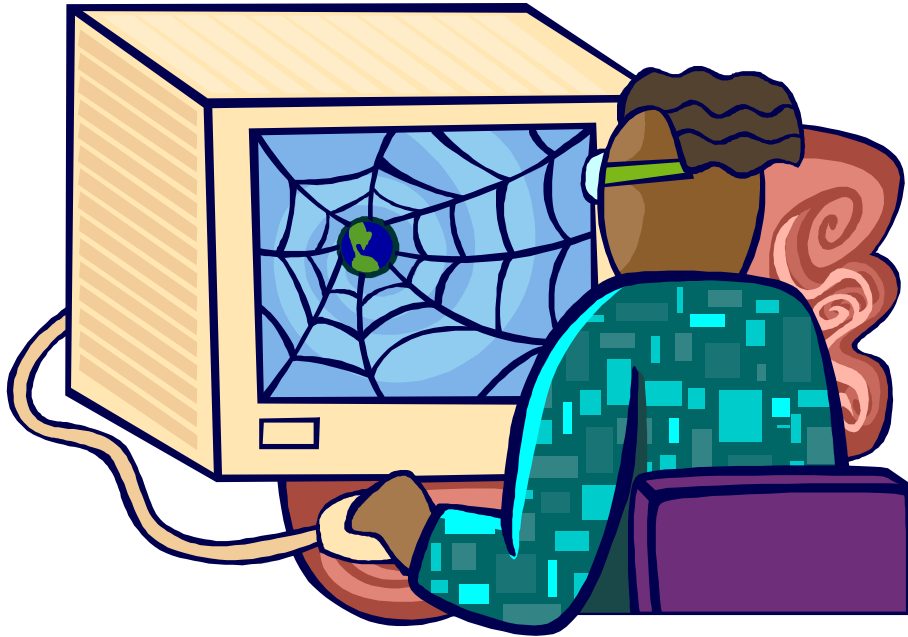


Our Favorite Environmental Education Websites



Compiled by the Ohio EPA Office of Environmental Education

Last update: 6/13/19

Please send corrections and suggestions to oeef@epa.ohio.gov



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1. ENVIRONMENTAL SUBJECT AREAS

1.1. Air Quality

AirCompare uses the EPA air quality databases to provide information about local air pollutants. Use this tool to get information about air quality in a specific area, based on a particular health issue to plan trips, help in relocation decisions, and learn more about local counties. <http://www.epa.gov/aircompare/>

AIRNow – (Joint Website of US EPA, NOAA/National Weather Service, NASA, National Park Service, and Environment Canada) – for latest air quality monitoring data in selected Ohio cities, www.airnow.gov

Air Pollution – What’s the Solution? modules for students in grades 6-12 utilizing real-time atmospheric and weather data, from US EPA, the Clean Air Association of Northeast States, and Stevens Institute of Technology, www.k12science.org/curriculum/airproj/

“Atmosphere” and “Atmospheric Pollution” units in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, <http://www.learner.org/channel/courses/envsci/index.html>

Clean School Bus USA website at US EPA, www.epa.gov/cleanschoolbus/

Cincinnati Childhood Allergy and Air Pollution Study (CCAAPS) at the University of Cincinnati, Department of Environmental Health, <http://eh.uc.edu/ccaaps/>

In the Air, Tools for Learning About Airborne Toxics Across the Curriculum, education modules for K-3, 3-6, 6-8, 9-12 and adults, developed by US EPA and the Missouri Botanical Garden, correlated with national science standards www.intheair.org/

Ohio EPA Division of Air Pollution Control, www.epa.ohio.gov/dapc/

1.2. Climate Change

Byrd Polar Research Institute at The Ohio State University
Antarctica and earth science lessons for grades 2-12, <http://bprc.osu.edu/>

Charting the Midwest: An Inventory and Analysis of Greenhouse Gas Emissions in America's Heartland
Report from World Resources Institute, includes Ohio Profile
<http://www.wri.org/publication/charting-the-midwest#>

Climate Literacy: The Essential Principles of Climate Sciences – A Guide for individuals and communities at <http://downloads.globalchange.gov/Literacy/Climate%20Literacy%20Booklet%20Low-Res.pdf> and at <http://www.globalchange.gov/>

Climate Policy – An American Meteorological Society Project, www.climatepolicy.org

Confronting Climate Change in the Great Lakes Region Report of the Union of Concerned Scientists and The Ecological Society of America, George W. Kling et al, 2003,
<http://www.ucsusa.org/greatlakes/glchallengereport.html>

“Earth’s Changing Climate” unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media,
www.learner.org/channel/courses/envsci/index.html

