

Glossary

Using a Really Big Power Plant

fossil fuel: You have to drill to get fossil fuels like coal, oil and natural gas.

fossil fuel: energy resources that form beneath the ground from decayed animal and plant life

greenhouse gases: Before we started putting too many greenhouse gases into the air, the gases that occurred naturally, like carbon dioxide, kept our planet at exactly the right temperature.

greenhouse gases: the gases in our atmosphere that keep heat from escaping into space.

nonrenewable resources: We need to think about developing other types of energy before our nonrenewable resources run out.

nonrenewable resources: energy resources that take millions of years to replace. Oil, gas, and coal are nonrenewable resources.

particulates: The tiny particulates from the power plant caused problems for people with breathing difficulties.

particulates: small particles of waste put into the air from factories and power plants that can be harmful to our health

soot: There were a lot of black particles called soot around the coal burning power plant.

soot: black particles that are formed when carbon such as fossil fuels are burned

asthma: Katie had a disease called asthma that made it hard for her to breathe.

asthma:- a lung disease that causes people to wheeze and have trouble breathing

stoking: The girls took turns stoking the campfire to keep it burning during the weekend campout.

stoking: to add more wood or fuel to keep a fire burning

utility: The manager wanted to visit other utility companies in the state to see how they were producing power.

utility: a public company that provides services such as power to an area

photovoltaics: The company made solar energy systems for rooftops called photovoltaics that supplied energy to homes and helped the environment.

photovoltaics: energy systems that turn sunlight into electricity

solar energy: We can use solar energy to heat our homes and swimming pools.

solar energy: energy found in sunlight

NASA: Maggie visited NASA headquarters to learn about plans for the space station.

NASA: the space agency in the United States

convert: The teacher wanted the class to convert the measurement they had made in yards to meters.

convert: to change

Journey To The Center Of The Earth – A Conference Center Uses Geothermal Energy!

mineral hot springs: Uncle J.G. took a vacation at the mineral hot springs and enjoyed soaking in the naturally hot water.

mineral hot springs: hot water that is heated naturally from the interior of the Earth

geothermal energy: Uncle J.G. visited the lab where the scientists were trying to use the heat from the Earth as power for buildings.

geothermal energy: heat that comes from inside the Earth

hydrothermal energy: The poster advertised that the hotel used the water that is heated from the hot rocks found under the surface of the Earth to heat their rooms. People liked this because it was hydrothermal energy in action.

hydrothermal energy: a kind of geothermal energy that is made when water is heated by the hot rocks beneath the surface of the Earth

earth energy: The heat that is found close to the surface of the earth is called earth energy.

earth energy: heat that is found in the rocks and soil near the surface of the Earth

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emitted: Don't ever breathe the gases that are emitted from your car's tailpipe.

emitted: sending out material from something

carbon dioxide: There was so much carbon dioxide in the air that the scientists began to worry about air pollution.

carbon dioxide: a colorless gas that is used by green plants in photosynthesis; too much of it can cause problems on the Earth

It's Not Just A Lot Of Hot Air..... Kinko's Uses The Wind!

turbine: The curved blades of the turbine circled as they moved in the wind, so the turbine had the appearance of a giant pinwheel.

turbine: a type of engine that has curved vanes that rotate around because of the action of water, wind, steam, or gas

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renewable energy resources: Renewable energy resources like the sun are always around.

renewable energy resources: energy resources that are constantly replaced. Wind, solar, and geothermal energy are examples of renewable resources

generator: The inventor was trying to put together a generator that would take the movement of the wind and change it to electricity.

generator: a machine that takes energy from movement of some sort and changes it to electricity

The Mighty Whale Puts Waves To Work

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generator: a machine that takes energy from movement of some sort and changes it to electricity

clams: When we say clams when talking about wave energy, we mean big bags that can change the power of the waves to electricity.

clams: bags that scientists are experimenting with to try to use the energy in waves to make electricity

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BIOMASS: Valuable Trash

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decay: Dead animals are stinky and full of worms when they decay.

decay: when living things die and break down

solar energy: We can use solar energy to heat our homes and swimming pools.

solar energy: energy found in sunlight

deforestation: Many birds and mammals have become extinct because of deforestation.

deforestation: when all the trees are cut down

wetlands: Wetlands are home to many water birds.

wetlands: a natural habitat that is covered with a shallow layer of water.

biogas: The rotting trash from the garbage dump gives off biogas.

biogas: A mixture of carbon dioxide and methane gas that comes from decaying organic material.

sludge: The farmer put on boots before walking through the sludge.

sludge: waste material

decompose: Autumn leaves fall to the ground and decompose.

decompose: when living things die and break down.

vegetation: Rainforests are thick with vegetation.

vegetation: plant life

convert: The teacher wanted the class to convert the measurement they had in yards to meter.

convert: to change

emission: Don't ever breathe your car's emission from the tailpipe.

emission: material that comes out of something

decrease: The class was begging the teacher to decrease the amount of homework she wanted to give them.

decrease: to become less

industry: Today's industries are looking for better ways to fuel their factories.

industry: a business that produces something

generate: Hopefully Maggie's website will generate interest in caring for the environment.

generate: to create

biomass: Campers burn biomass when they want to roast marshmallows.

biomass: plant and animal material that is used to produce solid, liquid, or gas fuels

Landfills: A Heap or a Help?

landfill: The garbage collectors dump our trash in a landfill.

landfill: a piece of land where household waste is thrown away

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decompose: Autumn leaves fall to the ground and decompose.

decompose: when living things die and break down.

landfill gas: Rotting trash gives off a gas called landfill gas.

landfill gas: gas that is the byproduct of decomposing trash found in a landfill

Cooking Curanto

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photosynthesis: Oxygen is released by plants during photosynthesis.

