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**Climate Justice Literacy: Stories-We-Live-By, Ecolinguistics, and Classroom Practice**

For Peer Review

## Abstract (127 words)

Literacy educators can guide students to examine the “stories-we-live-by” (Stibbe, 2015), or the larger narratives that guide individual and collective sense-making about relationships between humans and the environment. Drawing from the field of ecolinguistics, the authors consider two ecologically destructive stories-we-live-by: 1) humans are the center of existence; and 2) consumerism is a main pathway to happiness and fulfillment. They also explore three intersecting beneficial stories-we-live-by that center on indigenous perspectives, feminist foundations of climate justice, and youth activism. This work is rooted in three essential understandings about climate change: 1) it is a complex socioscientific topic and escalating problem; 2) engaging with climate change is mediated primarily by a complicated array of motivated digital texts and motivated readers; and 3) climate change is about climate (in)justice. The authors conclude with ideas about being a climate justice literacy educator.

**Key Words:** climate change, justice, social justice, climate literacy, environmental literacy, media literacy, critical literacy

## Teaser text (30 words)

Promote climate justice literacy by guiding students to become more aware of ecologically destructive and beneficial “stories-we-live-by.”

## **Climate Justice Literacy: Stories-We-Live-By, Ecolinguistics, and Classroom Practice**

Stories inform and guide literacy educators as they shepherd students through fictional accounts in literature as well as real-life narratives. The purpose of this article is to provide a framework for literacy educators to approach the complex socioscientific topic of climate change through a lens of stories. Based on our own work in many middle school, high school and university classrooms in literacy and social studies education, we draw from the field of ecolinguistics to make a case that literacy educators have a significant role in leading more systematic study and critical analysis of the “stories-we-live-by” (Stibbe, 2015), or the larger narratives that guide individual and collective sense-making, especially about the relationship between humans and the environment. Equipped with instructional commitments to inquiry-based learning, we consider ways an ecolinguistics perspective can help teachers and students to identify and examine harmful as well as beneficial “stories-we-live-by” about perhaps the most significant topic of our times, climate change. Such an approach points to a set of essential understandings for literacy educators that helps frame the issue of climate change in terms of climate justice beyond polarizing politics to instead focus on the relationships human beings have with the environment, our common home (Francis, 2015).

### **Critical Text Analysis: A Starting Point**

There is a long history of educators committed to helping students carefully and critically read and evaluate texts (Shannon, 1990) -- with a text defined here as the use of different semiotic resources, such as words, images, sounds, and movement, that offer different versions of reality based on how the text is selected and organized (Janks, 2018). Central to this process is examining the relationship between language and power (e.g., Comber, 2001; Fairclough, 2014;

Luke & Freebody, 1997). This includes work situated in contexts of globalization (Baildon & Damico, 2011; Luke, 2014) and with cosmopolitan perspectives that focus more centrally on issues of global human rights (e.g., Dunkerly-Bean, Bean, & Alnajjar, 2014). Fundamentally, such critical literacy practices involve close textual critique as well as reflexivity on the part of the reader (Baildon & Damico, 2011). Critique entails digging deeply into texts, examining purposes, claims, and evidence by evaluating how texts work within and across political, economic, and social contexts. With reflexivity, readers investigate their own backgrounds, beliefs, biases, and values as well as consider ways people from different social locations (gender, race, religion, socioeconomic, dis/ability, regional or national affiliation, military or veteran status, among others) might engage with a text.

### **Stories-we-live-by**

Because texts advance different representations about social conditions in the world, Brazilian educator, Paulo Freire, named the analytic process of working with texts “reading the word” and “reading the world” (Freire & Macedo, 1987). Of particular importance is examining what Stibbe (2015) calls “stories-we-live-by” that are encoded in language as well as in images, multimedia and across other semiotic resources that permeate our physical spaces and digital landscapes (Scollon & Scollon, 2001). While stories are “cognitive structures in the minds of individuals” that affect how people apprehend the world, “stories-we-live-by” are narratives in the “minds of multiple individuals across a culture” (Stibbe, 2015, p. 6). Stibbe describes how we are exposed to these mental models that influence our behavior

without consciously selecting them or necessarily being aware that they are just stories.

