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ENERGY STAR Kids Website Print Version!

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YOUR PLANET NEEDS YOU

Our Planet is in Trouble

For thousands of years our planet's given us energy, lots of energy!

But in the process, we've put our planet under stress and now it needs our help. If we want to keep our planet healthy, we must find better ways of getting and using energy.

Join ENERGY STAR in our fight to save our planet by becoming energy efficient.

What is Energy Anyway?

Energy is the ability to do work. Energy is found everywhere in the world and comes in many forms:

Forms of Energy

- Light
- Heat
- Electricity
- Sound
- Motion

Think of energy as the stuff that makes things happen. Without energy, your body wouldn't grow, your car wouldn't move, the lights in your house wouldn't work, and that's just to name a few.

We need energy for everything we do in life, and we need lots of it!

Where does energy come from?

Energy's all around us. It's in the light we see, it's in the food we eat, and it's in the ground we walk on. In fact, energy is everywhere! The problem is, we can't always use energy. If we want to use energy we have to first make some changes.

- The electricity in your house comes from different types of fuels. This energy is often produced far away and is sent along wires into your home.
- Our bodies can change the food we eat into energy.
- Plants can change sunlight into useful energy, which makes them grow!
- Things like cars, airplanes and buildings use a kind of food which we call fuel. Gasoline, coal and wood are all types of fuel, but there are many more. Think of fuel as stuff that has energy inside, just waiting to get out to do something.

Types of Energy

The energy we use to power things, like our cars and homes, come in two different types: renewable energy and non-renewable energy.

- Renewable energy comes from things that won't run out—wind, water, sunlight, plants and more. These are things we can reuse over and over again. These methods of producing energy are often cleaner and better for our environment than non-renewable ones.
- Non-renewable energy comes from things that will run out one day—oil, coal, natural gas and uranium. Oil, coal and natural gas are known as fossil fuels. These fuels are produced from animal and plant material that's millions and millions of years old.

What Can happen?

Energy allows us to do so many things that make our lives better. But energy isn't free, and there are several prices to be paid.

- Energy costs money. So, the less energy you use, the more you save! One way to do this is to buy energy efficient products, like the ones with the ENERGY STAR Label.
- Using too much of certain types of energy, like fossil fuels, can pollute our environment and possibly lead to global warming. Often, the electricity in your home is produced at power plants using fossil fuels, like coal. The less energy we use, the less impact we have on our environment, and that means our planet stays clean and healthy.
- We have to remember that there's a limited supply of things that give us energy, like coal and oil. They won't last forever, so it's important to use what we have left wisely.

Saving Energy

So, how do we use less energy? That's another good question. If you want to stay warm, you need energy. If you want to light your house, you need energy. If you want to drive to the store, you need energy. It seems like you need more, not less energy!

That's just the problem. More and more, every day we all need more energy, which is why energy efficiency is so important. When we're energy efficient we use less energy to do something as good as before or better. We have to remember there is a limited amount of non-renewable fuel sources such as coal and gas. Even if we don't run out of fuel, we can damage our environment by using too much and wasting energy.

YOU CAN MAKE BIG CHANGES

Change your ways and become an ENERGY STAR!

There's tons of stuff we can do everyday to save energy and our planet. Find out what you can do...Right in your own bedroom!

Ceiling Fan

Use your fan wisely to make the most of the air in your room. It's all about the direction your fan spins—in the summer to the left, in the winter to the right! And remember: Ceiling fans only cool people, not the room. So when you leave the room, turn it off.

Cell Phone

When your cell phone is done charging, unplug the charger from the wall. The charger wastes energy when nothing's plugged in to it.

Guitar Amp

Hey, rock star! Remember to unplug appliances you're not using to avoid unnecessary energy use.

Lamp

Light up your life with energy efficient ENERGY STAR qualified light bulbs and fixtures.

Laptop

Let them sleep and they will save. Ask your parents to help you set the ENERGY STAR power management features on your computer and monitor.

Light Switch

Your room's not afraid of the dark. Always turn off lights when you leave.

