Climate Change Resources for Educators

Resources* in the areas of:

- **Policy and Politics**
- **Media Coverage and Sources**
- **Supportive Sites and Organizations**
- **Curricular Frameworks and School/District-wide Activities**
- **Classroom Instruction**
- **Adult and higher education**
- **Resources for students**
- **For parents/grandparents**
- **Climate & Environmental Justice**

*Indicates a comprehensive site that fits into multiple categories

Policy, Politics, Funding

- State and Federal Legislation and Standards
  Summary table including bills/acts, status, sponsors, description, agency, news coverage related to Climate Change Education
- New Jersey Climate Education Standards
  Summarizes New Jersey's non-legislative approach to setting standards toward integrating climate change across the curriculum in all public schools in the state. This model implemented through the state department of education is an alternative that might inspire similar non-legislative approaches in other states. For the NJ State Dept of Ed's approach to monitoring standards click here.
- Campaign for Climate Literacy
  Outlines their work dedicated to improving our nation's education systems by integrating engaging climate change learning across our schools. Tracks and works to support legislation on both federal and state (Learn About Your State) such as the Climate Change Education Act.
- U.S. Department of Education Green Ribbon Schools Initiative
  A public engagement initiative for school sustainability that is structured as a federal recognition award. By highlighting schools, districts, postsecondary institutions, and early learning centers' cost-saving, health promoting, and performance-enhancing sustainability practices, ED-GRS celebrates these institutions and brings more attention to their work.
- Climate Action Resolution, Tucson Unified School District
  A model resolution for school districts entirely researched, written and lobbied for by students 13-20. Passed October 29, 2024.
- Climate Education Action Plan: Local, State, and Federal
  "Recommendations for federal, state, and local governments . . . highlights opportunities for business, philanthropy, communications, and advocacy to support the education sector in taking climate action." Download Recommendations (PDF)
- US Department of Ed Green Ribbon Schools Program

Explains program and criteria for receiving this designation including: (a) Reduced Environmental Impact and Costs, (b) improved health and wellness, and (c) Effective environmental and sustainability education. Recent Awardees. FAQs.

- US Department of Energy "Renew American Schools" Grant Program
  Inflation Reduction Act funding designated "to promote the implementation of clean energy improvements at K-12 public schools across the country."
- Seal of Climate Literacy Diploma Endorsement
  Bill passed by the CO General Assembly allowing for a special endorsement to be added to a high school diploma. Could be a model for other states.
- NYT Article on Integrating Climate Change in School Curriculum
  Focuses on NY and NJ.
- K-12 Climate Change Education Policy
  Follow this link to the North American Association of Environmental Education to see this report.
- FY26 Appropriation Request for Climate Education in New York State
  A model proposal for requesting state funding for climate education.
- The United States Climate Alliance
  Is your state in the Alliance? If so, what is it doing?
- Enroads Climate Solutions Simulator
  "EnROADS is an online simulator that provides policymakers, educators, businesses, the media, and the public with the ability to test and explore cross-sector climate solutions."

Media Coverage/Sources/Resources

- Climate Change References Removed From Florida Textbooks Authors Say
  Axios article with links to other coverage.
- Why Don't More U.S. Schools Teach About Climate Change
  Most Americans want schools to teach about global warming. But skeptics and lack of teacher training make it hard to implement climate change education.
- How Libraries Are Improving Climate Literacy in Their Communities
  Text with short accompanying interview highlighting how the library in Racine, Wisconsin is accomplishing this goal. Report from Yale's "Climate Connections" project.
- Empowering Children Through Media: Climate Literacy from *This is Planet Ed*
  "To encourage development of innovative, climate media for children, we held a Call for Pitches for creatives to showcase their ideas for short-form content leveraging the four essential climate principles using hope, humor, and solutions. We also partnered with Encantos to create This Is Cooler featuring Gloria Estefan and a group of young role models who explore the four essential climate principles."
- NPR Poll of Teachers Suggestions About Teaching Climate Change

National Public Radio article reporting results of a national poll of why teachers don't teach climate change with 8 suggestions from teachers about how to integrate it into instruction.

