

Science, Media, and Civic Literacy: Rachel Carson's Legacy for the Citizen Activist

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Many readers have probably seen the bumper sticker or button that asserts: “Well-behaved women seldom make history.” The statement has been attributed to Harvard University historian Laurel Thatcher Ulrich.¹ Ulrich’s many contributions to U.S. women’s history include attention to the “mis-behaving” women who claimed authority and expertise and pushed the boundaries of established gender norms, thus challenging patriarchy. One of Ulrich’s subjects was the 18th century Maine woman Martha Ballard, whose diary formed the basis of Ulrich’s Pulitzer Prize-winning book *A Midwife’s Tale*.²

Two centuries later, Pennsylvania-born Rachel Carson became another not-so “well-behaved” woman who made history as a science writer challenging governmental and industrial authorities about the safety of pesticides. One of her biographers characterized Carson as a “gentle subversive” because she raised public awareness about the dangers of the pesticide DDT, including its bio-accumulation in the food chain, threats to living organisms, and impact on the ecosystem.³ For years, the U.S. government kept secret the research showing DDT’s ill effects, while resisting efforts to regulate its use due to pressure from the chemical industry.⁴

In 1962, Carson published *Silent Spring*, which demonstrated that DDT was killing birds and animals and was probably dangerous to humans. Representatives of the chemical industry attacked her as a “hysterical female.” A former U.S. secretary of agriculture suggested that she was a communist. In the eyes of some powerful people, Rachel Carson behaved badly by using her skills as a writer and scientist to marshal

public support against the killing of eagles, osprey, robins, and other birds. In violating mid-20th-century American norms of polite womanhood, she made history by launching the modern environmental movement.



Young Rachel Carson holding flowers.

Carson family/ Rachel Carson Council, www.rachelcarsoncouncil.org

Can Carson serve as a model of citizenship engagement for the contemporary social studies classroom? Exploring this question shows how “adventurous women” like Carson (and men, too) can “make a difference” for themselves and posterity by speaking, writing, and organizing others around a cause with broad public interest. The tools of mass communication that Carson employed were television, magazines, and books. In the Internet age, digital and social media offer us an even broader range of possibilities for persuading and organizing. Nevertheless, such forms of communication are also susceptible to spreading misinformation and prejudice, a growing problem where scientific findings are concerned (for example, in relation to the scientific consensus on climate change). For this reason, the development of media literacy in relation to the role of citizens today is of paramount importance.

importance.

The Making of a Naturalist and Advocate

Carson was not born a radical, but she did wonder about nature from an early age, an orientation that may be threatened today by the sometimes excessive amount of time spent by young students in front of computer screens rather than outdoors.⁵ Rachel Carson’s mother had been a teacher—until she married, at which point Pennsylvania’s laws forced her to leave her job.

She was also a naturalist who taught her children to record their observations of nature during long walks together across the countryside.⁶ In 1911, when Rachel was only four, her older siblings brought home a new book from school, *The Handbook of Nature Study*, written by Anna Botsford Comstock, a leader in the nature-study movement of the day.⁷

During her college years, Carson combined her interest in biology with a love of writing, which her mother had also encouraged from Rachel's earliest years. After graduate study at Johns Hopkins University and Woods Hole Laboratory, Carson joined the U.S. Fish and Wildlife Service, writing newsletters and other publications. She would undoubtedly have enjoyed using her scientific training in the laboratory or field for USFWS, but these positions were largely closed to women at the time.

Nevertheless, Carson put her scientific understanding and writing skills to good use. In 1951, she published her first bestselling book, *The Sea Around Us*,⁸ based on the research of scientist Mary Sears, an oceanographic researcher for the U.S. Navy during the Second World War (when job opportunities increased for women since so many men were off fighting).⁹ The book sold so well Carson left her government job to write on a full-time basis.

Describing the Web of Life

During her years working for the federal government, Carson met many people through organizations such as the Audubon Society who were also concerned with DDT's effects on wildlife.¹⁰ She synthesized the available research on this subject, and, with her gift for making complex topics understandable to non-scientists, published *Silent Spring* in 1962.¹¹ One of Carson's fundamental contributions was in explaining that poisons sprayed on bugs also contaminated the soil, water, and other living things, thus accumulating in the food chain, what we call today "bioaccumulation."

