

# Our conversation with you about “Have you hugged your Mother (Earth) today?”



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One of us who edits this journal is old enough to remember the first Earth Day in 1970. I (Andrea) was in fifth grade and our science teacher, Mrs. Traitler, organized us into groups to create puppet shows about the environment to perform for the first grade classes. The plot of my group’s show involved trying to get others to help us clean up a park; puppet-sized protest signs were involved, as was a song with the refrain, “Hey, Hey, we’re the cleanies...” (yes, it echoed the theme song of The Monkees).

As we approach the 45th anniversary of Earth Day, cleaning up the park or the school playground as our sole environmental activity in school feels both quaint and insufficient. With 40 percent of Americans skeptical regarding the role of human activity in global warming<sup>1</sup> (scientific consensus<sup>2</sup> notwithstanding), raising awareness about the issue (as our puppet show sought to do) feels more important than ever. It feels particularly appropriate to do so at the upper elementary level, before political views harden and become the lens through which we view data. A recent Gallup poll indicates that most Democrats (79 percent) accept the prevailing scientific view that pollution is the cause of global warming, while many Republicans (41 percent) believe that the warming is part of a natural climatic cycle, and not driven by human activity.

Thus, any study of the environment must place the quest for reliable knowledge at its core, including the fact that 97 percent or more of actively publishing climate scientists agree that climate-warming trends over the past century are mainly the result of human activities. In addition, most of the leading scientific organizations worldwide have issued public statements endorsing this position, which can be accessed at NASA’s website.<sup>3</sup>

The emphasis on the quest for reliable knowledge is consonant with the Next Generation Science Standards, whereby elementary students “obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment” (5-ESS3-1).<sup>4</sup> Only when students have done their due diligence, interrogating the

research on environmental issues, should they feel ready to take action. The evaluation of sources is a key element of the Inquiry Arc found in the College, Career, and Civic Live (C3) Framework for Social Studies State Standards, as are the communication of conclusions and the taking of informed action.<sup>5</sup>

(It is worth noting that a few of the iconic visuals and beloved texts of the environmental movement sprang from less-than-reliable sources. In the early 1970s television spot, the Native American, with a tear rolling slowly down his cheek as he viewed the litter on his land, was actually a second-generation Italian-American. And the moving speech, supposedly delivered by Chief Seattle, on the need for careful stewardship of the land, turned out to be penned by a screenwriter in 1971.)<sup>6</sup>

The authors in this issue spotlight leaders in environmental activism and describe activities that go beyond picking up litter. In these classrooms, ecological education is alive and well, as teachers trust students to help steer the curriculum, allocating time for students to research, analyze, write, and act on this existential issue of our time.

“Creating a Solar-Powered Classroom with Fourth Graders” by **Scott Morrison** and **Aaron Sebens** chronicles a project in which students researched their own electrical consumption, ways to conserve energy, and alternative forms of producing electricity. They launched a project to generate all of the electricity they needed for lights and classroom devices from solar panels, and they raised the funds to do it!

**Ryan E. Hughes** and **Sarah L. Thomson’s** article “The First Earth Day 1970: Examining Documents to Teach about Civic Engagement” outlines a civics and history lesson designed for fifth graders. Students use primary sources to explore how students responded to the mounting environmental problems that faced our country in the 1960s.

In “The Power of Access to Clean Water . . . and the Power of Information,” **Lisa Diaz Nash**, **Andrea S. Libresco**, and **Jeannette Balantic** share examples and background about

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the topic, inviting students to consider why clean water is so important and how access to clean water can change people's lives. Handouts for the activities they suggest constitute the **Pullout** that follows.

"The Climate is A-Changin': Teaching Civic Competence for a Sustainable Climate" by **Carolyn A. Harris, Pushker Kharecha, Pam Goble, and Ryan Goble** invites students to interpret climate change data and role-play other children who are experiencing the local effects of change—and who have some ideas for mitigating these effects. Students can then use this information to discuss ways we can respond as consumers and as citizens to this global problem.