- Student-led Movement for Green New Deal in High Schools
  Short article (Sept 2023) in "Nation of Change," an online publication.
- From Eco-anxiety to Eco-optimism: Learning from Youth Climate Advocates
  Article about youth taking leadership in confronting climate change. See also a report from UNICEF with the same title.
- Psychology and Climate Change: Some Need-to-Knows
  Article in *Psychology Today* that analyses reactions to climate change from a psychological perspective.
- Connecticut Makes Climate Change Studies Mandatory
  Article from the Guardian Dec 2022.
- "Shedding Light on a Crisis"
  Teachers take the lead on climate education. In "The New York Teacher" a publication of the United Federation of Teachers

Supportive Sites and Organizations (General)

- *University of Minnesota Center for Climate Literacy
  A Center that develops research, training, and design solutions for climate literacy education in K-12 classrooms. Provides resources, including training, workshops, fellowships, database and curricula, to advance climate literacy education in every classroom.
- **This is Planet Ed*
  "An initiative of the Aspen Institute, aims to unlock the power of education as a force for climate action and solutions . . . Our systems support young people–early childhood, children's media, K-12 education, and higher education–can engage, prepare, and empower young people to succeed in a changing climate."
- *Action for Climate Emergency (ACE)
  "ACE educates, inspires and supports young people to lead the fight for their future. We ensure they have everything they need to understand the science and advocate for solutions to the climate emergency."
- *NASA: Global Climate Change for Educators
  List (with links) to organizations "of the best available student and educators resources related to global climate change, including NASA products."
- Global Citizen
  Activist non-profit dedicated to defeating poverty, demanding equity, and defending the planet.
- Climate Generation
  Activist non-profit aimed at educators and students. Mission: "Climate Generation ignites and sustains the ability of educators, youth, and communities to act on systems perpetuating the climate crisis." Provides a broad and diverse array of resources for teaching climate change, but membership is required for access.
- *Resources from the North American Association of Environmental Education

Includes reports/webinars on (a) Climate Change in Higher Education Policy, (b) K-12 Climate Change Education Policy, (c) State of Climate Change Survey Findings, and (d) Climate Change in Non-formal Education.

- *Wild Center Youth Climate Program
  Diverse activities and resources.
- NJ Climate Change Education Resources
  A wealth of resources compiled by the state of New Jersey, which is well ahead of others. Notably, climate change education is promoted by the governor's wife Tammy S. Murphy. Also notable is that the move toward climate change education is led, coordinated, and managed by the state department of education, not directly by politicized legislation. It is a recommended model for other states to follow.
- The Green Schools Campaign
  ". . . advocacy and grassroots organizing to enable leaders to spearhead initiatives to transition educational institutions to 100% renewable energy and advance community justice."
- National Wildlife Federation Resources
  Educational resources include Wildlife Guide, Educator Tools, Education programs, Reports.
- Environmental Protection Agency Climate Change Resources for Students and Educators
  Wide range of K-12 resources including from the federal government.
- "Subject to Climate" Free K-12 Resources
  Lesson plans, units, activities, resource library, professional development, teacher guides.

Curricular Frameworks and Action Plans (Federal/State/District/School)

- Classrooms for Climate Action
  Encourages teachers and students to take local climate action. Focus on intersectional environmentalism and helping **K-12 teachers** integrate climate action into all content areas. Connects retired teachers who serve as resources and supportive partners to practicing classroom teachers. For slide deck click here.
- Broward County Youth Climate Summit
  Broward County Florida is in its 7th year of holding day-long climate summits for more than 900 students **grades 5-12**. This site provides much detail and a variety of resources. Might inspire other districts to adapt or build on this model. See this related site.
- School Board Member Climate Action Toolkit
  How school board members can collaborate with district leaders, youth, and community leaders to pass resolutions and develop climate action plans for their districts. Includes a Template School Board Climate Action Resolution.
- Youth Climate Summit Toolkit
  Guide and materials for planning and implementing a youth climate summit developed by the Wild Center and Museum Tupper Lake NY.