Stereo

Plan on asking for a new stereo for your birthday? Be sure to ask for one that's earned the ENERGY STAR because they use less energy. And hey — turn off the one you have when you're not using it...Mom and Dad will really appreciate that!

TV

Vampires aren't only in movies you watch! Did you know that your TV sucks energy even when you're not using it? Make sure you ask for ENERGY STAR when getting a new TV because they use less energy when they're off or on.

Vent

Make it easy on the air and keep those vents clear. It takes less energy to pump air into your room when the vents aren't blocked.

Window

That's not a monster you hear...that's air blowing through a crack around your window. If you hear this noise and feel a draft near your window, be sure to tell your parents. They will likely need to caulk and weather-strip around your window to make sure no air is coming in, or going out.

More Ways to Save

Turn off lights, the TV, and other electronics when you're done with them.

Don't waste energy on an empty room—save it!

Talk to your friends and family about saving energy.

More energy saved means a healthier planet!

Recycle paper, plastic, glass and cans.

The more we reuse things, the less we damage our planet.

Use products with the ENERGY STAR label.

ENERGY STAR products use less energy than others.

Walk or ride a bike instead of taking a car or bus.

Remember, vehicles burn fossil fuels, which contribute to global warming. The less we use, the better!

Don't leave water running when you brush your teeth.

Water is precious and takes energy to clean it, so don't waste it!

Don't leave doors to the outside open for longer than necessary.

Hot and cool air escape quickly. Don't let it get away!

Use both sides of a piece of paper before throwing it away.

It takes energy to make paper, so don't waste it!

Pick up litter.

We want to keep our planet green and clean!

THE ENERGY STARS

Saving our Planet, One Kilowatt at a time.

Meet the most energy efficient superheros ever to come to our planet's aid.

In 1992 an elite team of energy-saving products set forth to conquer the world of energy waste. They are the ENERGY STARS! Many will apply, few will make it. It takes more than just a pretty face to become an ENERGY STAR product. It takes a commitment to energy efficiency. That, and a label, an ENERGY STAR label!

Bulby

Hometown: Las Vegas, NV

Mission: To illuminate the world.

Stats

- 75% more energy-efficient
- Lasts 10 times longer
- Produces 75% less heat

Quote: “Live bright, live long, and leave a good-lookin’ world behind!”

Background

As a kid, Bulby knew he was different. He always outlasted the other bulbs and produced less heat. This made the other bulbs jealous and they teased him. But this didn’t bother Bulby much, for he felt he was meant for greater things, he just didn’t know what.

One day, a man on the street passed and said, “Keep up the good work, CFL!” “CFL?” thought, Bulby. “What’s that?” He looked it up and found that CFL stood for, compact fluorescent lightbulb. These bulbs used less energy, saved money and would help save the world! And he was one of them! After that, C.f. Lumen set off to fulfill his destiny. He formed the ENERGY STARS, a collection of like-minded, energy-efficient products, whose mission is to save energy and the world! Meet the rest and join them today!

Tip

How many kids does it take to change a light bulb and save some energy? Just one—YOU! Compact fluorescent light bulbs like me use lots less energy and last a lot longer than regular light bulbs. Change a light today!

Bubbles

Hometown: Wheeling, WV

Mission: To keep your clothes clean and the Earth green.

Stats

- Saves 75,000 gallons of water over lifetime
- \$550 saved over lifetime
- Uses less energy

Quote: “If you got clean clothes and a dirty world, you ain’t got nothin’”

Background

Bubbles grew up on a small farm in West Virginia. Her momma and papa were washboards who worked long and hard washing clothes all day. Bubbles saw how tired they were and how all the dirty water was messing up the nearby creek. Her papa was old-fashioned and it was hard for him to change his ways. He was skeptical of all this energy-efficiency. But Bubbles knew better and vowed to become energy-efficient. One day, she was talking to one of her dishwasher friends and learned about the ENERGY STARS. This was what she had been waiting for! So, Bubbles packed her bags and set out to join their team. Today, she proudly wears the ENERGY STAR label and saves energy every day!

Tip

Hey ya'll! Help your mom and dad—and me—by using cold water to wash your clothes whenever you can. Also, make sure the washing machine is full when you turn it on!