In "Science, Media, and Civic Literacy: Rachel Carson's Legacy for the Citizen Activist," **Margaret Smith Crocco, Jay M. Shuttleworth, and Thomas Chandler** profile the author of *Silent Spring*, a scientist and gentle subversive who had a profound impact on environmental issues through her speaking, writing, and organizing. Carson's example can be a powerful model of the importance of media literacy and critical inquiry.

"Celebrating the National Parks Service's Centennial: 100 Years of Environmental Education" by **Nancy P. Gallavan and Jeff L. Whittingham** outlines a research project that helps students develop an appreciation for the diversity of our national parks and fosters a commitment to protecting these treasured places. The culminating activity, to create a Public Service Announcement, is aligned with the C3 Framework goal to have students take informed action.

In "How Do We Shape Our Environment? An Inquiry from the New York State Social Studies Toolkit," **S. G. Grant, Kathy Swan, and John Lee** invite readers of *SSYL* to check out a free, second grade inquiry unit on geography, humans, and the environment. Developed by the lead authors of the C3 Framework and nearly 60 New York State teachers, the online NYS Toolkit features an ambitious approach to constructing social studies inquiries for elementary school classrooms.

Which begs the question... In what ways do you work with your students to investigate, raise awareness about, and take action on the environment?

- What kinds of environmental projects have most resonated with your students? At what grade levels? How much time have you been able to devote to them? Are these projects ongoing?
- Many of the manuscripts we received for this issue were for intermediate grades. How do you teach about preservation of the environment in the primary grades?
- To what extent have you connected with the community

on any environmental projects?

- How much importance do you attach to anniversaries that mark the protection of the environment (e.g., The year 2016 marks the 45th anniversary of Earth Day and establishment of the Environmental Protection Agency; the 55th anniversary of the publication of *Silent Spring*; the 100th anniversary establishment of the National Park Service)? To what extent do you plan lessons around those anniversaries?
- To what extent do any of your lessons on the environment connect with Common Core literacy standards? Next Generation Science Standards? Grade-level goals listed in the C3 Framework?
- To what extent do you focus on media literacy as an aspect of being a citizen equipped to understand and act on scientific issues?
- To what extent do you see a unit on the environment as an opportunity to explore civic actions of the past (and present) that led (or might lead) to societal change? To what extent do such units allow students see their own civic capabilities and agency and to flex their "citizen muscles?"
- To what extent do you teach about the environment as an issue with global implications?

We look forward to a thoughtful conversation online about your conceptions of what environmental education looks like in an elementary classroom at NCSS Connected. As the White House tweeted about Aaron Sebens' students and their solar-powered classroom, "If these 4th graders can do something about climate change, there's no reason why we all can't." 🌍

—Andrea & Jeannette

#### Notes

1. Lydia Saad, "A Steady 57% in U.S. Blame Humans for Global Warming," Gallup, Inc., March 18, 2014, [www.gallup.com/poll/167972/steady-blame-humans-global-warming.aspx](http://www.gallup.com/poll/167972/steady-blame-humans-global-warming.aspx).
2. Naomi Oreskes, "The Scientific Consensus on Climate Change," *Essays on Science and Society: Beyond The Ivory Tower*, *Science* 306 (5702) December 3, 2004, 1686, [www.sciencemag.org/content/306/5702/1686.full](http://www.sciencemag.org/content/306/5702/1686.full).
3. "Scientific Consensus: Earth's climate is warming," NASA Global Climate Change: Vital Signs of the Planet, [climate.nasa.gov/scientific-consensus](http://climate.nasa.gov/scientific-consensus).
4. "5-ESS3 Earth and Human Activity," Next Generation Science Standards, [www.nextgenscience.org/5ess3-earth-human-activity](http://www.nextgenscience.org/5ess3-earth-human-activity).
5. NCSS, *College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History* (Silver Spring, MD: NCSS, 2013), 19.
6. "Iron Eyes Cody," Snopes.com, [www.snopes.com/movies/actors/ironeyes.asp](http://www.snopes.com/movies/actors/ironeyes.asp); "Chief Seattle," Snopes.com, [www.snopes.com/quotes/seattle.asp#add](http://www.snopes.com/quotes/seattle.asp#add).

"Please see our farewell to readers on the inside back cover!"

—Andrea & Jeannette