photosynthesis: the process by which plants use the sun's energy to make food

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convert: to change

deforestation: Many birds and mammals have become extinct because of deforestation.

deforestation: when all the trees are cut down

infertile: I'm so disappointed I can't get vegetables to grow in this infertile soil.

infertile: when soil becomes so unhealthy plants can't grow in it

decompose: Autumn leaves fall to the ground and decompose.

decompose: when living things die and break down.

insulate: The Hall family wanted to be sure that their new house was insulated very well so that they could save energy.

insulate: to use a material that prevents heat from escaping; this saves energy

efficiently: Jennifer studied for the test on the long bus ride home from school, so we can say that she used her time efficiently.

efficiently: using something wisely

evaporate: A jar of water will evaporate if you leave it out for a few days.

evaporate: when a liquid changes into vapor

A School Uses A Different Way To Save Energy – Cogeneration

cogeneration: The builder wanted to save energy so he put a cogeneration system in the new building that would use wasted energy to heat the swimming pool.

cogeneration: a process that uses waste energy to heat or cool buildings

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A Winning Combination: Wood Chips and Cogeneration

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emission: Don't ever breathe your car's emission from the tailpipe.

emission: material that comes out of something

efficient: If you're efficient with your time, you will have more of it.

efficient: to work well with little waste

cogeneration: The builder wanted to save energy so he put a cogeneration system in the new building that would use wasted energy to heat the swimming pool.

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What's The Big Problem With Cars?

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greenhouse effect: gases in the Earth's atmosphere act like a greenhouse to let in sunlight and trap some of the Earth's surface heat

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internal combustion: The class wanted to find out what made the spark inside the internal combustion engine.

internal combustion: an engine where the heat is produced by creating a spark within the engine itself

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particulates: small particles of waste put into the air from factories and power plants that can be harmful to our health

fuel cell: The car makers who cared about the environment wanted to make a car that used a fuel cell instead of a regular engine.

fuel cell: a source of power that uses hydrogen and oxygen without burning, pollution is not produced

hydrogen: “I want you to learn about the element hydrogen. It is found in many compounds on Earth such as air and water,” said the chemistry teacher.

hydrogen: an element that is very light and combines with other elements to form things like water

oxygen: “We need the gas, oxygen, to live,” said the student in response to the teacher’s question.

oxygen: an element that is found in the earth’s atmosphere, water, and minerals; it is essential for life

NASA: Maggie visited NASA headquarters to learn about plans for the space station.

NASA: the space agency in the United States

reformer: The car maker wanted to reduce the pollution that the new car models produced, so she asked the engineers to work on making a reformer that would release less pollution into the air than an internal combustion engine.

reformer: an engine that is a step between an internal combustion engine and a pollution free fuel cell

solar energy: We can use solar energy to heat our homes and swimming pools.

solar energy: energy found in sunlight

SunLine Transit Travels In The Right Direction

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asthma: Katie had a disease called asthma that made it hard for her to breathe.

asthma: a lung disease that causes people to wheeze and have trouble breathing

Cement Makers Solve “Hard” Problems

kiln: The artist put her clay sculpture in the kiln to harden.

kiln: a very hot brick oven used to burn, bake, or dry things

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natural gas: The family found that natural gas was cheaper and produced less pollution, so they used it to heat their home.

natural gas: a fossil fuel that is used to produce power

fly ash: “Yuck, look at all the fly ash coming out of that power plant!” yelled Maggie.

fly ash: the waste from a power plant such as a coal burning plant

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<http://www.helpenvironment.com>

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They're Nature's Gift...Trees

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fuel cell: a source of power that uses hydrogen and oxygen without burning, pollution is not produced

carbon sequestration: The trees in the forest act like a carbon bank. They take carbon dioxide out of the air and save it, so we can say they are good at carbon sequestration.

carbon sequestration: the ability of nature to save carbon; for example, trees can take in a certain amount of carbon dioxide and store it

Only You Can Prevent Forest Fires!

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kindling: The Boy Scouts needed to collect the small sticks to use as kindling to start their campfire.

kindling: dry twigs and sticks used to start a fire

Scott Bernstein Looks For Solutions

insulate: The Hall family wanted to be sure that their new house was insulated very well so that they could save energy.

insulate: to use a material that prevents heat from escaping; this saves energy

commute: Uncle J.G. had to travel two hours to get to work, so he had a long commute.

commute: the time and distance it takes a person to get to work

toxic: When Maggie saw the dead fish she realized that the cyanide sprayed by the fishermen was toxic.

toxic: something that can act as a poison

The Power Of One

toxic: When Maggie saw the dead fish she realized that the cyanide sprayed by the fishermen was toxic.

toxic: something that can act as a poison

incinerator: The incinerator burned the waste material from the factory.

incinerator: something that burns waste material

hazardous waste: Maggie and her friends warned the community about the hazardous waste that was coming out of the factory.

hazardous waste: pollution that is dangerous for our health

Let The Sun Shine In – BP's Sun Matches What It Feels About The Environment

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solar energy: energy found in sunlight

refinery: The class went on a field trip to a refinery to learn how oil is made into gasoline and other fuels.

refinery: a place that changes oil to gasoline before it is sent to market

cogeneration: The builder wanted to save energy so he put a cogeneration system in the new building that would use wasted energy to heat the swimming pool.

cogeneration: a process that uses waste energy to heat or cool buildings

flaring: The manager said that the company could not use flaring to burn away natural gas to get oil.

flaring : the practice of burning natural gas so that only oil is left

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alternative fuels: The gas station knew that normal gas added to air pollution, so they wanted to sell alternative fuels instead.

alternative fuels: a different type of gas that puts less pollution in to the air

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photovoltaics: energy systems that turn sunlight into electricity