GLOBE program (NASA/NOAA Global Learning and Observations to Benefit the Environment)'s Student Climate Research Campaign <http://www.globe.gov/web/scrc/overview>

Great Lakes Climate Change Curriculum from Ohio Sea Grant and Ohio State University Earth Systems Education, <http://changingclimate.osu.edu/topics/education/>

Human- vs. Natural-Caused Climate Change, based on data from NASA's Goddard Institute for Space Studies. <http://www.bloomberg.com/graphics/2015-whats-warming-the-world/>

Intergovernmental Panel on Climate Change (IPCC), www.ipcc.ch

Met Ed Meteorology and Training from the University Consortium on Atmospheric Research www.meted.ucar.edu/

NASA Global Climate Change – Vital Signs of the Planet <http://climate.nasa.gov/>

NASA's Climate Kids website for grades 4-6 <http://climate.nasa.gov/kids/>
NASA Earth Systems, Technology, and Energy Education, <http://esteem.larc.nasa.gov/>

NASA/PBS global Climate Change teaching modules http://climate.nasa.gov/resources/education/pbs_modules/

NASA site on monitoring climate with remote sensing <http://climate.jpl.nasa.gov/>

NASA Wavelength resources for Earth and Space Science Education <http://nasawavelength.org/>

National Climate Assessment summarizes current and future impacts of climate change in the U.S. <http://nca2014.globalchange.gov/>

NOAA Teaching Climate <https://www.climate.gov/teaching>

NOAA "Discover Your Changing World" middle school activities, <http://oceanservice.noaa.gov/education/discoverclimate>

North American Association for Environmental Education/Kettering Foundation Environmental Issue Forum guide "Climate Choices: How should we meet the challenges of a warming planet?" <https://www.nifi.org/en/issue-guide/climate-choices>

Download middle school teachers guide:

<https://naaee.org/eepro/resources/environmental-issues-forums-eif-0>

Download high school teachers guide:

<https://naaee.org/eepro/resources/environmental-issues-forums-eif>

Project Learning Tree secondary education module "Southeastern Forests and Climate Change" <http://sfrc.ufl.edu/extension/ee/climate/>

Center for Climate and Energy Solutions, <http://www.c2es.org/>

The Climate Registry greenhouse gas emissions reporting system www.theclimateregistry.org

United States Global Change Research Program Resource Library <http://library.globalchange.gov/>

World Resources Institute (WRI) Climate Analysis Indicators Tool <http://www.wri.org/project/cait>

1.3. Energy Efficiency/Alternative Energy Sources

Alliance to Save Energy: <https://www.ase.org/projects/powersave-schools>

Columbus Green Building Forum, www.cgbf.org/

Conservation section of US EPA's High School Environmental Center, <http://epa.gov/highschool>

Clean Fuels Ohio www.cleanfuelsohio.org

"Energy and Society" module from Project Learning Tree, <http://www.plt.org/energy-society-kit>

"Energy Challenges" unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, <http://www.learner.org/resources/series209.html?pop=yes&pid=2278>

<http://energyhog.org/> - Alliance to Save Energy

Energy Kids – U.S. Energy Information Administration
<http://www.eia.gov/kids/energy.cfm?page=1>

Northeast Ohio Green Building Coalition, <http://www.neogreenbuilding.org/>

Green Energy Ohio www.greenenergyohio.org

Leadership in Energy and Environmental Design (LEED Certification) from the U.S. Green Building Council, www.usgbc.org/

Ohio Biomass Energy Program, at the Public Utilities Commission of Ohio,
<http://www.puco.ohio.gov/puco/index.cfm/industry-information/industry-topics/ohio-biomass-energy-program/>

Ohio Department of Natural Resources, Mineral Resource Management
<http://www.ohiodnr.com/mineral/default/tabid/10352/Default.aspx> (oil and gas, coal mining)

Ohio Energy Project www.ohioenergy.org

US Department of Energy – Energy Efficiency and Renewable Energy education pages, including K-12 Lesson plans, energy literacy, green your school and energy career resources
<http://energy.gov/eere/education/teach-and-learn>

US Department of Energy fossil energy study guides and classroom activities
http://fossil.energy.gov/education/energylessons/Study_Guides_and_Activities.html

US EPA Clean Energy Home Page
<http://epa.gov/cleanenergy/index.html>

US Green Building Council – Center for Green Schools
<http://www.centerforgreenschools.org/home.aspx?gclid=CML-g9v0464CFbAEQAodTCQjYQ>
US Green Building Council – Cincinnati Chapter <http://www.usgbc-cincinnati.org/>

US Green Building Council – Northeast Ohio Chapter <http://www.neogreenbuilding.org/>