Silent Spring was originally serialized in *The New Yorker*. When the book appeared later that year, it created a sensation. A U.S. Senate subcommittee called upon Carson to testify before them where she made the argument that citizens have a right to be secure in their own homes "against the intrusion of poisons applied by other persons." This statement alluded to scientific findings that pesticides moved through the atmosphere, harming organisms far from the point of application and years after the initial spraying. On April 3, 1963, Carson

appeared on CBS Reports at the invitation of its host Eric Sevareid.¹² In this broadcast, she referred repeatedly to "the balance of nature," driving home the concepts of ecosystem and bioaccumulation.

Fifty years after publication of *Silent Spring*, Laurie Lawlor published an award-winning children's book describing Carson's "book that changed the world." Today, New York University places *Silent Spring* as second on its list of the "top 100 works of journalism in the United States in the 20th century," behind only John Hersey's *Hiroshima*.¹³ Carson's brave "misbehavior" has been a gift to future generations since her untimely death in 1964, after a long battle against breast cancer.

Decades later, environmental threats, including the kind of species extinction that endangered the future of the bald eagle in the 1960s, are once again rising to the forefront of issues demanding attention in social studies classrooms. New terms such as "ecological literacy," "endangered species," and "climate change" have entered the lexicon. An umbrella term for many of these concerns is the concept of sustainability, defined as the need for contemporary human societies to figure out how to live in the world in a manner that does not jeopardize the ability of future generations to continue to live on planet earth. We focus here on one approach to teaching about sustainability that owes much to the legacy of Rachel Carson: citizen activism supported by media literacy.

Social studies scholars have long called for attention to these issues.¹⁴ Nevertheless, K-12 social studies practitioners today find themselves confronted by the field's marginalization due to the Common Core's emphasis on literacy and math as well as pressures from high-stakes testing. We hope that the ideas presented here will encourage teachers to find ways to integrate Rachel Carson and her legacy into the social studies curriculum.

Science and Media Literacy

The themes of Rachel Carson's *Silent Spring* resonated strongly with the U.S. public because she was addressing more than the use of pesticides. In essence, Carson was also challenging Americans to consider their increasingly unsustainable relationship with the natural world.¹⁵

Since the time of Carson's writing, awareness of environmental harms that stem from industrialization and modern life's dependence on fossil fuels has grown among the general popula-



Rachel Carson at the microscope, 1951.

Brooks Studio/ Rachel Carson Council, www.rachelcarsoncouncil.org

tion, as have efforts to mitigate and remediate these problems. The introduction of recycling programs, smoking cessation campaigns, and banning aerosolized Chlorofluorocarbons (CFCs), to name a few, have been success stories.¹⁶

Despite these successes, climate change remains a controversial issue among the American public. A scientific consensus exists that “the global climate is changing and that humans, in part, are causing it.”¹⁷ Nevertheless, climate change has provoked a “cultural schism” between those who are convinced by the scientific evidence (as well as the consensus among climate scientists) and those who deny that evidence for one reason or another. Scientists assert that immediate actions must be taken to reduce emissions and mitigate the effects of climate change. Yet a substantial portion of the U.S. public has been unwilling to acknowledge that the use of fossil fuels has a damaging, cumulative impact on the Earth’s atmosphere.¹⁸ As a result, legislation in the U.S. Congress to mitigate climate change is bitterly contested.

The good news is that sociologists have found that education can have a positive impact in creating awareness, albeit chiefly among those who are already convinced that climate change is a problem. Educational and science writers have also argued that environmental studies can have positive effects on student attitudes and behaviors toward nature.¹⁹ As with developing an understanding of the food chain, once students recognize that the biosphere, atmosphere, hydrosphere, and geosphere are interrelated, they begin to understand the negative consequences of fossil fuel emissions over time. Addressing issues related to the environment, climate change, and sustainability of the planet requires an interdisciplinary, concerted, long-term effort, but the model of tenacity and bravery found in Carson and her work can serve as an inspiration to social studies students who may benefit by challenging the status quo and its “conventional wisdom.”

Preparing Ourselves and Our Students

In investigating the topic of climate change from the standpoint of citizen action and media literacy, learners can consider social studies-oriented questions such as: What can I do as a citizen to mitigate climate change? What can I do to adapt to this environmental problem? What types of changes would I like to see my municipality, state, and county undertake when dealing with climate change during the next 50 years? What resources on the web or in print should I trust or question? What criteria will help me decide?

