

Pierce Energy Planning Resource Series



Curriculum, Lessons, and Websites

Web Links

U.S. Department of Energy

<http://energy.gov/eere/education/education-homepage>

A large part of EERE technology deployment depends on the U.S.'s ability to innovate, produce, install, maintain, and service advanced energy technologies. The Office of Energy Efficiency and Renewable Energy's (EERE) education and workforce development activities support the market deployment of EERE technologies by focusing on further development and enhancement of these critical workforce skills as well as engaging and inspiring the future workforce.

ENERGY STAR

https://www.energystar.gov/index.cfm?c=kids.kids_index

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 the fight to save our planet by being energy efficient.

National Energy Education Development (NEED) Project

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

The mission of the NEED Project is to promote an energy conscious and educated society by creating effective networks of students, educators, business, government and community leaders to design and deliver objective, multi-sided energy education programs. NEED works with energy companies, agencies and organizations to bring balanced energy programs to the nation's schools with a focus on strong teacher professional development, timely and balanced curriculum materials, signature program capabilities and turn-key program management.

U.S. Energy Information Administration

<http://www.eia.gov/kids/>

Our teacher guide provides energy lessons that use this website as a resource. The guide provides Language Arts, Math, Performing Arts, Science and Social Studies extension activities by age levels: Primary (P), Elementary (E), Intermediate (I), and Secondary (S).

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Facing the Future

<https://www.facingthefuture.org>

Facing the Future is an international leader whose mission is to create tools for educators that equip and motivate students to develop critical thinking skills, build global awareness, and engage in positive solutions for a sustainable future. We are a program of Western Washington University.

Green Education Foundation

<http://www.greeneducationfoundation.org/institute/lesson-clearinghouse.html>

Green Education Foundation (GEF) is a non-profit organization committed to creating a sustainable future through education. Sustainability education provides educators with the real-world applied learning models that connect science, technology, and math education with the broader human concerns of environmental, economic, and social systems. GEF provides curriculum and resources to K-12 students and teachers worldwide with the goal of challenging them to think holistically and critically about global environmental concerns and solutions.

Sustainability Science for Schools

<https://sustainability.asu.edu/sustainableschools/>

The Sustainability Science for Sustainable Schools program at Arizona State University includes a collection of graduate students, high school teachers and sustainability researchers. Together we strive to further sustainability science by bringing sustainability projects into our high schools' curriculum, campuses, and larger communities. We believe that by teaching sustainability science to high school students, we can help promote a sustainable future for the Phoenix metro area.

USGBC Learning Lab

<https://learninglab.usgbc.org/>

Learning Lab is USGBC's online education platform for K-12 teachers and school leaders to find lessons, activities and resources that encourage student leadership, sustainability literacy and real-world action. With more than 500 lessons available in English and Spanish, educators from across the globe can access Learning Lab for comprehensive, interdisciplinary K-12 project- and STEM-based (Science, Technology, Engineering, Mathematics) curriculum for a green school and a sustainable future.

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Litterati

<https://www.litterati.org/>

Litter is everywhere. Soda cans, plastic bags, and cigarette butts litter the environment, choke wildlife, and threaten our planet. Litterati is tackling this problem one piece of litter at a time. Geotags provide insight into problem areas, while keywords identify the most commonly found brands and products. This data will be used to work with companies and organizations to find more sustainable solutions.

Audacity

<https://www.audacityteam.org/>

Audacity is an easy-to-use, multi-track audio editor and recorder for Windows, Mac OS X, GNU/Linux and other operating systems. Developed by a group of volunteers as open source.

Camtasia

<https://www.techsmith.com/video-editor.html>

Camtasia 2018 makes it easy to record your screen and create polished, professional-looking videos.

City of Glendale Water Conservation Education

https://www.glendaleaz.com/waterconservation/WaterConservation_Educators.cfm

Water Watchers is a comprehensive program for fourth, fifth, and sixth grade teachers in the Glendale water service area. The program progresses through each grade, where baseline knowledge of water-related issues is established in fourth grade and then applied towards real-life, service-learning projects in fifth and sixth grades. The Water Watchers program is designed to supplement existing curriculum and provide teacher support in the delivery of innovative water education activities. Teachers will receive free resource materials and one-hour Discovery Station presentations from the Glendale Water Conservation Office.

