Our Favorite Environmental Education Websites

Compiled by the Ohio EPA Office of Environmental Education
Last update: 3/6/20
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 http://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, http://ciese.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 https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/

Clean School Bus USA website at US EPA http://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 http://www.intheair.org/

Ohio EPA Division of Air Pollution Control http://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
and at http://downloads.globalchange.gov/Literacy/Climate%20Literacy%20Booklet%20Low-Res.pdf

Climate Policy – An American Meteorological Society Project http://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, https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/

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) http://www.ipcc.ch/

Met Ed Meteorology and Training from the University Consortium on Atmospheric Research http://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/PBS Global Climate Change teaching modules http://climate.nasa.gov/resources/education/pbs_modules/

NASA Wavelength resources for Earth and Space Science Education https://science.nasa.gov/learners/wavelength

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

> Middle school teachers guide
> https://naaee.org/eepro/resources/climate-choices-eif-classroom-middle
>
> High school teachers guide
> https://naaee.org/eepro/resources/climate-choices-eif-classroom-high

Project Learning Tree secondary education module "Southeastern Forests and Climate Change" https://www.plt.org/curriculum/southeastern-forests-climate-change/

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

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

United States Global Change Research Program Resource Library https://www.globalchange.gov/browse

World Resources Institute (WRI) Climate Watch https://www.climatewatchdata.org/

1.3. Energy Efficiency/Alternative Energy Sources

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

Columbus Green Building Forum http://www.cgbf.org/

Lesson Plans, Teacher Guides and Online Environmental Resources for Educators https://www.epa.gov/students/lesson-plans-teacher-guides-and-online-environmental-resources-educators

Clean Fuels Ohio http://www.cleanfuelsohio.org/

"Energy and Society" module from Project Learning Tree https://www.plt.org/curriculum/energy-society-kit/

"Energy Challenges" unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/energy-challenges/energy-challenges-video/

Alliance to Save Energy http://energyhog.org/

Energy Kids – U.S. Energy Information Administration https://www.eia.gov/kids/what-is-energy/

Green Energy Ohio http://www.greenenergyohio.org/

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

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

Ohio Department of Natural Resources, Mineral Resource Management (oil and gas, coal mining) http://minerals.ohiodnr.gov/

Ohio Energy Project http://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 https://www.energy.gov/eere/education/education-resources

US Department of Energy fossil energy study guides and classroom activities https://www.energy.gov/fe/about-us/students-and-teachers/study-guides-and-activities

US EPA Clean Energy Home Page https://www.epa.gov/energy

1.4.   Environmental Health and Safety

Agency for Toxic Substances and Disease Registry, U.S. Centers for Disease Control,
http://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, https://www.nlm.nih.gov/enviro/index.html

Learning and Teaching about the Environment
https://www.epa.gov/students

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

National Environmental Health Association
http://www.neha.org/

Ohio Environmental Health Association
http://www.ohioeha.org/aws/OEHA/pt/sp/home_page

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 https://www.learner.org/series/the-
habitable-planet-a-systems-approach-to-environmental-science/risk-exposure-and-health/risk-exposure-
and-health-video/

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 http://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 http://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

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/

Center for Ocean Sciences Education Excellence (COSEE) Great Lakes, Great Lakes Literacy Principles
https://www.cgll.org/for-educators/great-lakes-literacy-principles/

Greenacres Foundation (Cincinnati) Water Quality Project https://www.green-acres.org/

"Harmful Algae" (from Woods Hole Oceanographic Institute): cyanobacteria, other algal blooms
https://www.whoi.edu/website/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
https://www.epa.ohio.gov/oeef/Project-WET

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

Little Miami, Inc. citizen river conservation resources https://www.littlemiami.org/

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://masweb.vims.edu/bridge/index.cfm

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

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

Ohio EPA, Division of Surface Water http://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, Geauga Soil & Water Conservation District http://www.geaugaswcd.com/storm_water

Surf Your Watershed (from US EPA) https://www.epa.gov/waterdata/surf-your-watershed

"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": excellent pages on water-related topics http://water.usgs.gov/edu/

Volunteer water monitoring programs across the U.S. https://archive.epa.gov/water/archive/web/html/epasvmp.html