By following an approach similar to Carson’s, educators can foster an understanding that the environment is a complex system and that individual actions and larger policy changes both play a role in solving problems. Elementary school children deserve to learn about these topics since they will affect their future lives in tangible and perhaps dramatic ways. However, teaching about them should be done through pedagogical approaches that are optimistic and proactive, linked to the idea of educating for a sustainable future through the practice

Classroom Activities about Science and the Media

Products’ Promises vs. Realities: Construct a t-chart that records the marketing promises of products that claim (or claimed) to improve health or the well-being of society (e.g., DDT, cigarettes, flavored water), comparing that with the reality they deliver(ed). For example, one of the earliest (1860s) U.S. brands of cigarettes was named “Pro Bono Publico,” a Latin phrase meaning “for the public good” (www.nchistoricsites.org/duke/main.htm).

Endangered Species—How Are We Doing? Research the species that were identified as endangered when the act was passed in 1973. Find out how many are no longer endangered and how many are still on the list. What new species have been added to the list? Visit www.epa.gov/endangered-species/endangered-species-save-our-species-coloring-book.

Books that Inspired Change: Using Laurie Lawlor’s *Rachel Carson and Her Book that Changed the World* as a model, research other books (fiction or nonfiction) that fueled reform movements aimed at changing social behaviors and laws (e.g., *Unsafe at Any Speed* by Ralph Nader, *The Jungle* by Upton Sinclair, *How the Other Half Lives* by Jacob Riis, and *Uncle Tom’s Cabin* by Harriet Beecher Stowe).

Media Literacy Applied to Climate Change: Research the number of scientists and their claims who argue that the human role in climate change is real, as well as the number of scientists and their claims who deny a human role in climate change. Check out the resources at www3.epa.gov/climatechange/kids/resources/lesson-plans.html, as well as a *Washington Post* report (Feb. 3, 2015, www.washpost.com) about the leading skeptic of climate change who is also a scientist, Wei-Hock Soon.

Bill Nye the Science Guy Explains Climate Change and What We Can Do about It: Because this topic is both complex and depressing, it is important to present scientists who can bring kids understanding, hope, and agency in dealing with climate change. Watch National Geographic’s Explorer Bill Nye’s Global Meltdown (vimeo.com/142305414) that addresses climate change denial with wisdom and wit.

of good citizenship that considers the health of the planet as a *sine qua non* for the health of the human species.²⁰

The Debate about Climate Change

In an effort to have elementary school students reflect on climate change in age-appropriate ways, teachers might consider several books and online resources. *Weird Weather: Everything You Didn't Want to Know About Climate Change but Probably Should Find Out* by Kate Evans includes several humorous yet thought provoking comic strips describing in detail what is and is not being done globally to mitigate climate change, the effects of which, scientists argue, are increasingly tied to severe storms being experienced worldwide. Evans describes the topic of “weird weather” as “more serious than terrorism.” She presents it as a major social studies issue affecting young children who will ultimately be dealing with the worst effects of our changing weather.

How We Know What We Know About Our Changing Climate: Scientists and Kids Explore Global Warming features elementary school students as vital contributors to citizen science who assist professional scientists in documenting the changes caused by climate change. A portion of the book addresses what kids and scientists can do together to both gather data and mitigate climate change. The essential message here is that young learners can be active decision makers who

have a stake in determining their own future.

Finally, we recommend, as background reading for teachers, *Storms of My Grandchildren*. Author James Hansen, who directed the NASA Goddard Institute for Space Studies for two decades and is considered “the father of climate change research,” imagines a future conversation in which his grandchildren ask why he didn’t do more to stop climate change. By framing the issue as a “planetary emergency,” he challenges policy makers and educators to ensure that today’s youngsters do not inherit a world of environmental degradation and destruction.²¹

Given the conflicting messages about the warming of the earth put out by climate change deniers, media literacy learning activities can be incorporated effectively into elementary school social studies instruction. Critical analyses of popular and ubiquitous advertisements can enable students to gain greater awareness of the potential for misrepresentation, exaggeration, and false claims in commercials, and to better understand the advertising industry’s role in constructing views of reality that are sometimes detrimental to the public good. The conceptual basis for media literacy in the context of citizen advocacy is that a critical examination of media messages will influence student perceptions as well as their actions, providing them with the skills to make better-informed decisions about their own behaviors.²²

Online Resources for Teachers

Center for Ecoliteracy, www.ecoliteracy.org

Elementary teachers interested in project-based learning on ecological education that is interdisciplinary and experiential will find stimulating ideas here. The website also includes a discussion guide using Socratic inquiry with the movie *Food, Inc.*

Facing the Future, www.facingthefuture.org

This organization provides a wealth of teaching materials as well as professional development on promoting sustainability in schools.