- K-12 Climate Action Plan from *This is Planet Ed*
  "outlines the needs and opportunities for the education sector to take action on climate change and advance solutions . . . describes opportunities to reduce the environmental footprint of the [education] sector, adapt and build resilience to climate impacts, and support teaching and learning on climate change, solutions, and sustainability." Downloadable action plan.
- Early Years Climate Action Plan from *This is Planet Ed*
  "seeks to build partnerships with caregivers, providers, doctors, researchers, and community leaders from across the country to support our youngest children and their families in a changing climate." Downloadable action plan.
- K-12 Menu for Climate Solutions from *This is Planet Ed*
  "Outlines the needs and opportunities for the education sector to take action on climate change and advance solutions."
- Questions For Taking Action from *This is Planet Ed*
  "Is your school district ready to take action on climate change? These key questions can help you get started."
- Green Schools Campaign
  Useful resources and guides. "The Green Schools Campaign centers advocacy and grassroots organizing to enable leaders to spearhead initiatives to transition educational institutions to 100% renewable energy and advance community justice."
- Climate and Resilience Education Task Force
  A model program in New York that may be useful in other states."Outlines the elements that we believe are required for a successful statewide climate education program."
- Comprehensive Climate Change Plan (Tucson Unified School District)
  A model potentially useful to other school districts.

Classroom Instruction K-12

- ***Climate Literacy and Energy Awareness Network (CLEAN)**
  Comprehensive resource. "A high-quality and rigorously reviewed collection of climate and energy educational resources and lesson plans aligned with the Climate Literacy and Energy Literacy frameworks, and the Next Generation Science Standards." Materials in Spanish. Searchable by topic and grade level. Extensive resources including the following:
  - Build your curriculum
  - Virtual teaching
  - Managing Controversy
  - Next Generation Science Standards Guide
  - Strategies for managing climate change discourse and controversy
  - See also video here
- *Teaching Climate Change to Children: Literacy Pedagogy That Cultivates Sustainable Futures* (Language and Literacy Series) by Rebecca Woodard (Author), Kristine M. Schutz (Author), Carla Shalaby (Foreword)

Describes the journey of two literacy researchers to learn about climate change and support relevant literacy pedagogy for young children **(pre-K–6)**. The authors argue that climate change and social justice are inextricable; that children in the younger grades are capable of learning about climate change; and that reading, writing, and language study is well-suited to this work.

- Journal of Climate Literacy in Education
  A teacher-oriented journal with short, practical content on all aspects of climate literacy education at all grade levels and across all subject areas (primarily preK-16, but including teacher education and professional development). Click here to see summary of recent issues.
- *Environmental Protection Agency's Climate Change Resources for Educators and Students
  A wealth of resources for K-12 instruction including data, information, lesson plans, board games, videos, and more.
- *National Oceanic and Atmospheric Administration (NOAA) resources for educators, students, and kids
  A wealth of resources about the environment and climate for teachers and for students of all ages. Includes projects for earth day, videos, games, lesson plans, tutorials on various topics, and more. Searchable by topic, grade level, and more.
- *Zinn Education Project
  Searchable database of teaching activities/guides, books, articles, video, songs/poems, etc. on the theme of "Climate Justice." Grade 3 through adult. Registration is free.
- Our Climate: Our Future
  "A collection of educational resources on climate science, climate justice, and climate solutions." Videos by young people. Educators' resources (lesson plans, worksheets, activities, videos). Climate stories by young people across the US)
- New York Times Resources for Teaching Climate Change
  A collection of 60 teaching ideas, articles, interactive quizzes, graphs, films and more categorized by topic and with useful links.
- NASA Climate Kids
  Games, Activities, People, Videos, and Mysteries aimed at early elementary grades.
- NASA Jet Propulsion Laboratory Climate Change
  Searchable by subject, grade, time, resource type, etc.
- *US Department of Energy Resources for Educators
  Various resources for grades K-12 including some in Spanish. Links to lessons/activities related to:
  - Energy conservation and solar energy
  - Comics/activities (Sparksquad)
  - Coloring books
  - National Energy Education Day (NEED)
- Teaching Climate Change in Chemistry

Free lesson plans, experiments and activities to explore how chemistry can help us tackle climate change and build a more sustainable future.