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Project WET

https://arizonawet.arizona.edu/about_apw/apw_programs

It is vital that all people understand water resources, from a local, regional and global perspective, as well as the factors that affect its dependability and sustainability. Arizona Project WET programs use the unifying theme of water to bring relevance and real-world application to many subjects. Educational needs for the 21st Century require retraining and retooling. Our programs not only focus on the importance of water to all life, but also assist teachers in evolving instructional practices and engage students in pursuing the answers to their own questions. Science, Technology, Engineering and Mathematics (STEM) education, called for by businesses, universities, school districts and government agencies alike, has driven the development of APW's direct students outreach programs and altered our delivery of professional development to meet the needs of Arizona teachers.

Project Learning Tree

<https://www.plt.org/>

Project Learning Tree is an award-winning environmental education program designed for teachers and other educators, parents, and community leaders working with youth from preschool through grade 12.

Project Wild

<https://www.fishwildlife.org/projectwild>

Project WILD is an interdisciplinary conservation and environmental education program emphasizing wildlife. The goal of Project WILD is to assist learners of any age in developing awareness, knowledge, skills, and commitment resulting in informed decisions, responsible behavior, and constructive actions concerning wildlife and the environment. A national network of state wildlife agency sponsors ensures that Project WILD is available nationwide and is providing professional development for formal and non-formal educators. From awareness to action, this hands-on approach to learning engages students in investigating the world around them, connecting them to conservation careers, and participating in solid STEM activities.

Green Apple Day of Service

<http://greenapple.org>

Green Apple Day of Service projects bring school service and environmental sustainability together in one day of action. If you need help with fundraising, follow the prompts during registration to connect your Day of Service projects to DonorsChoose.org.

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Alliant Energy Kids

<http://www.alliantenergykids.com/>

The new website offers awesome energy resources for teachers and middle school students – all designed to meet core standards:

- Information on renewable energy and the latest and greatest in energy innovations
- Activities and experiments demonstrating energy concepts
- Animated glossary of energy terms
- “Ask the expert” articles with kid-friendly answers to important energy questions
- Plus, best of all – five teaching units to fill a whole unit on energy, including renewable energy, energy efficiency, home conservation and safety

Jason Learning

<https://www.jason.org/>

JASON provides curriculum and learning experiences in science, technology, engineering, and math (STEM) for K-12 students, and high-quality professional development for teachers. JASON has been used successfully in a wide variety of formal and informal education environments.

Using iMovie

<http://mrparkinsonict.blogspot.com/2013/01/using-imovie-trailers-across-curriculum.html>

There are plenty of video editing apps, but none can compare to the child friendly layout of iMovie. The app itself is perfect for the classroom, children learn quickly how to navigate around and use the app confidently.

The Fruit Tree Planting Foundation

<http://www.ftpf.org/resources.htm>

The Fruit Tree Planting Foundation is a nonprofit charity dedicated to planting edible, fruitful trees and plants to benefit the environment and all its inhabitants. Our primary mission is to plant and help others plant a collective total of 18 billion fruit trees across the world (approximately 3 for every person alive) and encourage their growth under organic standards. FTPF provides support, resources, and guidance for those interested in planting fruit trees and spearheads a variety of planting programs. These programs are aimed at enriching the environment, providing nutritious food sources for wild and rescued animals, and improving human health by bringing delicious, fresh, locally grown raw fruits and vegetables of the highest quality into the lives of all people.

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March for Science Phoenix

<http://www.phxmarchforscience.com>

March for Science Phoenix is a diverse, nonpartisan group that defends and celebrates publicly funded and publicly accessible science as a foundation of American freedom and prosperity. Our goal is to become a bastion of scientific engagement in the Valley through a variety of outreach and advocacy programs. We believe that the best way to protect the integrity of evidence and enact sound policy in our state is by encouraging the public to value and invest in science.