Future of Food, food.nationalgeographic.com

This National Geographic Society website deals with the challenges of feeding the planet’s rapidly growing population. See also teaching ideas related to global warming at environment.nationalgeographic.com/environment/global-warming.

Greater Good Science Center, greatergood.berkeley.edu

A wealth of ideas for all ages and disciplines, with education-related ideas applicable to elementary grades, is provided by University of California-Berkeley.

In Bloom, www.antiochne.edu/academics/continuing-education/in-bloom-promising-practices-in-nature-based-early-childhood-education

Antioch University-New England collaborates with Shelburne Farms in Vermont to create activities that develop a love of nature through early childhood education. See also Antioch’s Center for Place-Based Education, www.antiochne.edu/acsr/cpbe.

NCSS Sustainability Community, connected.socialstudies.org/home

How does the concept of sustainability link to history, civics, geography, and economics? Share your questions, ideas, and teaching activities with fellow social studies teachers at the Connected website (NCSS members only).

Change: A Historical Example

For instance, in critiquing tobacco and alcohol advertisements, former Secretary of Health and Human Services Donna Shalala once commented: “It is no secret that young people are exposed to a barrage of pro-use messages for both alcohol and tobacco. However, teaching your students to be critical thinkers about media messages can help them understand the risks associated with these substances and resist the temptation to become users.”²³

To pursue the analogy further, tobacco companies claimed for years that tobacco use did not harm one’s health, and marketed their products in a variety of ways targeting various groups to make their products more attractive. For example, the “Virginia Slims” brand of cigarette was pitched in the 1960s to create a connection in the mind of female users between smoking and weight control. The brand used the slogan “You’ve Come a Long Way Baby,” which suggested that smoking was somehow associated with the women’s liberation movement. The “Marlboro Man” in TV commercials epitomized the strong, silent, masculine type found in Western movies. In the late 1980s, creators of Camel cigarettes introduced the “Joe Camel” campaign. As with many consumer products, the “benefits” touted in these ads had more to do with one’s self-image than with any physical good. For today’s students growing up in a media-suffused culture, the need for media literacy to help decode and analyze advertising messages could not be greater, especially in regards to a complicated topic such as climate change.

Taking Action as Young Citizens

Concerning her research and writing in *Silent Spring*, Carson commented, “It is a great problem to know how to penetrate the barrier of public indifference and unwillingness to look at unpleasant facts that might have to be dealt with if one recognized their existence. I have no idea whether I shall be able to do so or not, but knowing what I do, I have no choice but to set it down to be read by those who will. I guess my own principal reliance is in marshaling all the facts and letting them largely speak for themselves.”²⁴

As a scientist, Carson knew that pesticides had helped control malaria and improved agricultural yields. However, as a scientist, she was disturbed by the government’s secrecy and its reluctance to regulate DDT’s use in the face of mounting evidence of its damaging effects. In the end, her efforts were successful because she used her persuasive powers to bring the problem to a broad public audience. A decade of advocacy by individuals and citizen organizations concerned about the issues raised in *Silent Spring* led to rules banning most uses of DDT as well as legislation creating the Endangered Species Act, the Clean Water and Clean Air Acts, and the Environmental Protection Agency.²⁵ These federal agencies and new laws have had a measurable impact: in 2007, for example, bald eagles came off the endangered species list.²⁶

Rachel Carson and her tenacious efforts can serve as an

inspiration for citizen action to preserve species, protect habitats, and sustain the health of the planet. Numerous topics related to these goals might be addressed in the elementary classroom. Whatever the topic, media literacy ought to play a role in the teaching unit in order to counteract misinformation and disinformation about environmentalism, climate change, and sustainability that still persists.

Rather than address the merits of her arguments, Carson’s opponents labeled her a communist when *Silent Spring* was published. Today’s “merchants of doubt,” as they have been dubbed, utilize similar rhetoric to try to discredit contemporary scientists whose work provides evidence of global climate change and other environmental hazards.²⁷ At the same time, changes in journalism, especially those associated with the decline of print media, rise of the 24-hour news cycle (and decline in fact checking in order to produce a constant stream of news stories), and the ubiquitous nature of social media, have all made it increasingly challenging for younger and older citizens alike to differentiate truth from fiction, at least in the short run, about many complicated topics. Happily, organizations such as Michigan State University’s Knight Center for Environmental Journalism and the State University of New York at Stonybrook’s Alan Alda Center for Communicating Science are dedicated to enhancing the scope of accurate reporting of complex modern scientific issues to a broad public.²⁸

In 2009, NCSS promoted the importance of media literacy in a policy statement circulated across the organization.