1.4. Environmental Health and Safety

Agency for Toxic Substances and Disease Registry, U.S. Centers for Disease Control, www.atsdr.cdc.gov/

“Chemicals” National Library of Medicine environmental health portal for middle school students <http://kidsenvirohealth.nlm.nih.gov/>

Environmental Health A to Z topics, National Institute of Environmental Health Science <http://www.niehs.nih.gov/health/topics/index.cfm>

Environmental Health and Toxicology section of Specialized Information Services database, U.S. National Library of Medicine, National Institutes of Health, <http://sis.nlm.nih.gov/enviro.html>

Health & Safety section of US EPA’s High School Environmental Center (includes asthma, lead, mercury, pesticides, radon, sun protection) <http://epa.gov/highschool>

MedlinePlus: environmental health section, from U.S. National Library of Medicine, National Institutes of Health, www.nlm.nih.gov/medlineplus/environmentalhealth.html

National Environmental Health Association, www.neha.org/

Ohio Environmental Health Association, <http://www.ohioeha.org/>

Project EXCITE at Bowling Green State University (Grade 4-9 problem-based learning episodes on environmental health science, aligned with Ohio standards) <http://edhd.bgsu.edu/excite/>

“Risk, Exposure and Health” unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, <http://www.learner.org/channel/courses/envsci/index.html>

Tox Town – Environmental Health Concerns and Toxic Chemicals Where You Live, Work and Play, from the U.S. National Library of Medicine, National Institutes of Health, www.toxtown.nlm.nih.gov/

US EPA, Healthy School Environment, <http://www.epa.gov/schools/>

1.5. Wastes and Recycling

Exploring Environmental Issues: Municipal Solid Waste unit from Project Learning Tree
<http://www.plt.org/municipal-solid-waste>

Keep America Beautiful, Inc. <http://www.kab.org>

Local Solid Waste Management Districts and Recycling Programs in Ohio
<http://epa.ohio.gov/dmwm/home/recycle.aspx>

National Middle Level Science Teachers' Association: Hands on Plastics
<http://www.nmlsta.org/>

Ohio EPA Division of Materials and Waste Management, <http://epa.ohio.gov/dmwm/>

Ohio EPA Office of Compliance Assistance and Pollution Prevention,
www.epa.ohio.gov/ocapp/

Photographers' impressions of waste in America
From Edward Burtynsky <http://www.edwardburtynsky.com/>
From Chris Jourdan <http://www.chrisjordan.com/>

"Turning the Tide on Trash: A Learning Guide on Marine Debris," K-12 lesson plans from the National Oceanic and Atmospheric Association (NOAA)
<http://marinedebris.noaa.gov/turning-tide-trash>

Waste & Recycling section of US EPA's High School Environmental Center, <http://epa.gov/highschool/>

Windows on Waste: An elementary, interdisciplinary, environmental studies activity guidebook about solid waste and environmental issues.
<http://epa.ohio.gov/Portals/51/Recycle/WindowsOnWaste.pdf>

1.6. Water Quality

Association of State Wetland Managers: <https://www.aswm.org/>

Centers for Ocean Sciences Education Excellence (COSEE) Great Lakes, Great Lakes Literacy Principles
<http://www.greatlakesliteracy.net/>

Greenacres Foundation (Cincinnati) Water Quality Project,
<http://www.green-acres.org/index.php/education/water-quality/>

“Harmful Algae” (from Woods Hole Oceanographic Institute) on cyanobacteria and other freshwater algal blooms, <http://www.whoi.edu/redtide/home>

Healthy Water, Healthy People middle and high school curriculum from Project WET, The Watercourse and Hach Scientific, coordinated in Ohio by Ohio EPA Office of Environmental Education
<http://www.epa.ohio.gov/oeef/ProjectWET.aspx>

Izaak Walton League Save Our Streams (national watershed education and outreach program)
<http://iwla.org/conservation/water/save-our-streams>

Little Miami, Inc. citizen river conservation resources
www.littlemiami.com/

Marine Debris in the Great Lakes, National Oceanographic and Atmospheric Administration (NOAA)
<http://marinedebris.noaa.gov/great-lakes>

National Marine Educators Association, National Oceanographic and Atmospheric Administration (NOAA), and Sea Grant, “The Bridge: An Ocean of Teacher-Approved Marine Education Resources”
<http://web.vims.edu/bridge/?svr=www>

New York State Department of Environmental Conservation, “Key to Aquatic Macroinvertebrates”
www.dec.ny.gov/animals/35772.html?showprintstyles&showprintstyles

Ohio EPA Division of Drinking and Ground Waters, www.epa.ohio.gov/ddagw

Ohio EPA, Division of Surface Water, www.epa.ohio.gov/dsw/

Ohio Watershed Network - local watershed coordinators
<http://ohiowatersheds.osu.edu/>