Eat Low Carbon Quiz

<http://www.eatlowcarbon.org/>

EatLowCarbon.org was created by Bon Appétit Management Company, a food service pioneer operating hundreds of cafés all over America for corporations, universities, and specialty venues. Bon Appétit is known for tackling pressing social issues such as local food, animal welfare, antibiotics in animal agriculture, farmworker rights, and more. Bon Appétit worked with the nonprofit environmental group Ecotrust to compile and conduct peer-reviewed Life Cycle Assessments from which the information on this site is drawn. Researchers use LCA to calculate the environmental impact of a product's entire life cycle: for food items, that includes the inputs, such as fertilizer, that went into growing it, and the energy that went into transporting, processing and cooking it.

PEP Blogs

<https://www.energyplanning.org/energy-blog/>

PEP inspires and empowers people to create a culture of sustainability that embraces conservation through behavior change and education.

Intro to Sustainability Lessons

<https://sustainability.asu.edu/sustainableschools/learn-more/intro/>

This lesson is comprised of a sustainability definition, brainstorming activity and an interconnectedness movement activity. The activities will enable students to define sustainability and understand how to connect global issues to each other and the pillars of sustainability: environment, society, and economy. The objectives for each activity may be accomplished when activities are performed together or individually.

WWF Footprint Calculator

<https://footprint.wwf.org.uk/>

The planet is in crisis – from climate change to the pollution of our oceans and devastation of our forests. It's up to all of us to fix it. Take your first step with our environmental footprint calculator.

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PBS Zerofootprint

<http://meetthegreens.pbskids.org/features/carbon-calculator.html>

With The GREENS, we get kids thinking about the world and their place in it. The GREENS project is upbeat and optimistic. We encourage kids to make informed choices and meaningful changes. Through the animated episodic adventures, a blog, kids' mail, and regular updates, we explore green living, sustainability, ecology, environmental care, and social equity. We nudge kids to research, to challenge, to discover, and to take action wherever and whenever they can. Green Business named us as one of the "Ten Best Environmental Sites on the Web."

International Student Carbon Footprint Calculator

<https://depts.washington.edu/i2sea/?page=fpcalc>

The International Student Carbon Footprint Challenge (ISCFC) is one of the centerpieces of the I2SEA project. It provides a forum for students from all over the world to evaluate, compare and discuss their carbon footprint with their peers. It allows students to quantify their greenhouse gas emissions, to compare differences between locales, and to foster discussion about the sources of those emissions. It is intended to promote students thinking about meaningful alternatives that students can implement in their own lives.

Global Footprint Network

<https://www.footprintnetwork.org/>

Global Footprint Network, an international nonprofit organization founded in 2003, **envisions** a future where all can thrive within the means of our one planet. We enable **our vision** through **our mission**: to help end ecological overshoot by making ecological limits central to decision-making.

Arizona Green Schools Toolbox

<https://arizonagreenschoolstoolbox.wordpress.com/>

The Arizona Green Schools Toolbox is a resource for teachers, administrators and others who want to help make Arizona schools healthier and more sustainable. Green schools use less energy and water, reducing utility costs and putting money back into the classroom. Green schools are healthier for students and staff, reducing absenteeism and increasing productivity and teacher retention. Green schools increase environmental literacy and help prepare graduates for careers in a technology-driven economy. Lastly, green schools reduce their impact on the environment, decreasing greenhouse gas emissions that contribute to climate change and protecting our air, land and water resources for current and future generations.

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Sustainability Education & Economic Development

<https://theseedcenter.org/>

A FREE initiative of the American Association of Community Colleges, the Sustainability Education, and Economic Development (SEED) Center aims to advance sustainability and clean technology education programs at community colleges by sharing innovative practices to help college administrators, faculty, and staff build the green economy. More than 480 community colleges are members of SEED, and more than 30 college presidents make up SEED's Presidents Advisory Cabinet.

Collaborize Classroom

<http://library.collaborizeclassroom.com/>

Welcome to the Collaborize Classroom Topic Library, a free resource where you can create, share and/or download inquiry-based discussions on any topic. Each lesson has its own unique URL (unique to you) and can easily be shared via email, social networks, or even embedded on any website or e-publication.

Breathing Earth

<http://www.breathingearth.net/>

This real-time simulation displays the CO₂ emissions of every country in the world, as well as their birth and death rates.

