Resource Conservation

What Happens to Recyclables?

Three-angled arrows have become the easily recognizable symbols for recyclable items and hopefully you are already doing your part in reducing the amount of waste that is filling the country's landfills.

Recycling takes a little work, such as sorting materials, but reuse is a great way to conserve the planet's resources. Knowing the process that takes place with the products you recycle and how they are reused will provide you with extra enthusiasm the next time you're sorting through your paper, plastic and glass.

PAPER

The United States Environmental Protection Agency states that paper creates almost 30 percent of the country's solid waste each year.

The first step of recycling paper is to separate it by type. This means lined paper, newspaper and even magazines. Once paper is sorted, it is compressed into a bale to make transportation a breeze.

Once the paper arrives at the paper mill, it is mixed with water and turned to pulp. During this process, items such as staples are removed and the pulp is screened several times to create usable paper.

The paper is then mixed in a solution that dissolves ink once air is applied. It is then bleached to create pure white, reusable paper.

GLASS

Once your recycled glass arrives at the recycling plant, it is sorted much like paper. Only like-colored glasses can be recycled together. The glass is then washed to remove impurities and then pulverized into a fine material called cullet.

Cullet is so smooth that it takes the place of sand in many different applications including sports turf, landscaping and even playground surfaces.

PLASTIC

Plastic is one of the most important materials used in today's world. It is in demand in nearly every industry and is non-biodegradable. Recycling plastic is a way to keep this valuable resource from taking up space in landfills.

Plastic recycling begins with sorting by the different resin contents which were used to create the original product. It is then chopped into tiny pieces and cleaned to remove any labels or other debris.

After a thorough cleaning, the pieces are melted and compressed into pellets called nurdles. These small pellets are then ready to be shaped into new products. Recycled plastic is rarely used to create the same plastic item again.

Heating and Cooling

Heating and cooling is crucial to human comfortability and, even more importantly, survival. Unfortunately, providing these two key elements can cause big problems to Earth's environment and its natural resources. In this modern age, it is easier than ever to lessen the amount of resources your heating and cooling system requires.


© FOTOLIA

The U.S. Department of Energy reports that space heating and cooling takes up half of a home's energy use. It is in your best interest to lower your home's reliability on a resource so important and costly as energy.

MAINTENANCE TO MAKE A DIFFERENCE

There are several things you can do to make sure your heating and cooling systems are running properly and efficiently. Some of these actions can be easily performed as DIY projects, while others should be left to the professionals.

The Environmental Protection Agency's Energy Star department recommends a few of the following maintenance procedures:

DO IT YOURSELF

• Clean or change air filters. Examine your system's air filters at least once a month. Dirty filters can restrict air flow and create long-term damage to your system.

• Check thermostat settings. Lower your thermostat levels when you are away from your home. Programmable thermostats can be used to set the temperature to comfortable levels before you arrive home.

• Inspect system cycling. Make sure your system kicks on, cycles and turns off properly.

CALL A PROFESSIONAL

• Check refrigerant levels. Incorrect levels of refrigerant will increase energy costs and reduce the lifespan of your AC system.

• Lubricate moving parts. Parts that aren't lubricated may cause friction in motors that increase energy use and damage important components.

• Check gas connections. Proper gas pressure and burner combustion is crucial for safe and efficient operation.

WHEN TO UPGRADE

It might be time to upgrade your current heating or cooling system. Your local HVAC company can show you your best options for an update. Financing also is usually available. According to the EPA, agreeing with any of the following statements means it's time to consider upgrading:

• Your heating and cooling equipment is more than 10 years old.

• Your equipment constantly requires repairs and the bills are going up.

• Some rooms are too hot or cold.

If you are experiencing any of these issues in your home, do yourself and the planet a favor by inquiring about an energy-efficient upgrade.

Protecting Oceans

Healthy oceans are a crucial part to the survival of the entire human race. Oceans provide over half of the oxygen we breathe, as well as food, medicine and water.

They also make significant contributions to our climate, which is vital to everyday life. It is no surprise that oceans are the largest ecosystems on Earth.

The MarineBio Conservation Society estimates that only 10 percent of the ocean's living space has been explored by humans. Maintaining the integrity of oceans will allow humans to explore new areas and discover potentially life-saving resources that oceans offer.