- World Wildlife Federation Climate Change Resources (UK)
  "Climate change resources have been designed to introduce the topic of climate change to students aged 7 -11." Downloadable poster.
- UN Environmental Programme Climate Change Toolkit for Educators
  Book for educators. "The impetus for writing this book was to advance our understanding of the atmospheric science and help to elucidate the fundamentals of teaching and learning about climate change."
- University of Michigan Center for Sustainable Systems
  Short videos and podcasts for grades 2-12. Advice for teachers who are teaching climate change. Games and simulations. Resources listed by topics related to sustainability.
- Met Office (UK): Explore Our Resources for Schools
  Metrological approach to climate change with lessons and activities for upper elementary and middle school.
- 15 Meaningful Hands-on Climate-change Activities for Kids
  Elementary grades. Site has links to other science-related activities for grades 6-12.
- National Geographic Resources on Climate Change
  27 articles, maps, videos, etc. from National Geographic ranging from grades 3-12.
- *PBS Learning Media: Climate Change
  A wide variety of resources (video, lesson plans, audio, documents, images, etc.) all searchable by grade, subject, type of resource, and so forth. More than 5000 items.
- GEF Sustainability Lesson Clearinghouse
  Green Energy Foundation (GEF) site. Organizations, groups, and individual educators contribute lessons, activities, and projects grouped by grade level (K-2, 3-5, Middle School, High School). If you join, you can submit your lessons for inclusion.
- ESA Climate for Schools Teaching Units
  European Space Agency's downloadable teaching packs/units for younger (8-11 yrs) and older (14-16 yrs). For younger students: **Is ozone good or bad?** sources and roles of ozone **The water cycle** effect of global warming on flood and drought. **Country under threat** coastal cities and small islands. For older students: **Taking the pulse of the planet** How satellites in orbit improve our understanding of climate change. **Urban hotspots** How the urban environment responds to climate change. **Biodiversity and habitat loss** How climate change is related to biodiversity.
  Planetary heat pumps. How the oceans regulate global temperatures and respond to global warming.
- NIH Environmental Resources for Young Children

Games, lessons, and activities (coloring, songs, etc.) for young children to understand and develop awareness of environmental issues.

- Course Catalog From EcoRise
  EcoRise is a youth organization that has developed series of lessons/activities on topics related to sustainability and climate change.
- Instructional Resources Compiled by the State of New Jersey
  Resources categorized by grade level and subject area
- NJ Climate Education Hub
  Searchable by grade and subject, vetted lessons for K-12 including Spanish materials.
- Climate Emotion Toolkit for Educators Free.Toolkits equips teachers to manage their emotions and has 10 lessons for middle schoolers that are adaptable for other ages and time limits.
- Lessons About Climate Change
  Resources and lesson plans in the New York Teacher published by the United Federation of Teachers.
- Integrating climate issues into literacy instruction
  pre-K and elementary.

Adult and Higher Education

- Climate Change Undergraduate Studies minor
  At Western Michigan University. A program that could serve as a model for other universities interested in developing a similar minor across disciplines. Has been in place for 10 years. Contact: Professor Lisa Dechano-Cook. Main points from an interview with her can be found here.
- Bending the Curve Curriculum
  Climate change curriculum developed and implemented at San Diego State University which also now has a general education climate change education requirement. Go here to see more details.
- Undergraduate General Education Requirement in Climate Change at University of California San Diego
  A potential model for other universities. “The establishment of this new graduation requirement for incoming first-year students, beginning fall 2024, is designed to empower our students with the knowledge and skills needed to confront the urgent global challenge of climate change.”
- Textbook for undergraduate climate education
  Climate and Society: Transforming the Future, 2nd Edition
  Robin Leichenko, Karen O'Brien May 2024 296 pages ISBN: 978-1-509-55930-5
  E-version available.
- Higher Ed Climate Action Plan from *This is Planet Ed*
  “Provides a roadmap to support comprehensive action across higher education and outlines recommendations for different stakeholders to catalyze and scale these efforts across the country . . . The Higher Ed Task Force heard from experts and leaders across the country and have identified recommendations, bright spots, and insights towards building a sustainable future through

collaboration and innovation . . . [identifies] the opportunity for the higher education sector to advance climate solutions, adapt to our changing climate, and prepare students for success in a sustainable, resilient, and just society." Downloadable action plan.