Arizona Energy Snapshot

<http://spotforcleanenergy.org/state/arizona/>

The Center for the New Energy Economy (CNEE), in partnership with The Nature Conservancy (TNC), built the State Policy Opportunity Tracker (SPOT) for Clean Energy to serve as a hub of information on both existing state clean energy policies and, uniquely, future policy opportunities. SPOT synthesizes existing information related to 37 clean energy policies at the state level and documents whether a given state policy exists and where it stands related to 3 – 6 policy components. This resource is not a state scorecard. It is a planning tool for states as they develop their clean energy policy roadmaps. In line with this goal, each policy has a downloadable 2-page policy brief, source information, and links to organizations that specialize in each policy area. The overall value of this hub is to inform decision-making processes by providing policymakers, regulators, and interested stakeholders a clear snapshot of existing state policies as well as opportunities for future policy adoption.

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Arizona Science Foundation STEM Resources

<http://stemlinks.sfaz.org/>

The Educator Resource Page was created to provide access to quality STEM resources and to support STEM offerings statewide. It offers a wide variety of content rich resources and links, organized around five separate categories. The resources may also be searched by STEM subject.

Newsela

<https://newsela.com/>

Newsela is an education technology startup dedicated to transforming the way students access the world through words. Our team combines powerful technological know-how with real-world experience earned in the classroom, the newsroom, and the boardroom. We publish high-interest news and nonfiction articles daily at five levels of complexity for grades 2-12 using a proprietary, rapid text-leveling process. By combining relevant and interesting nonfiction content with standards-aligned assessments, Newsela gives educators the primary solution to dramatically improve students' literacy skills for the 21st century.

Build a Bird

<http://projectbeak.org/adaptations/build.htm>

Project BEAK is an interactive, web-based curriculum that contains scientifically accurate information about avian conservation, avian form, function and other adaptations that help birds survive, Nebraska's unique avian biodiversity, Nebraska's threatened and endangered birds, plus video clips, interactive games, quizzes and diagrams, additional resources and links, and classroom lesson plans.

Week of Groceries Around the World

<http://fstoppers.com/food/what-week-groceries-looks-around-world-3251>

It seems as a people, we have a fascination with photographing our food. From Henry's series of riders, to looking on Instagram we can't help but document what we consume. Photographer Peter Menzel started this intriguing series of one weeks of groceries from around the world, taking traditional food photography to a much larger scale. In his book Hungry Planet, Peter explores both the cultural differences of diets around the world as well investigating how prosperity and poverty influence the diets of different nations.

Arizona Water Resources Research Center

<https://wrrc.arizona.edu/resources>

We tackle key water policy and management issues, empower informed decision-making, and enrich understanding through engagement, education, and applied research.

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Crayola ColorCycle

<https://www.crayola.com/colorcycle.aspx>

Crayola and schools across North America are banding together to help kids understand the importance of their role in protecting the environment. That's why we launched Crayola ColorCycle. Through this initiative, students in K-12 schools across the continental United States and parts of Canada can collect and repurpose used Crayola markers. ColorCycle is also a great opportunity for teachers and their students to explore eco-friendly practices. Specially developed standards-based lesson plans are available to enrich instruction and promote lively class discussions.

Energy is Everything

<https://www.pinterest.com/energyiseverything/?eq=energy%20is%20everything&etslf=5033>

Sustainable STEM lessons, activities, and resources for the classroom. Get powered up to teach, save, and change the world. Created by The Energy Coalition.

Green & Healthy Schools Academy

<http://www.greenandhealthyschoolsacademy.org/>

The Green & Healthy Schools Academy's goal is to promote schools as engaging, inspiring, and thriving places where students, staff, and community can meet their full potential. The Academy is a strategic initiative of Green Building Alliance, a 501(c)(3) non-profit organization serving Western Pennsylvania, and works towards the vision that everyone from every socioeconomic background is able to live, learn, work, and play in healthy and high-performing places.

Generation 180 Solar Schools

<https://www.generation180.org/solar-schools>

Generation 180 is a non-profit committed to advancing the transition to clean energy and supporting a cultural shift in energy awareness among individuals and communities across the country.