Once Upon a Wellhead, or the Adventures of Dew, Ohio EPA Wellhead Protection Coloring Book,
<http://www.epa.ohio.gov/portals/28/documents/swap/dew.pdf>

Green Yards and Healthy Homes Booklet for Homeowners, from Geauga Soil & Water Conservation District http://www.geaugaswcd.com/storm_water

Surf Your Watershed (from US EPA) www.epa.gov/surf

“Turning the Tide on Trash: A Learning Guide on Marine Debris,” K-12 lesson plans from the National Oceanic and Atmospheric Association (NOAA)
<http://marinedebris.noaa.gov/turning-tide-trash>

US Geological Survey “Water Science School” <http://water.usgs.gov/edu/> includes excellent pages on any water-related topic you can think of

Volunteer water monitoring programs across the U.S. <http://yosemite.epa.gov/water/volmon.nsf>

“Water Resources” unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, <http://www.learner.org/channel/courses/envsci/index.html>

“Water Pollution” page, National Institute of Health Medline <http://www.nlm.nih.gov/medlineplus/waterpollution.html>

World Water Monitoring Day, www.worldwatermonitoringday.org/
US EPA “Monitoring and Assessing Water Quality” web pages <http://water.epa.gov/type/watersheds/monitoring/monintr.cfm>

“Discover Water: The Role of Water in Our Lives” from Project WET <http://www.discoverwater.org/>

1.7. Websites with Data on Local Environmental Conditions in Ohio

U.S. EPA “Surf Your Watershed” www.epa.gov/surf

Ohio EPA Division of Surface Water, interactive GIS maps <http://www.epa.state.oh.us/dsw/gis/index.aspx>
Topics include Water Chemistry & Stream Sediment Data, Biological Monitoring & Assessment Data, Combined Sewer Overflow Outfalls, Individual NPDES Permits, and Fields Approved for Biosolids Application

Ohio Watershed Network (local watershed coordinators), <http://ohiowatersheds.osu.edu/>

Ohio Ambient Air Quality Data, <http://www.epa.ohio.gov/dapc/airohio/index.aspx>

U.S. Ambient Air Quality Data, <http://www.epa.gov/airdata>

Ohio hazardous waste management and recycling facilities
http://www.epa.ohio.gov/dhwm/receiving_facilities.aspx

U.S. EPA’s Enforcement and Compliance History Online (ECHO)
www.epa.gov/echo

Toxic Release Inventory data on industry emissions in Ohio
<http://www.epa.ohio.gov/dapc/tri/tri.aspx>

Ohio Geological Survey, Ohio geology
<http://geosurvey.ohiodnr.gov/>

Ohio Geological Survey hands on earth science educational activities,
<http://geosurvey.ohiodnr.gov/publications-maps-data/free-downloads/hands-on-activities>

“Shipwrecks and Maritime Tales of the Lake Erie Coastal Ohio Trail,” from Ohio Sea Grant/OSU Extension <http://www.ohioshipwrecks.org/>

Terra Server for aerial photos and topographic maps
<http://www.terraserver.com/>

Google Earth for aerial photos
<http://earth.google.com/>

1.8. Wildlife Cameras

DC Eagle Cam at the U.S. National Arboretum
<http://www.dceaglecam.org/>

Kelp Cam at Channel Islands National Park
<http://explore.org/live-cams/player/channel-islands-national-park-anacapa-ocean>

BearCam at Katmai National Park
<http://explore.org/live-cams/player/brown-bear-salmon-cam-brooks-falls>

Puffin Cam at Seal Island National Wildlife Refuge

<http://explore.org/live-cams/player/puffin-burrow-cam>

2. EDUCATION AND OUTREACH MATERIALS

2.1. Calculating Your Environmental Impact

US Dept of Energy site, shows miles per gallon, fuel consumption, cost, greenhouse gas emissions in tons and EPA Air pollution score by vehicle.

www.fueleconomy.gov (click on compare Side-by-Side)

Earthday Network site calculates how many acres are needed per person based on lifestyle factors

<http://www.earthday.org/footprint-calculator>

On the Facing the Future website www.facingthefuture.org are free downloads of lesson plans on global issues and sustainability. Three relevant to calculating environmental impacts are: "Watch Where You Step," "Now Hear This!" and "When the Chips are Down."