"Water Resources" unit in the Habitable Planet multimedia environmental science course for high school teachers and adult learners, from Annenberg Media, https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/water-resources/

"Water Pollution" page, National Institute of Health Medline https://medlineplus.gov/waterpollution.html

World Water Monitoring Day http://www.worldwatermonitoringday.org/

US EPA "Monitoring and Assessing Water Quality" web pages https://archive.epa.gov/water/archive/web/html/index-19.html

"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

Ohio EPA Division of Surface Water, interactive GIS maps Topics include Water Chemistry & Stream Sediment Data, Biological Monitoring & Assessment Data, Combined Sewer Overflow Outfalls, Individual NPDES Permits, and Fields Approved for Biosolids Application https://epa.ohio.gov/gis

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
https://www.epa.gov/outdoor-air-quality-data

Ohio hazardous waste management and recycling facilities
https://epa.ohio.gov/derr/hazwaste/tsd

U.S. EPA's Enforcement and Compliance History Online (ECHO) https://echo.epa.gov/

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," 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 https://www.google.com/earth/

1.8. Wildlife Cameras

DC Eagle Cam at the U.S. National Arboretum https://naeaglecam.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 https://explore.org/livecams/brown-bears/brown-bear-salmon-cam-brooks-falls

Puffin Cam at Seal Island National Wildlife Refuge https://explore.org/livecams/puffins/puffin-burrow-cam

2.   EDUCATION AND OUTREACH MATERIALS

2.1.   Calculating Your Environmental Impact

Climate Change Adaptation Resource Center interactive resource to help local governments deliver services to communities as the climate changes https://www.epa.gov/arc-x

US Dept of Energy (click on compare Side-by-Side) shows miles per gallon, fuel consumption, cost, greenhouse gas emissions in tons and EPA Air pollution score by vehicle. http://www.fueleconomy.gov/

Earthday Network calculates how many acres are needed per person based on lifestyle factors https://www.earthday.org/foodprints-calculators/

On Facing the Future 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." http://www.facingthefuture.org/

The Global Footprint Network
https://www.footprintnetwork.org/

"What's My Carbon Footprint" from the Nature Conservancy https://www.nature.org/en-us/get-involved/how-to-help/carbon-footprint-calculator/

Greenhouse Gas Equivalencies Calculator from US EPA https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

Other ideas:
1. Check utility bills for figures on pollutants per kilowatt hour and average energy use of appliances.

2. 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.

3. 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
http://www.batdetective.org/

Bird Sleuth from Cornell University's Lab of Ornithology https://www.birds.cornell.edu/k12/

Bumble Bee Watch
http://www.bumblebeewatch.org/

Cary Institute of Ecosystems Studies - 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. https://www.caryinstitute.org/eco-inquiry/research-projects/curriculum-projects/schoolyard-ecology-elementary-school-students

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Cornell University – Citizen science projects for the formal classroom
> https://www.birds.cornell.edu/k12/
> https://www.aza.org/frogwatch
> http://www.globe.gov/
> https://journeynorth.org/
> https://www.usanpn.org/
> http://feederwatch.org/
> http://www.scientificamerican.com/education/
> https://scistarter.org/

Ecology Explorers – 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.
https://sustainability.asu.edu/ecologyexplorers/

Frog Watch USA
https://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 http://www.globe.gov/

The Great Backyard Bird Count (Audubon and Cornell Lab of Ornithology) https://gbbc.birdcount.org/

The Great Sunflower Project
http://www.greatsunflower.org/

Journey North
https://journeynorth.org/

Monarch Watch
http://www.monarchwatch.org/

NEON Citizen Science Academy – online courses to help you implement citizen science projects in a variety of educational settings https://www.chicagobotanic.org/education/citizen_science_academy

Ohio Long-Term Butterfly Monitoring Project
http://www.ohiolepidopterists.org/

Project Feeder Watch
https://feederwatch.org/

Project Noah
http://www.projectnoah.org/

SciStarter – features many projects including Nest Watch, Project Bud Burst, Dragonfly Migration, Leaf Snap, Great Lakes Worm Watch, and Camel Cricket Census https://scistarter.org/