Snap Circuits

<https://www.elenco.com/product/snap-circuits-green/>

Learn about energy sources and how to think green. Build over 125 projects using the flexibility of our award-winning Snap Circuits®. Have loads of fun learning about environmentally-friendly energy and how the electricity in your home works.

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Calculate Electricity Usage

http://energyusecalculator.com/calculate_electrical_usage.htm

Energy Use Calculator offers electricity usage calculators for various devices. Allowing you to calculate the electrical cost of your home appliances, and helping you save power consumption costs.

LED Savings Calculator

<https://www.ledwaves.com/pages/led-calc>

Energy Use Calculator offers electricity usage calculators for various devices. Allowing you to calculate the electrical cost of your home appliances, and helping you save power consumption costs.

Arizona Drought Status

<https://new.azwater.gov/drought/drought-status#monthlyStatus>

The Arizona Drought Monitoring Technical Committee confers weekly to advise the U.S. Drought Monitor authors on the current drought conditions in Arizona and makes recommendations about the position of the drought boundaries for Arizona. The U.S. Drought Monitor is the official record of drought for Federal drought relief claims. Information used by the MTC in advising the Drought Monitor authors includes numerous drought indices, precipitation and stream flow data, and impacts data. Every Thursday, the Drought Status web page automatically updates with the latest U.S. Drought Monitor map of Arizona.

Learning to Give

<https://www.learningtogive.org/>

Empower your students to "do well" and "do good." Learning to Give helps K-12 educators build classroom community and lifelong engaged and generous citizens. From kindergarten to twelfth grade, Learning to Give students are using skills of writing, history, science, math, and arts as they learn about and take action in their own community.

The Green Team

<https://thegreenteam.org/>

THE GREEN TEAM is an interactive educational program that empowers students and teachers to help the environment through waste reduction, recycling, composting, energy conservation and pollution prevention. Participating classes receive certificates of recognition and are eligible to win awards.

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Energy Treasure Hunt Guide

https://www.energystar.gov/sites/default/files/buildings/tools/Energy_Treasure_Hunt_Guide_Jan2014.pdf

Organizations use resources including labor, materials, equipment, and energy to operate facilities. Most understand the basics of energy use and demand for utilities: electricity, natural gas, compressed air, steam, chilled water, and water. However, many do not regularly consider opportunities for optimizing these resources and controlling operating costs. The Energy Treasure Hunt is a dynamic, effective process for identifying savings opportunities. By focusing on energy savings, Energy Treasure Hunts support implementation of an energy management program and key components of EPA's ENERGY STAR Guidelines for Energy Management.

The Globe Program

<https://www.globe.gov/>

The Global Learning and Observations to Benefit the Environment (GLOBE) Program is an international science and education program that provides students and the public worldwide with the opportunity to participate in data collection and the scientific process and contribute meaningfully to our understanding of the Earth system and global environment. Announced by the U.S. Government on Earth Day in 1994, GLOBE launched its worldwide implementation in 1995.

Israel's Environmental School

<https://www.dw.com/en/pulse-israels-environmental-school/av-19199222>

The Environmental High School in Sde Boker is in the middle of the Negev desert in Israel. The vision behind the boarding school comes from Israel's first Prime Minister David Ben Gurion's: he saw the desert as a place to be studied and discovered. Today, students at the school have direct contact with the nature that surrounds them - so they can learn to cherish and take care of it.

The Ecological Greenhouse

<http://www.greenhouse.org.il/Profile.html>

The Ecological Greenhouse in Kibbutz Ein-Shemer, Israel, is an innovative educational center, a place for social encounters and connection which combines two fundamental elements: environmental ecology and social ecology.

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The Charlie Cart

<http://charliecart.org/>

The Charlie Cart Project is an integrated educational program that connects food and cooking with lessons in Math, English Language Arts, Science and Social Studies. We combine a rigorous curriculum with a mobile kitchen classroom to deliver hands-on nutrition education in any learning environment.

PepsiCo Recycling

<https://www.pepsicorecycling.com/>

PepsiCo Recycling believes that bigger change starts with one bottle, with one person, with one action.

