Depending on where you live, replacing your old heating and cooling equipment with equipment that has earned the ENERGY STAR can cut your annual energy bill by more than \$115.

DO YOU FEEL AIR LEAKS OR SEE GAPS:	YES	NO
Around windows?		
Around the front and back doors?		
Near electrical outlets?		
Near outdoor faucets?		
Around pipes under the kitchen sink?		
Around the dryer vent?		
Around recessed lights?		

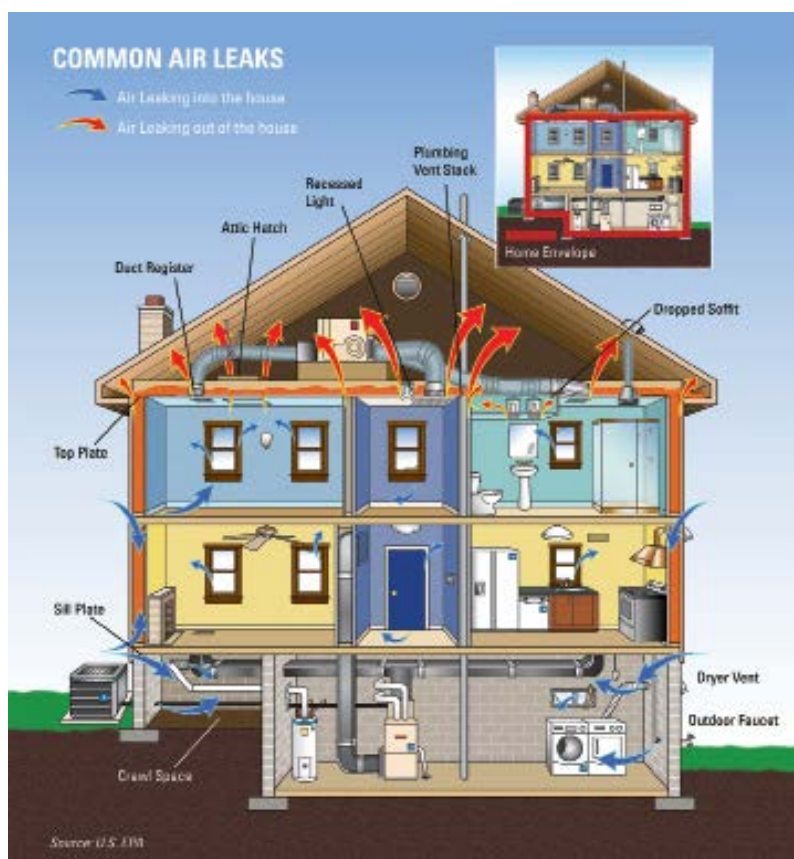
AIR LEAKS & INSULATION

★ INVESTIGATE:

- Ask the resident if he/she often feels drafts or sees gaps in the below areas around the home.
- Then, use a playing card to find doors that could benefit from weather stripping. If you can fit the card between doors and door jambs, weather stripping or a door sweep can be used to help keep out drafts.

★ EDUCATE:

- Air leaks, like these shown in the graphic on the right, waste energy and make a home less comfortable. In fact, the average home has enough air leaks that it is like keeping a window open all year long. There are easy ways to fix leaks with products such as caulk, weather stripping, or spray foam.
- Insulation helps to keep a home warm in the winter and cool in the summer, but most homes today do not have enough insulation in the attic.
- If you're in a colder part of the country, ask the resident if icicles often hang from the roof, or if the snow melts off of the roof earlier than off of neighbors' roofs. This problem may suggest that heat is escaping, and air sealing and additional insulation in the attic may be needed.
- Consumers can save up to \$150 to \$535 a year (depending on local climate) by replacing single-paned



windows with windows that have earned the ENERGY STAR. Also, during cold weather, take advantage of the sun's warmth by keeping drapes open during sunny days. To keep the heat out during the summer, close window shades and drapes in hot, sunny weather.

★ **ACTIVATE:**

- Have the resident order EPA's "Do-It-Yourself Guide to Sealing and Insulating with ENERGY STAR" from the ENERGY STAR publications website listed on the Resources hand-out at the end of this Check-Up for more information about how to fix air leaks all over the home.
- If the resident has an attic, suggest that he/she check the insulation levels. If the insulation is level with or below the attic floor joists, the home probably needs more.

★ **SAVE:**

- Residents can save up 10 percent on a home's energy bill—or up to \$200 a year—by Sealing and Insulating with ENERGY STAR.