HOW OCEANS SUPPORT LIFE

Plants are the key components in creating Earth's oxygen supply. The plants that float along oceans provide the Earth with 70 percent of the oxygen you breathe.

MarineBio credits microscopic algae called phytoplankton as a major contributor to managing earth's carbon levels and producing fresh oxygen.

These tiny plants sit at the bottom of the food chain for nearly every animal that calls the ocean home. Their ability to provide food for countless animals and the vast amount of oxygen they create gives this tiny species an enormous role in stabilizing Earth's ecosystem.

MEDICINAL BREAKTHROUGHS

The ocean is sometimes called "the underwater pharmacy," and for good reason. Humans have discovered many different medicinal breakthroughs by studying the ocean. The Nature Conservancy has listed a few of the most important medicines the ocean offers:

- Secosteroids: Corals use this enzyme to protect themselves from disease. Humans use it to treat asthma, arthritis and several inflammatory disorders.
- Bryozoan Bugula neritina: An organism which is often mistaken for seaweed, it is a source for the anti-cancer compound Bryostatin 1.
- Blue-green algae: This special algae is used to treat small-cell lung cancer. Researchers are predicting that a few more years of ocean research will produce treatments for tumors and antibacterial agents.

HOW YOU CAN HELP

Even if you don't live near an ocean, there are still ways you can do your part in conserving the resources it provides.

Donate to organizations that work to protect oceans. Talk to your local wildlife preserve for information on organizations it recommends. You can provide financial support or create an advocacy group to boost attention.

If you are near the ocean, keep your beaches clean. Garbage that ends up in the ocean can cause harm to thousands of marine animals.

WaterSense Campaign

Efficient and responsible water use allows consumers to save natural resources by reducing water consumption. The WaterSense campaign makes it easier to find water-efficient products that comply with strict regulations.


© FOTOLIA

Get behind this important campaign and help preserve the Earth while saving yourself money.

In 2006, The United States Environmental Protection Agency debuted its partnership with WaterSense. It is intended to promote the value of water efficiency, encourage manufacturing innovations and reduce the strain on water resources.

WATERSENSE PRODUCTS

If you are due for upgrades on any plumbing fixture in your home, consider installing a WaterSense-approved product.

Toilets account for 24 percent of water used in the average American household, according to the Regional Water Providers Consortium. Upgrading to a WaterSense-approved toilet can save nearly 13,000 gallons of water in your home each year.

A WaterSense-labeled sink reduces water flow by 30 percent from the standard flow of other inefficient faucets. This can save the American household 700 gallons of water without reducing performance.

Looking to purchase a new home rather than upgrade? Some homes even come with a WaterSense certification. They earn this certification by featuring water-efficient appliances throughout the entire home. New homes that boast the WaterSense label are able to save 50,000 gallons more than less efficient homes.

THE WATERSENSE LABEL

A company earns a WaterSense label for its products by signing a partnership agreement with the EPA committing to the meeting certain responsibilities including:

- Committing to water savings on a national level;
- Providing considerable water-saving results;
- Being tested by third parties to guarantee efficiency; and
- Being 20 percent more water efficient than average products in the same category.

MILESTONES

The EPA released some exciting milestones accomplished through its WaterSense campaign in 2015. A few of the highlights include:

- 1.5 trillion gallons of water saved since 2006;
- 78 million metric tons of greenhouse gas emissions eliminated;
- 246 homes labeled WaterSense (nearly doubled from 2014);
- 437 billion gallons of water saved in 2015 alone; and
- 212 billion kilowatt hours of energy saved in heating, pumping and treating water.

Protecting Pollinators

It's easy to write off insects as intrusive guests who damage plants or cause you physical harm. You may be surprised how important these sometimes troublesome pests are to the entire planet's ecosystem. Without important pollinators, there would be less food and wildlife and fewer raw materials available.

The process of pollinating is not limited to insects such as bees, butterflies and beetles. Birds and even bats also play a big role in pollinating. According to the North American Pollinator Protection Campaign, these important animals are responsible for supporting 180,000 different plant species.

But how do they do it?