Celine Fannagan

Hometown: Chicago, IL

Mission: To spin quieter, faster and more efficiently.

Stats

- 50% more energy-efficient

Quote: "I spin. I save. That's what I do."

Background

Celine grew up in Chicago and spent her days slowly circulating the air in local jazz clubs. She was young and grew tired of hanging out all day with the older fans. Her cousin, a wind turbine out in Nevada, used to tell her stories about all the new stuff happening with fans, "Everyone's becoming energy-efficient. It's the future!"

Celine decided it was time for her to become energy-efficient too. She took all the money she'd been saving, got herself some new blades, a new motor, and headed west! She met a roulette table at a spinning class out in Las Vegas who told her about the ENERGY STARS. She decided to join and is now fighting for energy-efficiency and a cleaner, greener world!

Tip

Hey kids! Help me fight ceiling fan misuse by checking out the fans in your house. To help your fans heat and cool your house the best they can, follow these rules: In the winter, set the fan to spin clockwise. In the summer, set the fan to spin counterclockwise.

Laptop Larry

Hometown: Silicon Valley, CA

Mission: To teach others, especially computers, that a little sleep saves a lot of energy.

Stats

- Faster response times
- Improved energy-efficiency
- \$1.8 billion saved over next 5 years

Quote: "I get a lot done when I'm asleep."

Background

Larry grew up in Silicon Valley and comes from a loving, open-minded family. His dad, a desktop PC, married his high school sweetheart, a Mac laptop. They always taught Larry to be tolerant of others and to be energy-efficient. He took this to heart. In fact, Larry's favorite pastime is saving energy. Well, actually it's sleeping, but while he sleeps, he saves energy!

One day, while napping out in the park, one of the ENERGY STARS stumbled over him. Seeing all the energy he was saving, they asked him to join! He's been saving energy (napping) ever since.

Tip

All I ask is that you kids let me sleep! Get your parents or teachers to check to make sure your computer's sleep functions are turned on—even your computer needs a break sometimes!

Teley

Hometown: New York, NY

Mission: To entertain and educate.

Stats

- 30% more energy-efficient

Quote: "Entertaining takes lots of energy; you might as well save some."

Background

When Teley was a kid, there were only a few channels and TVs weren't used as much. He was able to save lots of energy in stand-by mode when nobody was watching. But today, TVs are used all the time! Teley's smart, though, and has learned how to save energy in active mode while he's turned on. Saving energy is very important to Teley, since around 10% of a household's electric bill goes to watching TV. With this in mind, he knew he had to tell the rest of the world the benefits of saving energy. One day, while flipping through channels, he came across an ad for the ENERGY STARS. "That's it!" he exclaimed. The very next day, he joined the team and is now spreading the word of energy-efficiency!

Tip

Howdy partners! How about reading a book instead of watching TV sometimes? No? Ok, ok, how about just turnin' off the TV when you're not in the room? Thanks a bundle!

WORD BANK

Atmosphere

All the gases surrounding the Earth, which help make life possible.

Biodiesel

A fuel made with vegetable oils, fats, or greases - such as recycled restaurant grease. Biodiesel fuels can be used in diesel engines without changing them. It is the fastest growing alternative fuel in the United States. Biodiesel, a renewable fuel, is safe, biodegradable, and reduces the emissions of most air pollutants.

Biofuels

Fuels made from biomass (plants). These are usually mixed with gasoline and diesel fuel. Some examples are biodiesel and ethanol.

Biomass

Plant materials and animal waste used especially as a source of fuel.

Biomass Energy

A renewable source of energy that is made from plant material and animal waste.

Carbon Dioxide (CO₂)

A colorless, odorless noncombustible gas that is present in the atmosphere. It is formed by burning carbon and carbon compounds (such as fossil fuels and biomass) and by respiration from animals and plants, and by the gradual decomposition of organic matter in the soil.

Carbon Footprint

A measure of how our daily activities affect the environment. It relates to the amount of greenhouse gases we release into the world through burning fossil fuels. For instance, driving our cars, heating our homes, and using electricity all contribute to the release of greenhouse gases. Even buying food and clothes affect the amount of greenhouse gases released into the environment.