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

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

2.3.   Clearinghouses

Eisenhower National Clearinghouse for K-12 math and science http://www.goenc.com/

Tow Town 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 https://toxtown.nlm.nih.gov/

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

2.4.   National Environmental Education Curricula and Projects

Ag in the Classroom and Ohio Ag in the Classroom,
http://www.agclassroom.org/
https://www.agclassroom.org/affiliates_state_reports/ohio.cfm

Earth Force   http://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, http://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/oee

Leopold Education Project
https://www.aldoleopold.org/

Population Connection
http://www.populationeducation.org/

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
http://www.foodlandpeople.org/

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

Project WET (Water Education for Teachers) Project WET and
http://www.epa.ohio.gov/oeef/ProjectWET.aspx

Project WILD
https://www.fishwildlife.org/projectwild 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 https://www.learner.org/series/the-habitable-planet-a-systems-approach-to-environmental-science/

Center for Ecoliteracy: Lessons, articles, and principles to further ecological teaching and learning
https://www.ecoliteracy.org/ecological-education

2.5. Outdoor Classrooms/Land Labs/Wildlife Gardens

4-H Garden at Michigan State University https://4hgarden.msu.edu/

Bird Sleuth, from Cornell Lab of Ornithology https://www.birds.cornell.edu/k12/

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,
https://tree.oplin.org/

Journey North
https://journeynorth.org/

Leave No Child Inside Cincinnati
http://www.lncigc.org/

Monarch Watch at University of Kansas http://www.monarchwatch.org/

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

National Wildlife Federation Backyard Habitats
http://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
https://www.epa.gov/aboutepa/about-office-water#wetlands

Funding opportunities at http://epa.ohio.gov/Portals/42/documents/Funding%20Sources%20EE.pdf

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/oee/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 - https://www.isa-arbor.com/Portals/0/Assets/PDF/Certification-Applications/cert-Application-Municipal-specialist.pdf,
- Utility Arborist/Forester - https://www.isa-arbor.com/Portals/0/Assets/PDF/Certification-Applications/cert-Application-Utility-Specialist.pdf,
- Urban Forester/Government - https://www.isa-arbor.com/Portals/0/Assets/PDF/Career-Paths/Urban-Forester-Govt.pdf, and
- Careers in Arboriculture video - https://www.youtube.com/watch?v=u8Qn1iAMlSI&feature=youtu.be

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

Animal Care Career Videos from USA.gov; animal keeper and wildlife biologist
https://www.usa.gov/animal-career-videos

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/Scientist-Card-Series-v-168.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 https://www.usgs.gov/about/organization/science-support/human-capital/usgs-career-cards

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

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/agsystemsnaturalresources.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, select a degree then "science and engineering" category to reveal subjects like environmental policy and environmental science. http://oedb.org/

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

> "STEM and Our Planet"
> http://www.neefusa.org/resource/stem-our-planet-infographic
>
> "Engineering and Our Planet"
> http://www.neefusa.org/resource/engineering-our-planet-infographic
>
> "Rooted in Math" poster
> http://www.neefusa.org/resource/rooted-math, 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
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,
http://www.eeco-online.org/

Envirochem on-line compliance manual for Ohio environmental regulations http://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) http://www.greenlink.org/

Cecilia Berg Center for Environmental Education
https://miamioh.edu/cas/academics/centers/environmental-education/index.html

Ohio EPA Office of Environmental Education/Ohio Environmental Education Fund
http://www.epa.ohio.gov/oee

Ohio EPA Public Interest Center
http://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/

Ohio's Natural Heritage – a comprehensive source describing Ohio's natural environment
https://kb.osu.edu/handle/1811/90801

ODNR lesson plans: Wildlife Identification Guides, Project WILD Supplements, Aquatic Education Materials, Wildlife Poster Sets, and additional materials http://wildlife.ohiodnr.gov/education-and-outdoor-discovery/conservation-education-project-wild/education-materials

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
http://www.aag.org/sustainable

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

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

North American Association for Environmental Education
http://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)
http://www.seer.org/

Teach Engineering, standards-based K-12 inquiry activities developed by universities with NSF funding
http://www.teachengineering.org/index.php

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

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

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