Science News for Students

<https://www.sciencenewsforstudents.org/>

Founded in 2003, Science News for Students is an award-winning online publication dedicated to providing age-appropriate, topical science news to learners, parents and educators. It's part of the Science News Media Group, which has published its flagship magazine since 1922. SNS is a program of the Society for Science & the Public, a nonprofit 501(c)(3) membership organization dedicated to public engagement in scientific research and education. SNS — which is free to use — helps to fulfill the Society's enduring mission to inform, educate and inspire.

Project Drawdown

<https://www.drawdown.org/>

Drawdown is that point in time when the concentration of greenhouse gases in the atmosphere begins to decline on a year-to-year basis. Project Drawdown is the most comprehensive plan ever proposed to reverse global warming. We did not make or devise the plan—the plan exists and is being implemented worldwide. It has been difficult to envision this possibility because the focus is overwhelmingly on the impacts of climate change. We gathered a qualified and diverse group of researchers from around the world to identify, research, and model the 100 most substantive, existing solutions to address climate change. What was uncovered is a path forward that can roll back global greenhouse gas emissions within thirty years. The research revealed that humanity has the means and techniques at hand. Nothing new needs to be invented, yet many more solutions are coming due to purposeful human ingenuity. The solutions we modeled are in place and in action. Humanity's task is to accelerate the knowledge and growth of what is possible as soon as possible.

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Climate Generation

<https://www.climategen.org/>

A Will Steger Legacy is a nationally connected and trusted nonprofit dedicated to climate literacy, climate change education, youth leadership and citizen engagement for innovative climate change solutions.

Keep American Beautiful

<https://www.kab.org/>

A leading national nonprofit, Keep America Beautiful inspires and educates people to take action every day to improve and beautify their community environment. We envision a country in which every community is a clean, green, and beautiful place to live.

Alliance for Climate Education

<https://acespace.org/>

Alliance for Climate Education's mission is to educate young people on the science of climate change and empower them to take action. By empowering youth to take action within a frame of justice and optimism, we are growing and strengthening the climate movement, and shifting the national discourse on climate in ways that are proven to affect public opinion and policy. ACE does two things best. First, we teach climate science that puts teenagers at the center of the story. Our dynamic classroom teaching resources are award-winning and proven to work. Second, we give every student a chance to take action. For some, it's a small lifestyle change. For others, it's hands-on preparation for a lifetime of leadership.

The Fairchild Challenge

<https://www.fairchildgarden.org/Education/The-Fairchild-Challenge>

The Fairchild Challenge is our award-winning, interdisciplinary, environmental science competition designed to engage students of diverse interests, abilities, talents and backgrounds to explore the natural world. The program has been recognized as a benchmark for exceptional STEM education and for empowering PreK – 12th grade students to become the next generation of scientists, researchers, educated voters, policy makers, and environmentally-minded citizens.

The Dragons of Inaction

<http://www.dragonsofinaction.com/>

These dragons are a compendium of psychological barriers that hinder a person's desired actions. To date, they have mainly been gathered to help explain why a person agrees that climate change and environmental sustainability are important problems yet does not take enough action to effectively deal with those problems. However, the dragons can also help explain why people have difficulty moving from intention to action for other desirable behaviors, such as an improved diet, more exercise, or charitable donations of time or money.

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Slow Food Phoenix

<http://www.slowfoodphoenix.org/>

Slow Food is a non-profit, eco-gastronomic, membership organization that educates people about how the foods we choose to consume everyday have a large impact on our environment, health and the world we live in. An international organization begun in the early 1980's with chapters all over the world, our collective philosophy envisions a world in which all people can access and enjoy food that is good for them, good for those who grow it, and good for the planet.

Liberty Wildlife

<http://libertywildlife.org/education/>

Liberty Wildlife envisions a time when wildlife is recognized as an integral part of our natural world, and a precious natural resource, to be protected and preserved. Liberty Wildlife envisions being a permanent community resource, a place to instill compassion and stewardship in young minds and a place to reconnect the public with the beauty and benefits of native wildlife and habitat. Liberty Wildlife envisions a time when the community as a whole participates in the safekeeping of the natural world.