The Global Footprint Network, <http://www.footprintnetwork.org/en/index.php/GFN/>

Air emissions calculator, <http://www.footprintnetwork.org/en/index.php/GFN/page/calculators/>

"What's My Carbon Footprint" from the Nature Conservancy

<http://www.nature.org/greenliving/carboncalculator/>

Greenhouse Gas Equivalencies Calculator from US EPA

<https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>

Other ideas: Check utility bills for figures on pollutants per kilowatt hour, and average energy use of different appliances. Projects WET, WILD and Learning Tree have activities that show how much water is used to produce different crops and products, and how much a lunch cost wildlife. Storm water volumes could be calculated with measurements of a school and parking lot, multiplied by rain gauge measurements.

2.2. Citizen Science

- Bat Detective – www.batdetective.org/

Bird Sleuth from Cornell University's Lab of Ornithology – www.birdsleuth.org/

Bumble Bee Watch – www.BumbleBeeWatch.org

Cary Institute of Ecosystems Studies (<http://www.caryinstitute.org/educators/teaching-materials/syefest>) - SYEFEST (Schoolyard Ecology for Elementary School Teachers) has lesson plans, protocols and other resources online for everything from ant studies to beat sampling to seed preferences.

Cornell University – Citizen science projects for the formal classroom

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

<https://www.aza.org/frogwatch/>

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

<https://www.learner.org/jnorth/>

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

<http://feederwatch.org/>

<http://www.scientificamerican.com/education/>

<http://scistarter.com/>

Ecology Explorers (<https://ecologyexplorers.asu.edu>) – This site from Arizona State University includes teacher's guides, background information and protocols for studying ground arthropods, vegetation surveys, bird surveys, plant/insect interaction and much more. Most can easily be adapted for Ohio.

Frog Watch USA – www.aza.org/frogwatch/

Global Learning and Observations to Benefit the Environment (GLOBE Program) from NOAA/NASA using school posted data as ground truth for satellite data on climate, www.globe.gov

The Great Backyard Bird Count <http://www.birdsource.org/gbbc/whycount.html> (Audubon and Cornell Lab of Ornithology)

The Great Sunflower Project – www.greatsunflower.org/

Journey North – www.learner.org/jnorth/

Monarch Watch – www.monarchwatch.org

NEON Citizen Science Academy – <http://citizenscienceacademy.org/> (online courses to help you implement citizen science projects in a variety of educational settings)

Ohio Long-Term Butterfly Monitoring Project – www.ohiolepidopterists.org

Project Feeder Watch – www.birds.cornell.edu/pfw/

Project Noah www.projectnoah.org

SciStarter – <http://scistarter.com/index.html> (features many projects including Nest Watch, Project Bud Burst, Dragonfly Migration, Leaf Snap, Great Lakes Worm Watch, and Camel Cricket Census)

Trout in the Classroom - <http://www.troutintheclassroom.org/home>

U.S. Phenology Network – www.usanpn.org/usa-national-phenology-network

2.3. Clearinghouses

Eisenhower National Clearinghouse for K-12 math and science

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

Specialized Information Services at the U.S. National Library of Medicine, National Institutes of Health, includes environmental health and toxicology databases (Toxnet), chemical information and Resources for Science Teachers www.sis.nlm.nih.gov/

SciLinks7 from the National Science Teachers Association (NSTA) www.scilinks.org

2.4. National Environmental Education Curricula and Projects

Ag in the Classroom www.agclassroom.org/ and

Ohio Ag in the Classroom, <http://www.agclassroom.org/state/summaries/ohio.cfm>

Earth Force www.earthforce.org/

The Environmental Education and Training Partnership <http://www.eetap.org/>

Global Learning and Observations to Benefit the Environment (GLOBE) from NASA and NOAA, www.globe.gov

Healthy Water, Healthy People learning modules for grades 6-12 from International Project WET, The Water Course, and Hach Scientific) <http://www.projectwet.org/what-we-do/publications/guides/healthy-water-healthy-people-water-quality-educators-guide> and www.epa.ohio.gov/oe

Leopold Education Project

www.lep.org *Population Connection*, <http://www.populationeducation.org> and World Population Map http://www.populationeducation.org/content/world-population-video?utm_source=Campaign+Created+2013%2F10%2F16%2C+3%3A11+PM&utm_campaign=Contact+Email&utm_medium=email

Project Food, Land and People www.foodlandpeople.org

Project Learning Tree www.plt.org and <http://forestry.ohiodnr.gov/plt>

Project WET (Water Education for Teachers) www.projectwet.org

And <http://www.epa.ohio.gov/oeef/ProjectWET.aspx>

Project WILD www.projectwild.org and in Ohio: <http://wildlife.ohiodnr.gov/education-and-outdoor-discovery/conservation-education-project-wild>

See also "Science and Civics: Sustaining Wildlife" secondary curriculum from Project WILD

The Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, <http://www.learner.org/channel/courses/envsci/index.html>