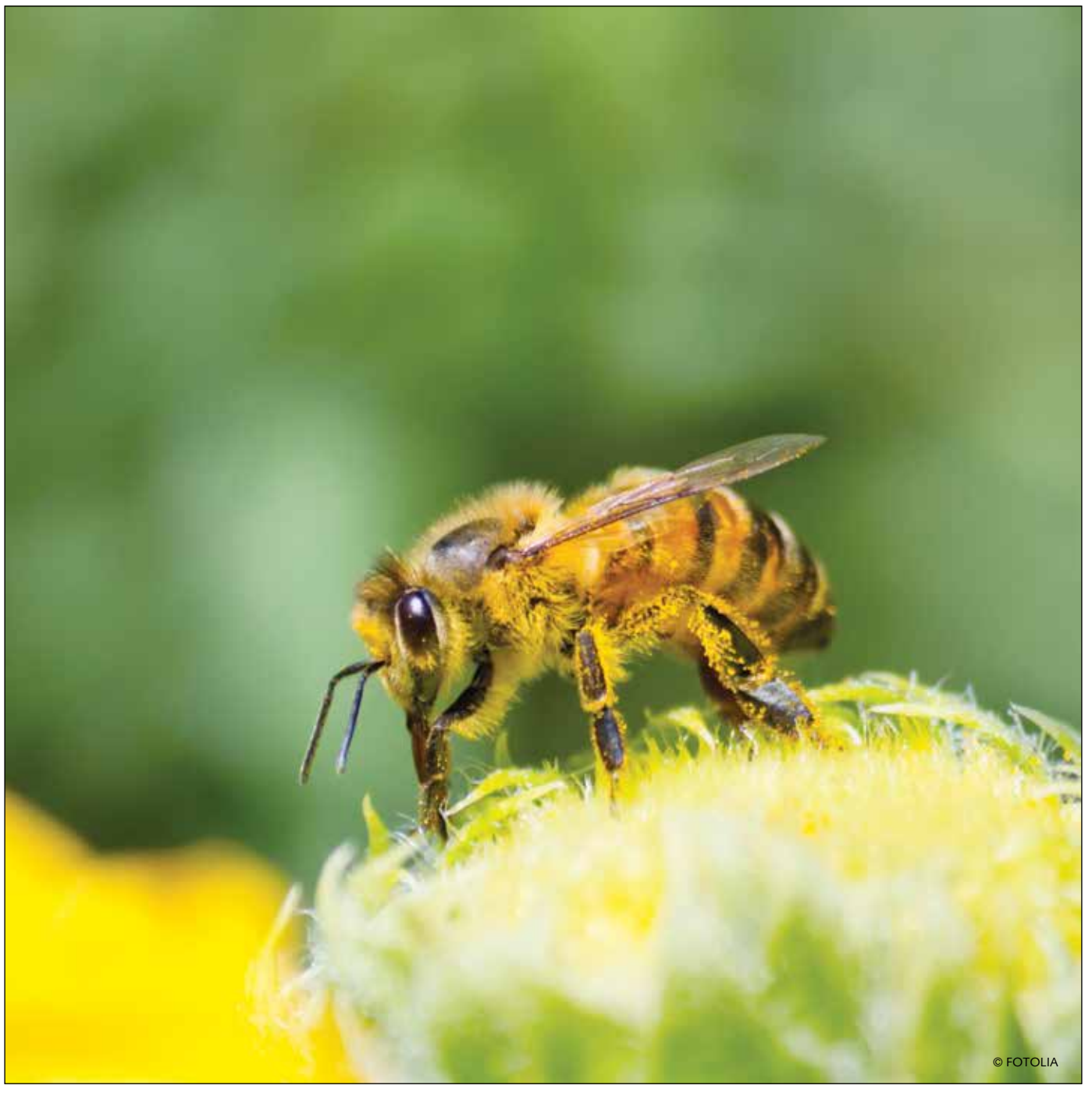
THE ROLE OF A POLLINATOR

A pollinator is a key contributor to fertilization of flowering plants. They use the nectar plants provide as a source of food. While feasting, pollinators gather pollen grains from a male flower's anther and deliver it to a female's stigma. This is the first part of the reproductive process for seeds, fruits and vegetables.

