

Our Favorite Environmental Education Websites



Compiled by the Ohio EPA Office of Environmental Education

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



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Nationally-known 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/

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) www.healthywater.org and www.epa.ohio.gov/oeef See also correlations to Ohio's Academic Content Standards for science education, at <http://www.dnr.state.oh.us/education/correlations/>

Leopold Education Project www.lep.org

No Child Left Inside national coalition
<http://www.cbf.org/Page.aspx?pid=687>

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> See also correlations to Ohio's Academic Content Standards for science education, at www.dnr.state.oh.us/education/correlations/

Project WET (Water Education for Teachers) www.projectwet.org
And <http://www.epa.ohio.gov/oeef/ProjectWET.aspx> See also correlations to Ohio's Academic Content Standards for science education, at www.dnr.state.oh.us/education/correlations/

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, and correlations to Ohio's Academic Content Standards for science education, at <http://www.dnr.state.oh.us/education/correlations/>

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>

WOW!: The Wonders of Wetlands, http://www.wetland.org/education_wow.htm

Outdoor Classrooms/Land Labs/Wildlife Gardens

4-H Garden at Michigan State University
<http://4hgarden.msu.edu/tour/overview.html>

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

Chester Elementary land lab near Wooster, Ohio
www.northwestern-wayne.k12.oh.us/Chester/Landlab/main2.html

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/

Leave No Child Inside Central Ohio/Columbus <http://kidsandnature.org/blog/>

Monarch Teacher Network www.eirc.org/website/Programs--and--Services/Monarch-Teacher-Network/
Monarch Watch at University of Kansas www.monarchwatch.org

National Audubon Society - nature center initiative
www.audubon.org/educate/

National Gardening Association, (includes grants), www.kidsgardening.com

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
www.projectwild.org/WILDSchoolSites.htm
and www.dnr.state.oh.us/tabid/5821/default.aspx

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 and <http://www.k12grants.org/>

US Fish and Wildlife Services' Schoolyard Habitat Program:
www.fws.gov/cno/conservation/schoolyard.cfm

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/>

Air Defenders curriculum on open burning of solid waste, from Wisconsin Environmental Health Association, www.airdefenders.org/

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” pages, National Library of Medicine environmental health portal for middle school students <http://kidsenvirohealth.nlm.nih.gov/topic/001/air-pollution/>

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/

Midwest Regional Carbon Sequestration Partnership
<http://www.netl.doe.gov/publications/factsheets/project/Proj243.pdf>

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

Project A.I.R.E. (Air Information Resources for Educators) resources for grades 4-12, and Tools for Schools resources for K-3, on US EPA’s Region 1 Website, www.epa.gov/ne/students/teacher/airqual.html

Project LEARN – Atmospheric Science Explorers - middle school science modules developed by the National Center for Atmospheric Research with NSF funding: Ozone in Our Atmosphere, Atmospheric Dynamics, and Cycles of the Earth and Atmosphere
www.ucar.edu/learn

Climate Change

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

Center for Remote Sensing of Ice Sheets at the University of Kansas, includes K-12 lessons on topics like ice sheets, glaciers, sea level change, weather, climate and global warming,
<https://www.cresis.ku.edu/education/iceicebaby.html>

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 Change” National Library of Medicine environmental health portal for middle school students
<http://kidsenvirohealth.nlm.nih.gov/topic/003/climate-change/>

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, <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

EE Capacity Project-based Online Learning Community Alliance (POLCA) Resources and Suggestions for Advancing Climate Change Environmental Education
<http://www.eecapacity.net/climate-change-ee-project-based-online-learning-community-alliance.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/>

Keystone Center’s “CSI: Climate Status Investigations” (US DOE and US NETL middle & high school activities) <http://www.keystonecurriculum.org/>

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

US EPA Global Climate Change Lesson Plans for Educators,
<http://www.epa.gov/climatechange/kids/resources/lesson-plans.html> including

“Weather and Climate: What’s the Difference?”

“Mapping Greenhouse Gas Emissions Where You Live”

“Carbon Through the Seasons”

“Getting to the Core: Climate Change Over Time”

“Tree Rings: Living Records of Climate”

“Sea Level: On the Rise”

“Corals and Chemistry”

US EPA Climate Change, www.epa.gov/climatechange and Climate Change for Kids,
www.epa.gov/climatechange/kids/index.html

U.S. EPA available publications list on climate change and global warming
<http://www.epa.gov/oecaagct/acli.html>

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>

Calculating Your Environmental Impact

US EPA Global Warming Resource Center; Personal Greenhouse Gas Calculator
http://epa.gov/climatechange/emissions/ind_calculator.html

US EPA 's Green Vehicle Guide, www.epa.gov/autoemissions

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)

Local Governments for Sustainability software to help cities estimate GHG emissions
www.ICLEI.org

Canadian Government, ecoAction, www.ecoaction.gc.ca/index-eng.cfm

Earthday Network site calculates how many acres are needed per person based on lifestyle factors
<http://www.earthday.org/footprint-calculator>

The "Ecological Footprint of Nations" at www.ecologicalfootprint.org has a 15-question quiz (<http://www.earthday.org/footprint-calculator>) used to calculate how much productive land and water you need to support what you use and what you throw away. Answers are metric, so this is a good activity for students to make the conversions.

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/>

Zero Footprint youth carbon calculator from National Environmental Education Week
http://www.eeweek.org/carbon_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.

