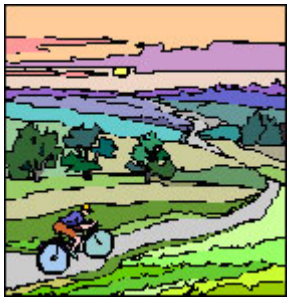
Environmental Facts-at-a-Glance

Wind Power

Wind power has recently become the world's fastest-growing renewable energy source.

Early windmills were built to grind flour and haul water. Their classic design was adopted to create what are today known as wind turbines. Much larger and more efficient than early windmills, wind turbines are often built in groups of tens or hundreds to form *wind farms* or *wind parks*. Whether they are built on land or offshore, these modern wind farms can generate electricity for thousands of homes and businesses.

Unlike the burning of fossil fuels to generate electricity, the operation of wind farms does not cause air or water pollution. The more wind farms that we build today, the fewer fossil fuels we will need to burn tomorrow and that means a better environment for everyone.



Green Spaces

Green spaces not only provide beautiful places to play and explore - they also provide important habitats for animals and birds and fish and insects. They help filter polluted runoff from towns and cities, making our water safer and cleaner. And trees and plants located here help us all breathe easier by absorbing carbon dioxide into their leaves, stems, roots and branches; as few as 20 trees can offset the pollution from a car driven 60 miles per day!

Air Quality

Burning fossil fuels like oil, natural gas and coal to power cars or generate electricity creates air pollution, which is harmful to the land and the sea and the plants, animals and people living there. Some air pollution is easily visible as haze or smog. Other air pollutants, like carbon dioxide are odorless and colorless and therefore often go unnoticed. But don't be fooled! These pollutants impact our health and our world just as significantly as those that we see and smell.

We can all help to reduce air pollution by walking or riding our bikes instead of riding in a car, turning off the lights when we are done, and re-using or recycling things instead of throwing them away. The little changes we all make can make a big difference in the world we wake up to tomorrow.

Water Supply

More than 97 percent of Earth's water is found in the oceans as salt water. 2 percent is stored as fresh water in glacier ice caps and snowy mountain ranges. Only one percent is available for our daily needs. Wow!

This one percent breaks down to water stored in soil and bedrock fractures, which is called *groundwater*, and water stored in lakes, rivers and streams, which is called *surface water*.

Groundwater accounts for 36 percent of available water. We use this supply by installing wells and pumping the water to the Earth's surface. Most of our groundwater comes from municipal town wells (88 percent), but some still comes from private wells (12 percent), located primarily in rural communities.

Surface water supplies account for the remaining 64 percent. But remember…this is 64 percent of only 1 percent. WOW! When you think about it, there really isn't that much water to go around!

Solar Power

Half of the Earth is exposed to the Sun at any given time. Radiation from the Sun is the Earth's main source of energy, providing huge amounts of heat and light.

It makes sense that we use the sun's energy to help power our lives. After all sun's power, known as solar power, will never run out. And, unlike the burning of fossil fuels to make electricity, electricity made from the sun does not pollute the water land or air.

Photovoltaic cells are the devices that convert sunlight to electricity. Photovoltaic stands for photo (light) and voltaic (electricity). Photovoltaic (PV) cells can be used to heat and cool buildings, power irrigation systems and provide power to space satellites.

Biking

Everyone knows that biking, skateboarding, and rollerblading are fun and a great way to explore and discover the world! But think abut how important having this much fun is for the planet! Not only do these wheels run on 100% renewable energy – yes, YOU!—but whenever we use these wheels to travel to school or to work or to play, we are lowering the number of cars on the road and helping to make the air

cleaner for everyone. Many communities have been built to accommodate cars and trucks, not bikes and roller-blades and skateboards and scooters. Streets that were once two lanes are now four or six lanes, and just crossing them can be a major challenge. Many cities and towns are just hard to navigate. Communities like York, England and odense, Denmark have reduced air pollution by creating bike-only zones—areas where automobile traffic is restricted. In odense, where the town is designed to encourage rising instead of driving, nearly 80 percent of all trips made between home and school are actually made on two wheels—not four! Protecting air quality is so importnt