Clean Air Make More

<http://cleanairmakemore.com/>

Clean Air Make More is an educational outreach initiative created to inform Maricopa County residents about air pollution challenges we face in the county and provide them with the tools they need to take action. Created by the Maricopa County Air Quality Department and funded through fines collected from air quality violations, the primary focus of Clean Air Make More is to reduce the number of days this region exceeds the federal health standard for air pollution. The initiative is creating awareness about air quality in the county by providing information and tips to residents and businesses to make the air we breathe healthier.

Kids Making Sense

<http://cleanairmakemore.com/kids-making-sense/>

Students collect and analyze real air quality data in real time using portable, hand held sensors. Data collection sessions are saved and uploaded onto an online map. Students can analyze the data and compare their results to others across the country. Lesson plans, materials, sensors, cell phones, and technical support provided to participating schools in Maricopa County at no cost.

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Up in the Air: An Air Pollution Education Program

<https://www.arizonaee.org/ee-resources/maricopa-air-pollution-education-program/>

“Up in the Air: An Air Pollution Education Program” is designed around the big idea that our actions impact air quality in both positive and negative ways. This environmental education program engages K-5th Grade students in hands-on learning activities designed to promote collaboration and critical thinking skills.

Arizona Association for Environmental Education

<https://www.arizonaee.org/environmental-education-resources/>

AAEE aims to connect all people in Arizona with diverse professional development, networking, and collaborative relationships to enhance environmental education throughout the state of Arizona.

Environmental Professionals of Arizona

<https://www.epaz.org/>

Environmental Professionals of Arizona (EPAZ) is the premier environmental professional organization in Arizona. Our membership is comprised of state, industry, and business leaders including: regulatory, academia, environmental consultants and engineers, as well as environmental services companies dedicated to promoting environmental stewardship. EPAZ events and activities foster networking, communication, and cooperation between industry, business, and government. We provide a platform that allows our members to learn and share information within a diverse list of environmental disciplines including air, water, waste, pollution prevention, sustainability issues, safety and climate change.

Ashoka Changemaker Schools

<https://www.ashoka.org/en/program/ashoka-changemaker-schools>

Ashoka identifies and supports the world's leading social entrepreneurs, learns from the patterns in their innovations, and mobilizes a global community that embraces these new frameworks to build an "everyone a changemaker world."

Recycling Simplified

<https://recyclingsimplified.com/>

At Republic Services®, we bring you quick and easy ways to make a difference in our communities. Follow these simple guidelines to become a better recycler.

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Six Activities to Teach Kids About Water

https://wateruseitwisely.com/six-activities-to-teach-kids-about-water/?utm_source=Water+Use+It+Wisely+Newsletter&utm_campaign=aae0e7e038-EMAIL_CAMPAIGN_2018_11_06_12_47&utm_medium=email&utm_term=0_38479901e0-aae0e7e038-281955365

Beyond the classroom, there are many more opportunities to teach children about water. We suggest making the topic of water conservation both interesting and important without letting the discussion get too complicated or concerning.

Citizen Science Opportunities

A citizen scientist is an individual who voluntarily contributes his or her time, effort, and resources toward scientific research in collaboration with professional scientists or alone. These individuals don't necessarily have a formal science background.

<https://www.scientificamerican.com/citizen-science/>
<https://www.nationalgeographic.org/idea/citizen-science-projects/>
<https://www.citizensciencealliance.org/>
<https://scistarter.com/citizenscience.html>
<https://www.citizenscience.gov/#>
<http://www.citizenscience.org/>

Habitat Network

<http://content.yardmap.org/>

Habitat Network is a citizen science project designed to cultivate a richer understanding of wildlife habitat, for both professional scientists and people concerned with their local environments. We collect data by asking individuals across the country to literally draw maps of their backyards, parks, farms, favorite birding locations, schools, and gardens. We connect you with your landscape details and provide tools for you to make better decisions about how to manage landscapes sustainably.

Global Citizen

<https://www.globalcitizen.org/en/>

Our mission is to build a movement of 100M action-taking Global Citizens to help achieve our vision of ending extreme poverty by 2030. Global Citizen is a movement of engaged citizens who are using their collective voice to end extreme poverty by 2030. On our platform, Global Citizens learn about the systemic causes of extreme poverty, take action on those issues, and earn rewards for their actions — as part of a global community committed to lasting change.