Carbon Offsets

These are things done to reduce the amount of greenhouse gases released into the environment. Things like, using renewable energy (wind, solar, biofuel, etc.), planting trees, and buying energy-efficient products all help to reduce greenhouse gas emissions.

Chemical Energy

Energy stored in a substance and released during a chemical reaction such as burning wood, coal, or oil.

Climate

The average weather conditions of a region. For example: deserts are hot and dry, while the North Pole is cold and icy.

Climate Change

Any long-term, lasting change in the weather patterns of an area.

Coal

A fossil fuel formed by the breakdown of vegetable material trapped underground for millions of years.

Deforestation

The cutting down and removal of all or most of the trees in a forested area. Deforestation can erode soils, contribute to desertification and the pollution of waterways, and decrease biodiversity through the destruction of habitat.

Energy

The ability to do work or the ability to move an object.

Energy Conservation

The practice of decreasing the amount of energy used.

Energy Efficiency

The practice of using less energy to do something as good as before or better.

Environment

All the living and non-living things, such as air, water, soil, plants and animals, found on Earth or in some particular region.

Ethanol

A fuel made from the sugars found in grains, such as corn, sorghum, and wheat, as well as potato skins, rice, sugar cane, sugar beets, and yard clippings.

Fossil Fuel

Fuel consisting of the remains of organisms preserved in rocks in the Earth's crust with high carbon and hydrogen content.

Fuel

Something consumed to produce energy, especially: 1. A material such as wood, coal, gas, or oil burned to produce heat or power. 2. Material used in a nuclear reactor. 3. Nutrients used by a living organism; food.

Generator

A machine that converts movement into electricity. Usually a force, like wind or water, causes something to spin and electricity is made.

Geothermal Energy

The heat energy that is produced by natural processes inside the earth. It can be taken from hot springs, reservoirs of hot water deep below the ground, or by breaking open the rock itself.

Global Warming

An increase in the average temperature of the Earth.

Greenhouse Effect

The effect produced when greenhouse gases trap solar radiation in the Earth's atmosphere and warm the planet. This process occurs naturally and has kept the Earth's temperature about 60 degrees Fahrenheit warmer than it would be without it. Current life on Earth could not continue without the greenhouse effect.

Greenhouse Gases

Any gas that traps heat in the atmosphere. Greenhouse gases include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), halogenated fluorocarbons (HCFCs), ozone (O₃), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs).

Hydrogen

A colorless, odorless, highly flammable gaseous element. It is the lightest of all gases and the most abundant element in the universe.

Hydropower

Energy that comes from moving water. The force of the water pushes on blades in a turbine and produces electricity.

Ice Age

Any of several cold periods during which glaciers covered much of the Earth.

Industrial Revolution

The rapid industrial growth that began in England during the middle of the 1700s and then spread over the next 50 years to many other countries, including the United States. This period brought the introduction of mass production, improved transportation, technological progress, and the industrial factory system.

Natural Gas

An odorless, colorless, tasteless, non-toxic clean-burning fossil fuel. It is usually found in fossil fuel deposits and used as a fuel.

Nuclear Energy

Energy that comes from splitting atoms of radioactive materials, such as uranium.

Non-Renewable Energy

Energy sources that can't be replenished (made again) in a short period of time. These energy sources come out of the ground as liquids, gases and solids. Oil, natural gas, coal and uranium are all examples of non-renewable energy sources.

Ocean Energy

Energy that comes from the movement of tides and waves.

Oil

A black, liquid fossil fuel found deep in the Earth. Gasoline and most plastics are made from oil. It is formed from the remains of animals and plants that lived millions of years ago.

Post-consumer Waste

Basically, it's trash. These are things that we buy that don't get recycled. This is a problem because we're producing so much of it that we're running out of places to put it.

Photovoltaic Cells

A device that converts energy from light into electricity.

Recyclable

Something that can be used over and over again, sometimes for different purposes. For example, instead of throwing away metal cans, they can be used again to make new cans; they could even be made into completely different things.

Renewable Energy

Energy sources can be replenished (made again) in a short period of time. Sunlight, wind, water, geothermal, and plants are all examples of renewable energy sources.