Oceans

Oceans are majestic and magical. According to the Ocean Conservancy, ocans are home to mountains taller than Everest, canyons deeper than the Grand Canyon, and the largest animals on Earth! They provide food for the world an, absorb carbon dioxide from the air and help balance extremes of heat and cold across the planet. Human activities have created quite a major problem for the Earth's oceans. Chemicals from factories located near the shoreline endanger marine life. Rivers and streams that begin their journey thousands of miles away from the ocean can carry chemicals from cities and towns over long distances. When the rivers make their final journey into the ocean, these chemicals are transferred from the land to the water. Oil spills at sea can blight marine habitats that sometimes take many decades to recover. Many ocean scientists and researchers from around the world believe that that much more work needs to be done to protect Earth's oceans. They have suggested that an official system of ocean parks be created to help protect marine life—much in the way that many national park systems, like the grand Canyon and Yosemite protect wilderness areas on land.

Shorelines

Shorelines are where oceans and seas meet land. Shorelines provide rich, fertile nesting grounds for thousands of animals and birds. Unfortunately, as more and more shoreline property is developed for hotels, golf courses, and marinas, the amount of space available for wildlife continues to shrink. In fact, coastal marshes, which help filter pollutants and serve as wildlife "nurseries," are disappearing at a rate of 20,000 acres per year. And that's just in the United States!

Rainforests

Often called the “Lungs of the Planet,” rainforests are one of Earth's most efficient environmental filtering systems. Trees and plants in the rainforest improve the quality of Earth's air by absorbing carbon dioxide they need to live and emitting pure oxygen which we need to live.

Plants and vines in the rainforest contain many substances which help fight disease and illness. Quinine, from the cinchona tree, is used to treat malaria. Vincristine, extracted from the Rosy Periwinkle plant, is one of the world's most powerful anticancer drugs.

But rainforests are being destroyed! The World Resources Institute report that rainforests are being destroyed at the rate of fifty-four acres per minute, or twenty-eight million acres each year! At this rate, we could loose our rainforests - one of Earth's most beneficial ecosystems - by the year 2035.

Conservation

For over two hundred years, our homes, businesses and schools have been powered by energy sources that we extract from the ground by mining or drilling. These are what are known as fossil fuels because they were formed over 65 million years ago from the “fossils” or remains of ancient plants and animals. Today, these sources - including oil, coal and natural gas - sit deep underground and their limited, fixed supply is decreasing. And once we use up their supplies, they'll be gone for good.

We can make fossil fuels last longer and protect Earth by using less energy or “conserving” it. Some things you can do are:

- Turn off lights when you are not using them.
- Turn the heat down when you're not at home or when you go to bed at night
- Close your shades in the summer and keep as many lights off as possible to keep your home or school cooler without air conditioning.
- Recycle paper and packaging materials that take lots of energy to make.
- Use canvas bags to carry groceries.
- Walk instead of drive.
- Ride a bike!
- Use public transportation
- Persuade your friends and families to buy an energy efficient car.

Recycling

Recycling begins with reducing and reusing! There is only so much aluminum, tin, oil, coal, natural gas and other raw materials in the world to go around. So, if we reduce the amount of things we use, reuse the things we have and recycle the things we're finished with, we'll be saving resources and helping to reduce the amount of stuff we have to throw away!

In 2003, over 30 million plastic water bottles were used every day and nine out of ten of these ended up either as garbage or litter. But did you know that these bottles can take up to 1,000 years to degrade! What in the world will the world look like if we keep this up?

And each day over 60 million newspapers are printed in the US and 44 million are thrown away! Why throw them away when they can be recycled to make other things we need. By recycling paper, we save trees and also protect our air, water and land from pollution.

Green Heroes

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