- Centers for Sustainability Across the Curriculum (Higher Ed)
  The Association for the Advancement of Sustainability in Higher Education sponsors Centers, which are "selected based on their experience organizing sustainability-oriented professional development for their own faculty, agree to organize at least one workshop or other professional development offering annually that is open to faculty from other institutions." International Focus.
- Teaching Climate Change and Resiliency
  Initiative of the California State University at Chico. "provide[s] resources focused on solutions that inspire teachers to integrate climate change and resilience into their course materials to advocate for actionable change in our classrooms."
- Science Education Resource Center at Carlton College (SERC)
  All aspects of designing a college-level course on climate change. "Find resources and teaching materials such as **activities**, **course descriptions**, **visualizations**, and effective teaching methods from SERC projects and collaborators for teaching about climate, climate change, and sustainability across the curriculum."
- Higher Ed Resources
  University of Michigan Center for Sustainable Systems. Overview of major environmental sustainability issues. Environmental law.
- MBA Educators Address Climate Change
  Short article describing how "A fresh initiative from Columbia Business School is boosting the pace at which educators can take on the challenge of climate change."
- Climate Change in Higher Education Policy
  Follow this link to the North American Association of Environmental Education to see this report.
- Journey of the Universe Free Online Course for Adults
  Developed and sponsored by Yale University. "Realize our connection to the universe and Earth that helps us not only know, but also shape the course of evolution for a thriving future. Find new ways as individuals and communities to create a vibrant and healthy Earth community."
- Al Gore's Climate Reality Training
  Three-day in depth online course. Highly recommended by past participants. An initiative of the Climate Reality Project.
- Environmental Justice Courses at Yale.
  This list might be a model for other universities.

Resources for Students

- Youth Climate Action Toolkit from *This is Planet Ed*
  "Partnered with The Nature Conservancy to design this toolkit with young leaders from across the country to share climate solutions that students can advocate for

in schools. The Youth Climate Action Toolkit provides talking points, highlights advocacy strategies, and includes bright spots of students taking action around the country."

- Submit your climate story/video
  An initiative of the youth-oriented Our Climate: Our Future within the larger Action for Climate Emergency (ACE) organization. Student Scholarships.
- Fellowships and Student Internships and Graduate Programs
  University of Michigan Center for Sustainable Systems. Focus on sustainability.
- Zero Hour
  Activist youth organization that could be basis for school club/organization. "The mission of Zero Hour is to center the voices of diverse youth in the conversation around climate and environmental justice. Zero Hour is a youth-led movement creating entry points, training, and resources for new young activists and organizers (and adults who support our vision) wanting to take concrete action around climate change."
- EcoRise
  Youth organization that could be the basis for a school club/organization"We work at the intersection of sustainability education, climate resilience, and environmental justice to **elevate youth voices and advance student-led solutions to real-world challenges**. We offer a range of curricula and programs designed to advance environmental literacy, sustainable schools, and equitable access to green career pathways."

Resources for Parents/Grandparents (and librarians)

- Courageous Conversations: Talking About Climate Change to Kids
  YouTube video by Anya Kamenetz former NPR reporter. From a Webinar. See accompanying guide with resources.
- Climate Related Books to Read With Your Grandchildren
  From the Elders Action Network.
- Guide to Talking to Kids of All Ages About Climate Change
  "Tips for discussing the basic facts, answering tough questions, and helping your kids cope with climate anxiety—even when you, too, are feeling overwhelmed." From the Natural Resources Defense Council.

Climate & Environmental Justice

- Yale Center for Environmental Justice
  Multiple resources include several courses open to the public.
- Climate Generation
  Multiple resources focused on climate justice including a library of resources. Free, but requires login information.
- Climate Mental Health Network

Multiple resources aimed at K-12, middle-school, informal learning, gen-zer, and research. Mission "a collective of dedicated community advocates focused on fostering

mental well-being by reshaping our national dialogue—and actions—about the emotional impacts of the climate crisis.”