MY ENERGY STAR

Conclude the ENERGY STAR Home Check-Up by thanking whoever participated and encouraging them set up a My ENERGY STAR account. My ENERGY STAR is a free EPA tool that provides comprehensive information on how to save energy and money and help protect the environment. From products to easy tips to bigger projects, My ENERGY STAR provides comprehensive guidance on ways to save and helps you track your progress with "to do" and "completed" lists and stars you can earn based on your energy savings. Go to energystar.gov/myenergystar and demonstrate how easy it is to get started.

Thanks for making a difference with ENERGY STAR!



LIGHTING MADE EASY

Just Look for the ENERGY STAR®

Only bulbs that have earned the ENERGY STAR label have been independently certified and undergone extensive testing to assure that they will save energy and perform as promised.



- ★ Use 70-90% less energy than incandescent bulbs
- ★ Save you \$30 to \$80 in energy bills
- ★ Provide the same brightness (lumens) with less energy (watts)

- ★ Last 10 to 25 times longer than incandescent bulbs
- ★ Help protect the environment and prevent climate change

ENERGY STAR certified CFL and LED bulbs

are available in a variety of shapes and sizes for any application—including recessed cans, track lighting, table lamps, and more. You can even find certified bulbs that are dimmable.

Use this chart as a guide to finding the right ENERGY STAR certified bulb for your light fixture and remember to always check the packaging for proper use.

BULB TYPES						
TABLE OR FLOOR LAMPS		SPIRAL	A SHAPE			
PENDANT FIXTURES		SPIRAL	A SHAPE	GLOBE	MR16	CANDLE
CEILING FIXTURES		SPIRAL	A SHAPE	CANDLE		
CEILING FANS		SPIRAL	A SHAPE	CANDLE		
WALL SCONCES		SPIRAL	A SHAPE	GLOBE	CANDLE	
RECESSED CANS		MR16	SPOT	FLOOD		
ACCENT LIGHTING		MR16	SPOT			

BRIGHTNESS

For brightness, look for lumens, not watts. Lumens indicate light output. Watts indicate energy consumed. ENERGY STAR certified bulbs provide the same brightness (lumens) with less energy (watts). **Use this chart to determine how many lumens you need to match the brightness of your old incandescent bulbs.**

Old Incandescent Bulbs (Watts)	ENERGY STAR Bulb Brightness (Minimum Lumens)
40	450
60	800
75	1,100
100	1,600
150	2,600

COLOR/APPEARANCE

ENERGY STAR certified bulbs are available in a wide range of colors. Light color, or appearance, matches a temperature on the Kelvin scale (K). Lower K means warmer, yellowish light, while higher K means cooler, bluer light.

2700K	3000K	3500K	4100K	5000K	6500K
WARM					COOL
Warm White, Soft White Standard color of incandescent bulbs.			Cool White, Natural White Good for kitchens and work spaces.		Natural or Daylight (think blue sky at noon) Good for reading.

Visit energystar.gov/lighting for more information.



HOW TO POWER MANAGE YOUR COMPUTER



For a
PC

For a
MAC

Homeowners can save money by activating the power management features on a computer or laptop.

Enabling “sleep” features can save you as much as \$50 per system annually. Also, you can save energy, money, and the environment just by activating your power management!

ENERGY STAR Power Management features—standard in Windows and Macintosh operating systems—place monitors and computers (CPU, hard drive, etc.) into a low-power “sleep mode” after 5 to 20 minutes of inactivity. Touching the mouse or keyboard “wakes” the computer and monitor in seconds. The lower the setting, the more energy you save.

To configure the Power Management on most Windows programs:

Click **START**, **RUN**, and then **CONTROL PANEL**.

Double click on **PERFORMANCE AND MAINTENANCE**.

Click **POWER OPTIONS**.

The Power Options Properties dialog box should now be displayed with the Power Schemes tab selected. Here you can set timeouts for your monitor, system standby, and hibernate. Notebook computer users can specify an alternative power scheme that will take effect when the PC is running on battery power.

To configure the Power Management on most Mac programs:

Click on the **APPLE symbol** (Apple Menu) in the upper left of your screen.

Go to “System Preferences.”

Click **SHOW ALL** (if necessary).

Select **ENERGY SAVER** from the “Hardware” row.

Set “Put the computer to sleep when it is inactive for” to 30 minutes using the slider.