This process also can happen through wind or water pollination, but pollinators are able to do this job more efficiently over a more widespread area.

WHY POLLINATORS ARE IMPORTANT

The U.S. Fish and Wildlife Service reports that pollinators are responsible for pollinating more than 75 percent of the nation's flowering plants and 75 percent of America's crops.



Bees alone contributed to $19 billion of American crops in 2010. All other pollinators combined directly contribute to the production of an additional $10 billion in the United States.

The NAPPC states pollinators directly contribute to one in every three bites of food you eat. Without these hard-working animals, the nation's food supply would suffer tremendously. Americans would have access to fewer foods that offer the healthy vitamins of plants supported by pollinators. Wildlife also would suffer due to the lack of dense plants they rely on for cover from danger.

INVITE POLLINATORS

The best way for you to say thank you to pollinators for all their hard work is to provide them with a safe habitat in your backyard.

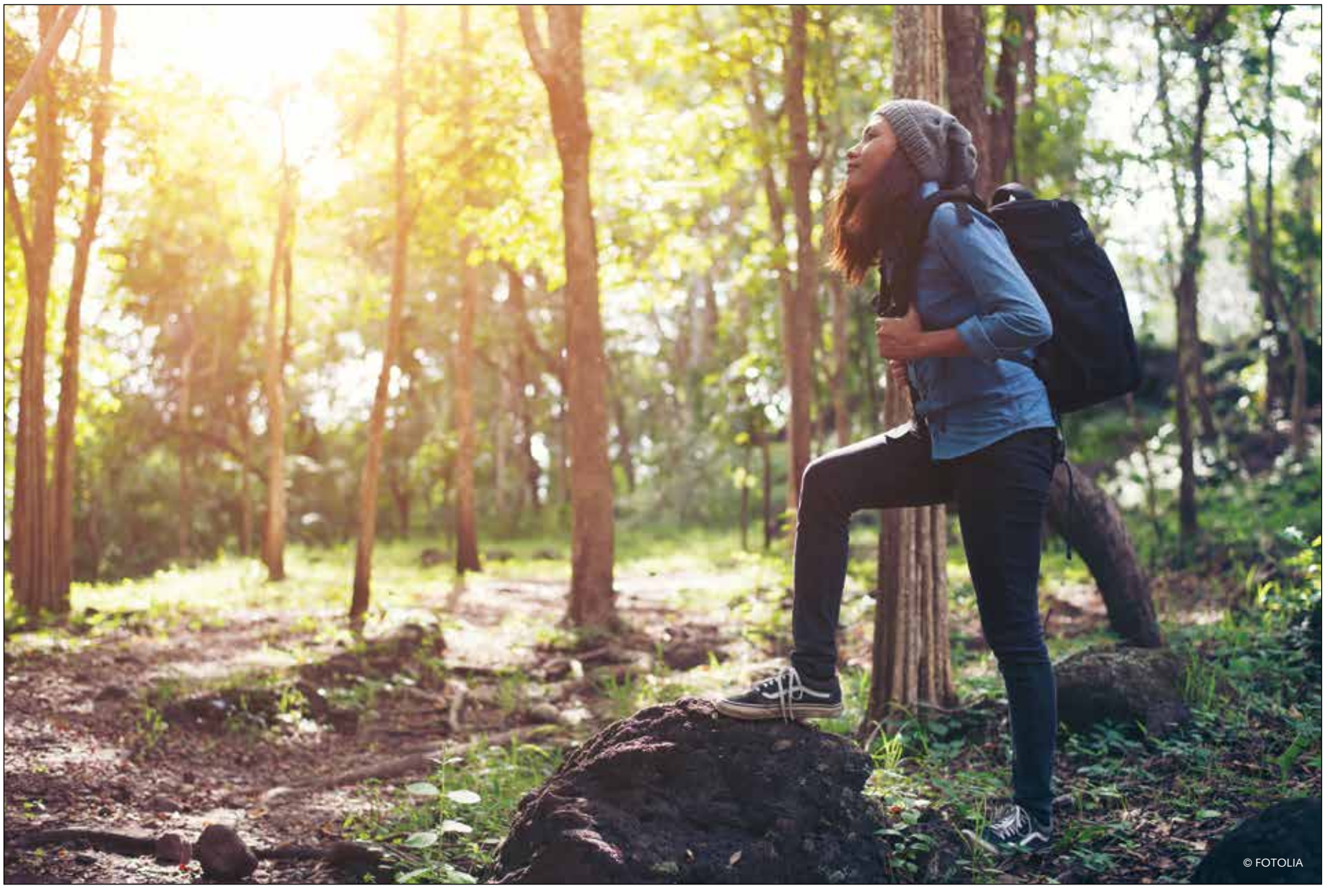
A tip from the Fish and Wildlife Service is to plant a variety of plants that vary in color and shape. Plants that are clumped together will attract more pollinators than single plants.