2.5. Outdoor Classrooms/Land Labs/Wildlife Gardens

4-H Garden at Michigan State University

http://www.hrt.msu.edu/our_gardens/4_h_childrens_garden

Bird Sleuth, from Cornell Lab of Ornithology <http://birds.cornell.edu/birdsleuth>

Get Em Outside video from National Leave No Child Inside Coalition

<http://www.youtube.com/watch?v=wRR1feHqZPY>

Granny's Garden School <http://www.grannysgardenschool.org/>

Habitats for Learning, a Planning Guide for Using and Developing School Land Labs

<http://www.epa.ohio.gov/Portals/42/documents/habitat.pdf>

Identifying Ohio trees, from Ohio Public Library Information Network and Ohio Historical Society,

www.oplin.org/tree/

Journey North www.learner.org/jnorth/index.html

Leave No Child Inside Cincinnati www.lncigc.org/

Monarch Watch at University of Kansas www.monarchwatch.org

National Wildlife Federation Schoolyard Habitats www.nwf.org/schoolyard

National Wildlife Federation Backyard Habitats www.nwf.org/backyard

PollinatorLive! Distance learning adventure for grades 4-8 <http://pollinatorlive.pwnet.org/>

Project WILD grants and resources for WILD School Sites

<http://wildlife.ohiodnr.gov/education-and-outdoor-discovery/conservation-education-project-wild#tabr4>

Raptors in the City (includes Cleveland peregrines)

<http://raptorsinthecity.homestead.com/index.html>

US EPA and US Botanic Garden, "Reduce Runoff: Slow It Down, Spread It Out, Soak It In" video showing how green techniques such as rain gardens, green roofs and rain barrels help manage stormwater runoff

<http://www.epa.gov/owow/nps/lid/video.html>

Funding opportunities at www.epa.ohio.gov/oeef/ee_resources.aspx

US Fish and Wildlife Services' Schoolyard Habitat Program:

<https://www.fws.gov/cno/conservation/schoolyard.html>

3. CAREER RESOURCES

3.1. Classroom Activities on Environmental Careers

Environmental Careers Icebreaker Classroom Activity created by Ohio EPA Office of Environmental Education to showcase 52 different public sector and private sector careers
<http://epa.ohio.gov/oeo/EnvironmentalEducation.aspx#135377996-environmental-education-resources>

“**Urban Waters**” activity in the *Project WET Curriculum and Activity Guide 2.0* includes water career cards for 19 careers related to providing and treating drinking water, and treating waste water.

“**Who Works in This Forest?**” in *Project Learning Tree Pre K-8 Environmental Education Activity Guide*

“**Working for Wildlife**” activity in newest *Project Wild Aquatic Guide*, and accompanying online Project WILD: Wild Work Resources, <http://www.projectwild.org/projectwildwebsite/resources/occupations.htm>

3.2. Environmental Career Resources

Animal Care and Science videos from Kids.gov, including animal keeper, marine biologist, veterinarian, wildlife biologist, and zoo keeper <https://www.usa.gov/animal-science-careers>

Arboriculture Career Paths from the International Society of Arboriculture
<http://www.isa-arbor.com/students/careersInArboriculture/commonCareerPaths.aspx>, with job descriptions for [Municipal Arborist/Forester](#), [Utility Arborist/Forester](#), and [Urban Forester/Government](#) and a Careers in Arboriculture video <https://youtu.be/u8Qn1iAMISl>

Careers in Environmental Health, Chemistry, and Toxicology from National Institute of Health/US National Library of Medicine https://toxtown.nlm.nih.gov/text_version/educators.php?id=5

Conservation Connect outdoor career videos from US Fish and Wildlife Service
<http://nctc.fws.gov/conservationconnect/>

Energy Kids Career Corner, from US Energy Information Administration
https://www.eia.gov/kids/energy.cfm?page=activities_career_corner

Farming, Fishing and Forestry videos from Kids.gov, including federal wildlife officer and wildlife biologist <https://www.usa.gov/farming-fishing-forestry-careers>

Oil and Gas “Careers in Ohio” from Ohio Oil and Gas Energy Education Project
<http://oogeep.org/industry-workforce/careers/> or email acroce@oogeep.org to order free copies

Scientists at the Smithsonian, includes Amphibian Ace, Bat Listener, Bee Tracker, Bird Strike Sleuth, Dinosaur Hunter, Frog Follower, Reef Whisperer, Seed Reader and many more <http://www.smithsonianeducation.org/scientist/index.html>

Scientists Card series from Natural Inquirer middle school science education
<http://www.naturalinquirer.org/scientists-v-92.html>

US Environmental Protection Agency “Faces of the EPA” video interviews
<https://www.youtube.com/playlist?list=PLBhfkkujnoRD-7H1IYa5FQ10AFgsjbnlh>