Set “Put the Display to Sleep when the computer is inactive for” to 5 minutes using the slider.

To maximize savings, EPA recommends setting computers to enter system standby or hibernate after 15 to 60 minutes of inactivity. To save even more, set monitors to enter sleep mode after 5 to 20 minutes of inactivity. The lower the setting, the more energy you save. The “Turn off hard disks” setting does not save much power, and can be ignored.

If you are not able to select a hibernate timeout, you may need to enable the hibernate feature. To do so select the **HIBERNATE tab** in Power Options Properties, check “Enable Hibernation” and click **APPLY** or **OK**.

For a clickable list of resources, please visit the ENERGY STAR Power Management Web site at www.energystar.gov/powermanagement.

ENERGY STAR ONLINE RESOURCES

The U.S. Environmental Protection Agency offers a variety of tools to help people make home improvements, find energy-efficient products, bring energy efficiency practices to work and their communities, and get tips on how to save energy, save money, and fight climate change.

MY ENERGY STAR

www.myenergystar.gov

- Set up your personal energy-saving profile
- Track your progress
- Find rebates
- Get energy-saving ideas

ENERGY STAR HOME ADVISOR

www.energystar.gov/homeadvisor

- Get customized recommendations on home improvement projects.
- Make a plan to get started.
- Increase your household's energy efficiency and comfort.

HOME ENERGY YARDSTICK

www.energystar.gov/yardstick

- Compare your household's energy use to others across the country.
- Get your score and recommendations for improvement.
- Make your home improvements and come back in 12 months to see how much you've saved.

ENERGY STAR @ HOME

www.energystar.gov/home

- Take a room-by-room tour.
- Learn what steps you can take to save energy, save money, and help fight climate change.

ENERGY STAR @ WORK

www.energystar.gov/work

- Take a tour of an office.
- See how you can save energy—and help fight climate change—all without leaving your desk

REBATE FINDER

www.energystar.gov/rebatefinder

- Find special offers in your city or state sponsored by ENERGY STAR partners, such as:
 - Sales tax exemptions or credits
 - Rebates on certified products
 - Recycling incentives

TAX CREDITS FOR ENERGY EFFICIENCY

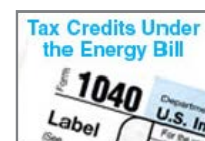
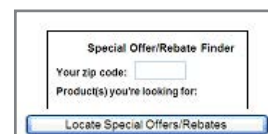
www.energystar.gov/taxcredits

- Learn about tax credits available for purchasing energy-efficient products.
- Discover tax credits for home builders and tax deductions for commercial buildings.
- Read frequently asked questions.

ENERGY STAR PODCASTS

www.energystar.gov/podcasts

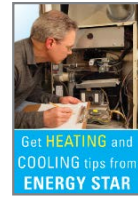
- Watch video podcasts to learn how to make energy-efficient improvements.



HEATING & COOLING QUIZ

www.energystar.gov/homeimprovement

- This simple online tool asks homeowners five basic questions about the HVAC system to see if it is being properly maintained.
- Based on their answers, ENERGY STAR provides tips on increasing efficiency through proper maintenance.



CHANGE THE WORLD, START WITH ENERGY STAR

www.energystar.gov/changetheworld

- This site represents the hub of what all Americans are doing to save energy, money, and help fight climate change as part of our Change the World, Start with ENERGY STAR campaign. See what others are doing to make a difference at home, at work, and in the community with ENERGY STAR and how you can get involved.



ENERGY STAR SOCIAL MEDIA

- Facebook: www.facebook.com/ENERGYSTAR
- Twitter: www.twitter.com/ENERGYSTAR and www.twitter.com/ENERGYSTARBldgs
- YouTube: www.youtube.com/EPAENERGYSTAR

ENERGY STAR PUBLICATIONS

www.energystar.gov/publications

- Order free informational materials to use yourself or share in your community:
 - Guide to Energy-Efficient Heating and Cooling
 - Do-It-Yourself Guide to Home Sealing
 - Bring Your Green to Work tip card
 - Join Us in the Fight Against Climate Change booklet



RESOURCES FOR KIDS

ENERGY STAR KIDS PAGE

www.energystar.gov/kids

- Kids can learn how to make a difference in protecting the environment.
- Find fun games and activities.



ENERGY STAR KID'S ROOM

www.energystar.gov/kidsroom

- Be an ENERGY STAR ... right in your own bedroom.
- See tips on how kids can make big changes to save energy.