Limit the use of pesticides, if you can. Sacrifice minor plant damage for big environmental boosts.

Getting the whole neighborhood involved by creating a community garden is a great way to spread the word about the importance of pollinators to our natural environment.

Protecting Forests

Forests host a wide variety of animals and an abundance of trees that humans depend on to balance the ecosystem. Without these important pieces of land, Earth would suffer from less clean air and less water and be at risk of lower carbon sequestration.


© FOTOLIA

AMERICAN FORESTS ARE AT RISK

A study performed by the USDA Forest Service estimates that more than 57 million acres of forestland may be affected between 2000 and 2030. This staggering number comes from risks of wildfire, pest damage and development plans.

While the threat of diminishing American forests is a real issue, there is still a chance to turn around the dire outlook. Organizations including The Nature Conservancy are working to double the pace of restoration on federal lands. Along with partners in 25 states, they intend to restore 7 million acres a year.

WHY CONSERVATION IS CRUCIAL

American forests hold the world's largest and oldest trees, which cover over one-third of the nation's space. This puts America in the top five nations in forest cover. This mass amount of forest provides many benefits including:

- Acting as a natural storage and filter system for the nation's water supply;
- Providing 1 million jobs for forest workers;
- Providing more than 4,000 forest-dependent animal and plant species; and
- Acting as a major filter to isolate 15 percent of all fossil fuel emissions.

DOING YOUR PART

Conserving forests is an important factor when it comes to preserving Earth's natural resources. Here are some steps you can take to have a big impact on saving the American forests, according to the World Wildlife Foundation:

- Most corporations offer a paperless billing or notification system. Pay attention to the mail you are getting and inquire about whether companies can provide you the same information on a digital template.
- If you are unable to go completely paperless, be sure you are properly recycling all paper materials.
- Eating organic or locally grown foods will lessen the amount of forests being cleared for agricultural purposes. You will be doing favors to your health and the state of forests.

Conservation Tips for Kids

Kids are very impressionable, and it is up to the adults in their life to take advantage of this and teach responsible behavior. Fun and easy-to-understand lessons make it enjoyable for children to learn about how big of an impact people have on the natural resources around them.


© FOTOLIA

Committing to teach the children in your life of the importance of respecting the Earth and the resources it provides is a great way to get the whole family or community involved. Early learning enhances the chance that these children will carry these lessons with them into adulthood.

CONSERVING WATER LESSONS

Teaching children about the reasons to conserve water may be one of the easiest lessons to get across. Why? Many of their favorite activities occur in or because of water. Think of swimming, playing in mud, picking flowers and bath time. Well, maybe not always bath time.

Teach your children to turn off the faucets during hand-washing and teeth-brushing sessions. Encourage them to only turn it on once the soap is on their hands or they are ready to rinse their mouth. This is an easy way for them to learn that water running down the drain with no purpose is wasted.

Have your children keep records of how many times they flush the toilet, run the faucets or use water in other ways on a daily basis. See if they can list any times their water use may have been wasteful and set goals to reduce their usage.

SAVING ENERGY

Energy usage may be a little more difficult to get across than water conservation. Children may not hold much interest in learning about efficient appliances or how energy is actually does its job in the home.

A fun way to get kids involved is developing a responsibility and reward system. Explain to children that their job is to be sure all electric appliances are turned off when not in use. That could include lights or televisions left on in empty rooms. Rewards can be longer periods of play time or their favorite treat.