US Geological Survey Career Cards for ten different science careers including biological science technician, biologist, cartographer, chemist, ecologist, geologist, geographer, hydrologic technician,

hydrologist, physical scientist, <http://education.usgs.gov/careercards.html>

Wildlife Biologist Career Spotlight video from US Fish and Wildlife Service & Kids.gov
<https://www.usa.gov/animal-science-careers?source=kids#item-213553>

Wildlife Officer Career Spotlight video from US Fish and Wildlife Service & Kids.gov
<http://kids.usa.gov/watch-videos/jobs/federal-wildlife-officer/index.shtml>

Zoo Keepers from the National Zoo and Kids.gov
<http://kids.usa.gov/watch-videos/jobs/zoo-keepers/index.shtml>

“My Future Life” videos, <http://www.youtube.com/user/SEOCEMS> with career interviews such as Aquatic Biologist, Hydrogeologist, Environmental Projects Manager, Plant Pathologist, Wind Energy Assessment, and Waste Management

Career Pathways from the Ohio Department of Education, showing middle, high school and college course options for various career clusters
<https://education.ohio.gov/Topics/Career-Tech/Career-Connections/Career-Pathways>

Four of these environmental career pathways have been posted as an “Ohio In-Demand Job” on the **Ohio Means Jobs** website:

Water plant operator/utilities director
<http://jfs.ohio.gov/owd/CareerPathways/AgSystemsWaterSystems.stm>

Environmental Technician/Environmental Specialist/Natural Sciences Manager
<http://jfs.ohio.gov/owd/CareerPathways/AgSystemsEnvironmental.stm>

Arborist/Forestry Specialist/Forestry Manager
<http://omj.ohio.gov/WorkArea/DownloadAsset.aspx?id=2147644425>

Pipeline Technician/Petroleum Technician/Petroleum Engineer
<http://jfs.ohio.gov/owd/careerpathways/agssystemsnaturalresources.stm>

Ohio Means Jobs K-12 Occupation Search page for beginning to research different career fields:
<https://jobseeker.k-12.ohiomeansjobs.monster.com/ExploreIt/OccupationSearch.aspx>

Open Education Database <http://oedb.org/>, select a degree then “science and engineering” category to reveal subjects like environmental policy and environmental science.

Posters showcasing careers and strong employment outlooks for environmental professionals, from the National Environmental Education Foundation:

“STEM and Our Planet” www.neefusa.org/resource/stem-our-planet-infographic

“Engineering and Our Planet” www.neefusa.org/resource/engineering-our-planet-infographic

“Rooted in Math” www.neefusa.org/resource/rooted-math poster, and
<https://www.neefusa.org/resource/rooted-math-educator-toolkit>

3.3. Environmental Career Resources Available for Purchase

Environmental Related Occupations two- volume Career Pathway DVD available from www.careerpathwaysonline.com includes video interviews of Ohio and West Virginia environmental professionals about their careers, education and salary in the following fields:

- Air Quality Manager
- Solid Waste Manager
- Hazardous Waste Manager
- Urban and Regional Planner
- Forest and Conservation Scientist
- Water and Wastewater Treatment Plant Operator
- Geologist
- Meteorologist
- Park Ranger
- Biological Scientist
- Environmental Inspector
- Recycling Plant Manager

Scientists in the Field series of books from Houghton Mifflin Harcourt:

- The Bat Scientists** by Mary Cay Carson, c. 2010
- Emi and the Rhino Scientist** by Mary Kay Carson, c. 2010
- Extreme Scientists: Exploring Nature's Mysteries from Perilous Places** by Donna M. Jackson, c. 2009
- The Frog Scientist** by Pamela S. Turner, c. 2009
- Gorilla Doctors: Saving Endangered Great Apes** by Pamela S. Turner, c. 2005
- Hidden Worlds: Looking Through a Scientist's Microscope** by Stephen Kramer, c. 2001
- The Hive Detectives: Chronicle of a Honey Bee Catastrophe** by Loree Griffin Burns, c. 2010
- The Manatee Scientists: Saving Vulnerable Species** by Peter Lourie, c. 2011
- Once a Wolf: How Wildlife Biologists Fought to Bring Back the Gray Wolf** by Stephen R. Swinburne, c. 1999
- Park Scientists: Gila Monsters, Geysers and Grizzly Bears in America's Own Backyard** by Tom Uhlman and Mary Kay Carson, c. 2014
- The Polar Bear Scientists** by Peter Lourie, c. 2012
- The Prairie Builders: Reconstructing America's Lost Grasslands** by Sneed C. III, c. 2008
- Project UltraSwan** by Elinor Osborn, c. 2002
- Quest for the Tree Kangaroo: An Expedition to the Cloud Forest of New Guinea**, by Sy Montgomery, c. 2006
- Saving the Ghost of the Mountain: An Expedition Among Snow Leopards in Mongolia** by Sy Montgomery, c. 2009
- Science Warriors: The Battle Against Invasive Species** by Sneed B. Collard III, c. 2008
- Secrets of Sound: Studying the Calls and Songs of Whales, Elephants and Birds** by April Pulley Sayre, c. 2002
- The Snake Scientist** by Sy Montgomery, C. 1999
- Stronger than Steel: Spider Silk DNA and the Quest for Better Bulletproof Vests, Sutures, and Parachute Rope** by Bridget Heos, c. 2013
- The Tarantula Scientist** by Sy Montgomery, c. 2007
- Tracking Trash: Flotsam, Jetsam and the Science of Ocean Motion** by Loree G. Burns, c. 2007
- The Whale Scientists: Solving the Mystery of Whale Strandings**, by Fran Hodgkins, c. 2007
- The Wildlife Detectives: How Forensic Scientists Fight Crimes Against Nature**, by Donna