Children’s Books about Citizen Advocacy and the Environment

Bruchac, Joseph. *Rachel Carson: Preserving a Sense of Wonder* (Images of Conservationists) Golden, CO: Fulcrum Publishers, 2009.

Cherry, Lynne and Gary Braash. *How We Know What We Know about Our Changing Climate: Scientists and Kids Explore Global Warming*. Nevada City, CA: Dawn Publishing, 2008.

Colman, Penny. *Adventurous Women: Eight True Stories about Women Who Made a Difference*. New York: Henry Holt, 2006.

Evans, Kate. *Weird Weather: Everything You Didn’t Want to Know about Climate Change but Probably Should Find Out*. Toronto: Groundwood Books, 2007.

Lawlor, Laurie. *Rachel Carson and Her Book that Changed the World*. Dongguan City, China: Holiday House, 2012.

Media education built on critical inquiry encourages students to ask probing questions such as:

1. What social, cultural, historical, and political contexts are shaping the message and the meaning I am making of it?
2. How and why was the message constructed?
3. How could different people understand this information differently?
4. Whose perspective, values and ideology are represented and whose are missing?
5. Who or what group benefits and/or is hurt by this message?²⁹

Subsequently, the NCSS House of Delegates passed a resolution in 2011 endorsing a “sustainability education week,” calling for attention (at least one week a year) related to the kind of concerns Carson brought to the American public’s attention through *Silent Spring*.³⁰ Taking up the legacy of Rachel Carson in today’s social studies classroom is surely in keeping with the policy statements of NCSS, but more importantly is essential to helping shape a positive and healthy future for the planet’s children. 🌍

Notes

1. Laurel Thatcher Ulrich, *Well-behaved Women Seldom Make History* (New York: Vintage, 2008).
2. Laurel Thatcher Ulrich, *A Midwife’s Tale: The Life of Martha Ballard Based on Her Diary, 1785–1812* (New York: Vintage, 1991). For more on midwives and their place in the history of medicine, see Rebecca Tannenbaum, “Conceptualizing U.S. Women’s History through the History of Medicine,” in *Clio in the Classroom: A Guide to Teaching Women’s History* Carol Berkin, Margaret S. Crocco and Barbara Winslow, eds. (New York: Oxford University Press, 2009), 77–89.
3. Mark Hamilton Lytle, *The Gentle Subversive: Rachel Carson, Silent Spring, and the Rise of the Environmental Movement* (New York: Oxford University Press, 2007); DDT is the abbreviation for dichlorodiphenyltrichloroethane.
4. Besides Lytle’s biography, see two other wonderful biographies of Carson that focus on various aspects of her story: Linda Lear, *Rachel Carson: Witness for Nature* (New York: Mariner Press, 2009), and William Souder, *On a Farther Shore: The Life and Legacy of Rachel Carson, author of Silent Spring* (New York: Broadway Books, 2013).
5. Richard Louv, *Last Child Left in the Woods: Saving our Children from Nature-Deficit Disorder* (Chapel Hill, North Carolina: Algonquin Books).
6. Robert K. Musil, *Rachel Carson and Her Sisters: Extraordinary Women who Have Shaped America’s Environment* (New Brunswick, NJ: Rutgers University Press, 2014), p. 13.
7. Anna Botsford Comstock, *Handbook of Nature Study* (Ithaca, NY: Comstock Publishing Company/Cornell University, 1911/1986). This book is still in print and available via Amazon.
8. Rachel Carson, *The Sea around Us* (New York: Oxford University Press, 1951).
9. On the subject of women’s work during the second world war, see, for example, Penny Colman, *Rosie the Riveter: Women Working on the Home Front in World War II* (New York: Crown Publishers, 1998).
10. One of these was George J. Wallace, an ornithologist at Michigan State University (MSU) who witnessed and wrote about the effects of DDT on the campus robin population (Musil, p. 116). MSU made ample use of DDT in the years after WWII in order to deal with mosquitoes, malaria, and the ravages of Dutch elm disease, but when Wallace pursued his line of research on DDT, he was challenged, even ridiculed, by those associated with agriculture on campus and in the region. For more on Wallace’s story, see: www.silentsspringat50.org/3/post/2012/07/dying-to-be-heard.html.
11. Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 1962).
12. For a one-minute clip from CBS Reports (featuring Severeid and Dr. Robert H. White-Stevens), see www.youtube.com/watch?v=8nriVJC0H8I.