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
- Butler County Stream Quality Monitoring – www.butler-countystreamteam.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.
- 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/
- The Lost Ladybug Project – www.lostladybug.org/index.php
- 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
- OSU Phenology Garden Network – <http://phenology.osu.edu/default.asp>

Energy Efficiency/Alternative Energy Sources

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 – Central Ohio Chapter <http://www.usgbc-coh.org/>
US Green Building Council – Cincinnati Chapter <http://www.usgbc-cincinnati.org/>
US Green Building Council – Northeast Ohio Chapter <http://www.neogreenbuilding.org/>

Windwise curriculum from Normandeau Associates for middle and high school
<http://learn.kidwind.org/teach>

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/

Fact Sheets, Ohio Department of Health, Health Assessment Section (areas of responsibility include hydrogeology; environmental chemistry; sampling water, air and soil; health risk assessment; epidemiology and toxicology) http://www.odh.ohio.gov/odhprograms/eh/hlth_as/HAS.aspx

Ohio Department of Health, *Creating Healthy School Environments Step by Step Voluntary Guidelines for Ohio Schools*, <http://www.odh.ohio.gov/odhprograms/eh/schooleh/sehmain.aspx>

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/>

Wastes and Recycling

Akron Global Polymer Academy: The site provides lesson plans, video demonstrations, contests, etc.
<http://www.agpa.uakron.edu/p16/>

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, Recycling, <http://epa.ohio.gov/dmwm/home/recycle.aspx>

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/>

The National Association for PET Container Resources (NAPCOR) is the trade association for the PET plastic packaging industry with Educator Resource information about recycling.
<http://www.napcor.com/PET/store.html>

"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>

Water Quality

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

Give Water A Hand (University of Wisconsin Extension curriculum)
www.uwex.edu/erc/gwah/

Groundwork Cincinnati/Mill Creek Restoration Project School Program Teacher Guide,
<http://www.millcreekrestoration.org> under “publications”

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
www.healthywater.org and <http://www.epa.ohio.gov/oeef/ProjectWET.aspx>

H2O University (Hach Scientific) www.h2ou.com/index.htm

Izaak Walton League Save Our Streams (national watershed education and outreach program)
<http://www.iwla.org/index.php?ht=d/sp/i/1977>

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>

Rain Garden Manual for Homeowners, from Geauga Soil & Water Conservation District
<http://www.geaugaswcd.com/publications>

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 Pollution” and “Waterborne Diseases and Illnesses” pages, National Library of Medicine Environmental Health portal for middle school students
<http://kidsenvirohealth.nlm.nih.gov/subtopic/004/water-pollution/008/waterborne-diseases-&-illnesses/>

“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 and The Weather Channel “After the Storm” stormwater pages
<http://water.epa.gov/action/weatherchannel/stormwater.cfm>

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/>

Websites with Data On Local Environmental Conditions in Ohio

Ohio DNR Earth Resources Information Network, www.ohioerin.com

Ohio EPA "In My Community" http://www.epa.ohio.gov/in_my_community.aspx

U.S. EPA "Search Your Community" www.epa.gov/epahome/commsearch.htm

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>

Superfund Sites in Ohio, <http://www.epa.gov/reg5sfun/npl/ohio/index.html>

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

HUD Healthy Communities Environmental Maps (combine HUD housing data with US EPA environmental data) <http://egis.hud.gov/egis/>

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

OSU Extension, county environmental data, Ohio water and ground water resources by county,
<http://ohioline.osu.edu/lines/facts.html>

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/>

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>

Clearinghouses

Eisenhower National Clearinghouse for K-12 math and science

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

Ohio Resource Center for Mathematics, Science, and Reading (compendium of peer-reviewed web-based teaching resources) www.ohiorc.org

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

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 Soil and Water Conservation District

<http://ohiodnr.com/tabid/9093/Default.aspx>

Find your local Solid Waste Management District/Recycling Program

<http://epa.ohio.gov/dmwm/Home/recycle/tabid/6105/LiveTabId/143809/Default.aspx#where>

Greater Cincinnati Environmental Educators

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

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/oe

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/>

Ohio State University Extension fact sheets <http://ohioline.osu.edu/lines/facts.html>

Other National Resources

EELink www.eelink.net/

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/>

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

Organizational Assessment Tool for EE organizations

<http://www.uwsp.edu/cnr/neeap/Research/OAT.htm>

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

University of Wisconsin Extension Environmental Resources Center

www.uwex.edu/erc

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

U.S. Geological Survey Learning Web www.usgs.gov/education/

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/

Environmental Career Resources

Aquarium Curator and Herpetologist video from National Aquarium and Kids.gov

<http://kids.usa.gov/watch-videos/jobs/aquarium/index.shtml>

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 video <https://youtu.be/u8Qn1iAMISl>

Conservation Connect outdoor career videos from US Fish and Wildlife Service

<http://nctc.fws.gov/conservationconnect/>

Geoscience Career Videos from National Ground Water Association:

“Groundwater Careers” <https://www.youtube.com/watch?v=yUqI1QjuPHs> and

“Groundwater is Cool” <https://www.youtube.com/watch?v=ZZ7K50O6z5g>

Marine Biologist Career Spotlight video from Smithsonian and Kids.gov

<http://kids.usa.gov/watch-videos/jobs/marine-biologist/index.shtml>

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

River Careers profiles from RiverWorks Discovery

<http://www.riverworksdiscovery.org/river-careers/>

Scientists at the Smithsonian, includes Amphibian Ace, Bat Listener, Bee Tracker, Bird Strike Sleuth, Germinator, Reef Doctor, 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

<http://kids.usa.gov/watch-videos/jobs/wildlife-biologist/index.shtml>

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>

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/oeef/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?**” activity 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>

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 Collard 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 Griffin 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

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 http://development.ohio.gov/bs/bs_oceip.htm

Occupational Outlook Handbook from the US Bureau of Labor Statistics <http://www.bls.gov/oooh/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/>