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The top 7 questions you've asked Google about renewable energy

https://blog.arcadiapower.com/top-7-questions-youve-asked-google-renewable-energy/?mkt_tok=eyJpIjoiTnpZNFpqZzRZamN4WXPVNCIsInQiOiJyUnQ2REt2MwJBTEhTN2dYWmFIS0RIRU9tSHBicms1Szh2aUxxVnR5RTBUYmpqWXc1eIRcl0lXcmNHSHNvTTZndmxGYjNia09rb0EzTzNDU2RUbWh0aWQ3VWQ2U2hEUDFlbFhnT25QYVgybnBOVndDc3RDdndBQnU1RkRWUEh0djEifQ%3D%3D

As the clean energy industry gains momentum, most of us are curious to know more about its benefits, how it works, and what it costs. But what are the biggest questions we all still have about renewables? We took a look at the top questions you've asked Google and provided some insight. Energy can be confusing, but with the right resources, we can all make better choices when it comes to our power.

Arizona Sustainability Alliance

<https://www.azsustainabilityalliance.com/>

The Arizona Sustainability Alliance is a group that recognizes sustainability as the core of continued improvement of the lives of Arizonans and the protection of the state's natural resources.

Arizona Regional Service Centers

<http://www.azregionalcenters.com/>

Regional Centers are voluntary structures implemented by County School Superintendents and Education Service Agencies that provide professional development, educational services and technical assistance to address statewide, high priority initiatives including Data Use, Standards and Assessments, Great Teachers/Great Leaders, and STEM.

Honda Environmental Leadership Program for Automotive Dealerships

<https://greendealer.honda.com/downloads/hondagreendealerguide.pdf>

I'm pleased to provide an update on the progress of the Honda Environmental Leadership Program, also known as the Honda Green Dealer program. Since the program's launch in 2011 with a handful of dealers, we've witnessed rapid growth as hundreds of auto, powersports, and power equipment dealers across the U.S. have joined our voluntary program to reduce their carbon footprint, waste and water usage. The program provides dealers with support for data collection, environmental assessment, expert advice, implementation and results verification.

Pierce Energy Planning Resource Series

Technology Teaching Tools for Teachers

<http://sse.asu.edu/tools/>

If you've been wary to try online tools in your classroom, our casual quick and easy to follow instructional videos will help change your mind and show you all the neat things you could be doing with your class in a virtual capacity. Ranging from presentation tools to cloud storage solutions, these web-based tools pack loads of educational potential.

LED Waves' LED Savings Calculator

<https://www.ledwaves.com/pages/led-calc>

Making the switch to LED lighting? Answer the following questions on your current lighting usage, plus the LED replacement, to calculate your savings.

STEM Education for Diverse Learners

<https://education.asu.edu/stemcamp-2019>

A 5-day summer camp for teachers on best practices when teaching your students about STEM.

Obaggo Plastic Bag Recycling

<https://www.obaggo.com/>

Obaggo is dedicated to keeping the planet clean from plastic bag and film waste. Our innovative technologies help people recycle their post-consumer plastic bags, with the goal of doubling the number of plastic bags and film recycled each year. Obaggo actively influences sustainable packaging efforts, and supports initiatives to clean plastic from the oceans, and protect marine wildlife.

Arizona Recycling Coalition

<http://www.arizonarecyclingcoalition.org/resources.php>

The Arizona Recycling Coalition (AzRC) is a membership-based, non-profit organization dedicated to promoting waste reuse, reduction and recycling throughout Arizona and our southwestern region. They have a list of links for information on where to recycle, grants, bins, sponsors, and more by city.

SolarUp

<http://www.solarupapp.com/>

SolarUp is an intuitive app designed to streamline solar project development. Its friendly interface allows solar professionals and consumers easy access to a precision layout tool with no to little training. SolarUp helps visualize solar energy solutions and develops accurate energy modeling with sizing. Edit, create, and share your solar designs anywhere on your tablet or phone. Designing your own solar projects has never been easier or more accessible!