13. “Top 100 Works of Journalism in the United States in the 20th Century,” <https://www.nyu.edu/classes/stephens/Top%20100%20page.htm>.
14. Among the first was James P. Shaver, “Environmentalism and Values,” *The Journal of Environmental Education* 4, no.1 (1972) 49-53. See also, Timothy Lintner, “Hurricanes and Tsunamis: Teaching about Natural Disasters and Civic Responsibility in Elementary Classrooms,” *The Social Studies*, 97, no.3 (2006) 101-104; Jay Shuttlesworth, “Teaching the Social Issues of a Sustainable Food Supply,” *The Social Studies*, 106, no. 4 (2015): 159-169.
15. Eliza Griswold, “How ‘Silent Spring’ ignited the environmental movement.” *The New York Times Magazine*, September 21, 2012, www.nytimes.com.
16. Bill McKibben, *Deep Economy: The Wealth of Communities and the Durable Future* (New York: Random House, 2007).
17. Andrew J. Hoffman, *How Culture Shapes the Climate Change Debate* (Stanford, CA: Stanford Briefs, 2015), 7.
18. Michael Oppenheimer, “Defining Dangerous Anthropogenic Interference: The Role of Science, the Limits of Science,” *Risk Analysis*, 25, no. 6 (2005) 1399{1407.
19. Bill Bigelow and Bill McKibben, “Changing the Climate in School,” *Huffington Post Blog*, April 14, 2012, www.huffingtonpost.com/bill-bigelow/changing-the-climate-in-s_b_1432061.html
20. NCSS standards and their approach to citizenship are closely aligned to UN efforts, especially the aims propounded by the United Nations Decade of Education for Sustainable Development, www.unesco.org/new/en/education/themes/leading-the-international-agenda/education-for-sustainable-development.
21. James Hansen, *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and our Last Chance to Save Humanity* (New York: Bloomsbury USA, 2010)
22. Nel Noddings, *Critical Lessons: What our Schools Should Teach* (New York: Cambridge University Press, 2006)
23. Donna Shalala, “Media Literacy as a Substance Abuse Prevention Strategy.” (Weekly Reader Corporation and the U.S. Department of Health and Human Services, 1998); Steven S. Lapham, “Is This Candy an Advertisement for Cigarettes? A Media Literacy Activity,” *Middle Level Learning* 39 (2010): M13-M-16.
24. R. Carson, in W. Souder, 303 (see note 4).
25. “Celebrating Rachel Carson’s Life and Legacy,” blog.epa.gov/blog/2013/05/celebrating-rachel-carsons-life-and-legacy.
26. “Bald Eagle,” www.fws.gov/midwest/eagle.
27. Naomi Oreskes and Erik Conway, *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues from Tobacco Smoke to Global Warming* (New York: Bloomsbury, 2011). The book became a documentary by the same name: sonyclassics.com/merchantsofdoubt. Robert Kenner, the filmmaker, also produced *Food, Inc.*, www.pbs.org/pov/foodinc/. The types of attacks made on Carson have proved resilient ones for attacking environmentalists. See, for example, this online commentary on the purported linkages between the Common Core and “green global serfs” at www.thenewamerican.com/culture/education/item/17930-common-core-and-un-agenda-21-mass-producing-green-global-serfs.
28. On the Knight Center website, there is an award winning documentary about Rachel Carson created by a New York 8th grade student “with a bit of help from Michigan State University’s Knight Center for Environmental Journalism,” jrn.msu.edu/kc/2015/07/15/high-schoolers-prize-winning-documentary-features-some-knight-center-work/. See also the SUNY Stonybrook Center for Communicating Science, named after Alan Alda, at www.centerforcommunicatingscience.org.
29. NCSS, “Media Literacy: A Position Statement” (Washington, DC, 2009), www.socialstudies.org/positions.
30. NCSS House of Delegates, Resolution #11-01-01, “To Recognize Annual Sustainability Education Week (2012), socialstudies.org/system/files/publications/se/7603/7603159.pdf.

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