Solar Energy

The radiant energy of the sun, which can be converted into other forms of energy, such as heat or electricity.

Wind Energy

Energy from the movement of wind. Windmills and wind turbines use the force of wind to spin their blades and produce energy.

Wind Turbines

A rotating device, like a windmill, that converts the movement of air into electricity.

FACTOIDS

Find out the Why's, Where's, How's and Who's of Energy.

Where does our electricity come from?¹

Coal: 49%

Coal is a non-renewable source of energy that takes millions of years to make. It comes from energy stored by plants that lived millions of years ago. It is the most abundant fossil fuel produced in the United States.

¹ SOURCE: <http://www.eia.doe.gov/cneaf/electricity/epa/figes1.html>

Natural Gas: 20%

Natural Gas is a non-renewable source of energy that takes millions of years to make. The main part of natural gas is called methane. Natural gas comes from plants and animals that lived millions of years ago. It is a fossil fuel.

Nuclear: 19.4%

Nuclear energy is a non-renewable source that comes from the energy stored in tiny particles called atoms. Uranium is the metal found in the earth that is needed to get the whole process going.

Hydroelectric: 7%

Hydroelectric is a renewable energy source that uses the movement of water to make energy.

Oil: 3%

Oil (petroleum) is a non-renewable source of energy that takes millions of years to make. It comes from plants and animals that lived millions of years ago. It is a fossil fuel.

Other Gases: 2.3%

While natural gas is the most common, there are many other types of gases used to make energy.

Other Renewables: 0.4%

Other Renewable energy sources include: wind, solar, geothermal, and biomass.

Other: 0.3%

The energy sources listed are the most common, but there are other ways to make energy.

What are people thinking about the environment?

84% of Americans think global warming is probably happening (up from 80% in 1998).

52% personally see global warming as very/extremely important (up from 31% in 1998).

57% think global warming will be a “very” serious problem in the future if nothing is done.

83% of Americans think that our government should provide leadership to help reduce pollution linked to global warming, and help find new ways of helping the Earth, like renewable energy.

95% of consumers agree or strongly agree that “saving energy helps the environment”.

98% of consumers think it is important to save energy in their home.

How ENERGY STAR is helping

Americans have purchased more than 2.5 billion ENERGY STAR qualified products. This is great news, since the more energy we all save, the healthier our planet will be!

In 2008, Americans — with the help of ENERGY STAR — saved \$19 billion on their energy bills and avoided greenhouse gas emissions equivalent to 29 million cars.

Energy and your home

ENERGY STAR homes are typically 20–30% more efficient than standard homes.

The typical household spends more than \$1,900 a year on energy bills. With ENERGY STAR, you can save over 30% or about \$600!

The average house is responsible for 22,000 lbs of greenhouse gas emissions per year, twice as much as the average car.

ENERGY STAR qualified homes save \$200 to \$400 each year! Over the years, this adds up to thousands of dollars!

The ENERGY STAR label makes it easy to identify homes that are truly energy efficient.

Each home that earns the ENERGY STAR can keep 4,500 lbs of greenhouse gases out of our air each year. This is good since greenhouse gases contribute to global warming.

If your family is looking for a new home, tell them that ENERGY STAR qualified homes could save your family \$200 to \$400 every year.

Where does all that energy go?

Typical house's annual utility bill (\$1900 total)

- \$22 : Computer & Monitor
- \$35 : TV, VCR, DVD
- \$47 : Dishwasher
- \$87 : Refrigerator
- \$107 : Clothes Washer & Dryer
- \$184 : Lighting
- \$239 : Other
- \$245 : Water Heater
- \$257 : Cooling
- \$688 : Heating

WOW! It sure does cost a lot of money to keep your house running smoothly. With ENERGY STAR, your parents could save \$600 a year! Just think of all the games, vacations and other fun stuff that money could be used for! (Although, don't be surprised if your parents just want to save it. Hey, you're going to college one day, you'll need it!)

PARENTS AND TEACHERS

Did You Know...