M. Jackson, c. 2000
The Woods Scientist by Stephen R. Swinburne, c. 2002

3.4. General Career Resources

Ohio Career Exploration Internship Program at the Ohio Development Services Agency places high school students in businesses for 20-week paid internships. Online application at <https://education.ohio.gov/getattachment/Topics/Career-Tech/Career-Connections/Resources-for-Families-and-Communities/Career-Exploration-Internship.pdf.aspx>

Occupational Outlook Handbook from the US Bureau of Labor Statistics <http://www.bls.gov/ooh/home.htm> includes in-depth job descriptions, degree requirements, pay and job outlook for a number of environmental careers, including:

| | |
|--|--|
| Atmospheric Scientists | Epidemiologists |
| Biological Technicians | Geoscientists |
| Civil Engineers | Hazmat Removal Workers |
| Conservation Scientists and Foresters | Hydrologists |
| Environmental Engineering Technicians | Microbiologists |
| Environmental Engineers | Occupational Health & Safety Specialists |
| Environmental Science Technicians | Wildlife Biologists |
| Environmental Scientists and Specialists | Zoologists |

See also the Bureau of Labor Statistics K-12 website, <http://www.bls.gov/k12/>

4. MISCELLANEOUS

4.1. Other Ohio Resources

Environmental Education Council of Ohio (EECO), including online directory of Ohio EE Resources, www.eeco-online.org

Envirochem on-line compliance manual for Ohio environmental regulations www.ohiochemistry.org

Find your local Solid Waste Management District/Recycling Program
<http://epa.ohio.gov/dmwm/Home/recycle/tabid/6105/LiveTabId/143809/Default.aspx#where>

Greenlink (Green Environmental Coalition) www.greenlink.org

Green Teacher Institute at Miami University www.environmentaleducationohio.org

Ohio EPA Office of Environmental Education/Ohio Environmental Education Fund
www.epa.ohio.gov/oeo

Ohio EPA Public Interest Center, www.epa.ohio.gov/pic/

Science for Ohio (Learning Episodes developed by the Center for Environmental Education and Natural History at Miami University, aligned with Ohio standards) <http://www.cas.muohio.edu/scienceforohio/>

Ohio Department of Natural Resources <http://www.ohiodnr.com/>

ODNR lesson plans on science, language arts, and environmental careers, with modules on land, water, Lake Erie Coastal Management, Ohio Native Plants, Managing Ohio's wild deer herd, and Outdoor Recreation <http://www.dnr.state.oh.us/tabid/18945/Default.aspx>

Ohio Department of Health <http://www.odh.ohio.gov/>

4.2. Other National Resources

National Engineers= Week Future City Competition - www.futurecity.org/ and <http://futurecity.org/ohio>

My Community Our Earth www.aag.org/sustainable

National Geographic Society <http://www.nationalgeographic.com/>

Nature Serve: <http://www.natureserve.org/>

North American Association for Environmental Education, www.naaee.org/

Rainforest lesson plans,
<http://www.rainforest-alliance.org/programs/education/index.html>

State Education and Environment Roundtable (Environment as an Integrating Concept) www.seer.org/

Teach Engineering, (standards-based K-12 inquiry activities developed by a group of universities with NSF funding) www.teachengineering.org/index.php

U.S. EPA's EE programs www.epa.gov/enviroed/index.html

Webrangers U.S. National Park Service Website for children
www.nps.gov/webrangers

Women In Mining Website includes cookie mining, plate tectonics and other good classroom activities, some are NSTA award winners. www.womeninmining.org/