- The annual energy bill to run America's primary and secondary schools is a staggering \$6 billion — more than is spent on textbooks and computers combined.
- The least efficient schools use three times more energy than the best energy performers.
- Top performing ENERGY STAR labeled schools cost forty cents per square foot less to operate than the average performers.

In the Classroom

Teach kids how becoming energy-efficient can help save our world!

Lesson Plans:

- The Department of Energy offers excellent lesson plans and downloads² for use in the classroom.
- The mission of the National Energy Education Development Project's (NEED)³ is to design and deliver objective, multi-sided energy education programs.

Games & Activities:

- "A Beautiful World Starts with You" brochure (English)⁴ (Spanish)⁵
- Horton Hears a Who! Activity Book⁶
- You can also order printed copies of these and many other publications using our Publications Tool⁷.

School Partnership and Participation

Schools across the country have joined the ENERGY STAR community — committing themselves to both their students and the environment.

- Our K–12 Partners⁸
- K–12 Schools that have Earned the ENERGY STAR⁹
- Learn more about opportunities for K–12 Schools¹⁰

Campaigns & Pledges

Get involved with your kids and make a pledge today!

Change a Light, Change the World!¹¹

This year, schools have played a crucial role in the success of the ENERGY STAR Change a Light campaign. Anyone can take the pledge. Schools and community organizations can help drive the pledge. See what you and your kids can do to help.

Take the ENERGY STAR Challenge!¹²

Join the K–12 Schools that have already committed to reducing their energy use by 10%!

2 <http://www.eere.energy.gov/education/lessonplans/>

3 <http://www.need.org>

4 http://energystar.gov/ia/business/k12_schools/KidsBrochure.pdf

5 http://energystar.gov/ia/business/k12_schools/Spanish_Coloring_Book.pdf

6 <http://www.energystar.gov/ia/partners/publications/pubdocs/HortonESActiv508.pdf>

7 <http://energystar.gov/index.cfm?fuseaction=publications.showPublications>

8 http://www.energystar.gov/index.cfm?fuseaction=PARTNER_LIST.showPartnerResults&partner_type_id=CIK&s_code=ALL

9 http://www.energystar.gov/index.cfm?fuseaction=labeled_buildings.showBuildingResults&building_type_id=334&s_code=ALL&profiles=0

10 http://www.energystar.gov/index.cfm?c=k12_schools.bus_schoolsk12

11 <http://energystar.gov/index.cfm?fuseaction=cal.showPledge>

12 http://energystar.gov/index.cfm?c=challenge.bus_challenge

QUICKEST EVER SLIDE SHOW ON GLOBAL WARMING

Things Come...

Things go.

Our planet's climate is no different. Slowly, over long periods of time our planet naturally undergoes changes in temperature.

Sometimes it's hot.

Sometimes it's cold.

But now, something else is happening.

Human beings have come onto the scene. Over the centuries we've made great progress. Some of our advances have even changed the world, but are we changing our climate...?

Many leading scientists think so. Because of the demands of our growing population we are adding more and more greenhouse gases into the atmosphere, which can lead to Global Warming.

So what's the big deal? The warming of our planet might sound nice, but it can lead to big problems, like...

- Floods
- Loss of Habitat
- Droughts
- Lack of Food

As you can see, we face plenty of trouble if our planet heats up too much, too quickly. So what can we do...? Lots! There are many ways to lessen our impact on the environment and make our world a cleaner, greener place to live.

PRIVACY NOTICE

This ENERGY STAR Web site provides content to children. It is EPA policy, in compliance with the requirements of the Children's Online Privacy Protection Act (COPPA), to collect no information online about or from children under the age of 13 except when it is needed to identify a submission or to answer a question. Any such instances where information is collected on Web pages for children will be clearly marked. Unless required by law, none of the information will be used for another purpose or shared with third parties, nor will personally identifying information be published on the EPA Web site. When EPA offices identify the work product of a child under thirteen on the ENERGY STAR Web site, only the first name, age, and home state of the child will be stated (e.g., Mike, age 7, Kentucky) unless the parent makes a hardcopy request to have additional information posted.

TELL US WHAT YOU THINK

Like the site? Have some ideas to make it better? Tell us what you think by sending an email to kidsfeedback@energystar.gov!