They appear between the lines of the texts which surround us in everyday life: News

reports, advertisements, conversations with friends, the weather forecast, instruction manuals or textbooks. They appear in educational, political, professional, medical, legal and other institutional contexts without announcing themselves as stories. (2015, p. 5)

Literacy educators play an essential role in helping students identify and examine stories-we-live-by in their own lived experiences and in a range of texts where these stories circulate.

Two interrelated stories-we-live-by that permeate our culture and significantly shape our lives are: (1) humans are separate from nature and, (2) consumerism, or the acquisition of goods, services, and experiences, is a primary pathway to happiness and fulfillment.

### **Humans are the center of existence, separate from nature**

With this story-we-live-by, humans are positioned as the most important entity on the planet, existing separate from all other species. Philosophically, this anthropocentric perspective holds that human beings possess intrinsic value while other entities, such as animals, plants, and minerals, are resources that humans can use or exploit justifiably for their benefit. This supports a view of nature as a commodity and potential source of economic value. This is a powerful story, especially in the United States, given its deep historical links to ideas of progress and economic development championed in such beliefs like manifest destiny. This story is also supported and reinforced in some religious communities, which interpret sacred texts, such as the Bible, as confirmation of (hu)man's dominion over all other species on earth.

One instantiation of a text embodying this story is a truck or sport-utility vehicle commercial where a climate controlled, energy inefficient vehicle rumbles off the paved road, rambling through fields, streams, and mountain sides or across a desert landscape. In such a scene, the environment becomes a playground for humans with little attention paid to what such

activity might mean for the environment. A more subtle example, perhaps, are ‘selfies’ taken by nature travelers who disrupt or damage an ecosystem in search of the perfect backdrop for their snapshots to post to online social media platforms (Leetaru, 2019). In these examples, humans do not simply ‘skim’ along the desert surface as they throw a car into four wheel drive and turn off the main road or step from a well-defined trail to snap a quick photo. Such choices, for example, can wreak havoc on the delicate “crust” of the desert made up of numerous organisms central to its ecosystem and health (Miller, Warren, & Clair, 2017). Texts like truck commercials or “nature selfies” posted to social media offer possibilities to explore this anthropogenic story and consider its ramifications on specific ecosystems.

### **Consumerism is a main pathway to fulfillment**

A companion story-we-live-by is one that positions the acquisition of goods, services, and experiences as a primary pathway to personal happiness and fulfillment. This story of endless abundance, of purchasing and obtaining an enticing cornucopia of new, better and more satisfying products, is perpetuated by advertising and deeply embedded in our culture. Conspicuous consumption (Veblen, 1899) is a way to demonstrate one’s identity, lifestyle choices, and social status and permeates mindsets about about what constitutes the good life. Consumerism creates a state of unease and chronic anxiety that can only be satisfied through more consumption (Lasch, 1984).

One illustrative example of this story can be found in President George W. Bush’s September 2001 speech to the American people, shortly after the attacks on the World Trade Center in New York City and the Pentagon in northern Virginia. Then President Bush suggested that civic responsibility, even a sense of national duty, entailed going shopping. He said, “Now,

the American people have got to go about their business. We cannot let the terrorists achieve the objective of frightening our Nation to the point where we don't, where we don't conduct business, where people don't shop" (Bush, 2001).

Of course, the advertising industry, with the guiding principle to convince people to purchase things they might not have previously considered, is best known for promulgating this story-we-live-by. Consider the Delta Airlines advertising campaign "Keep climbing." One video ad called "Runways" (<https://www.youtube.com/watch?v=kKhtwKuFWQA>) uses a number of rectangular images taken from destinations around the world (table full of food, a lakeside dock, a street), each a stand-in for a runway. As the camera zooms in on each image amidst the sound of an airplane accelerating for takeoff, the narrator says:

The old saying: "Good things come to those who wait." It's just that - old. Those good things? You have to get out there and chase them. We see it in the millions of people we fly around the world. All of them living proof good things come to those who go.

In this sophisticated visually and emotionally compelling ad, what is good and what it means to live fully and well is equated with the consumption of experiences through airline travel to destinations around the world. Notably, this ad, with the culminating goal to leave the ground, also works figuratively to align with the "humans as separate and above nature" story. There is no shortage of other examples that embody these two stories-we-live-by: (1) humans are separate from the environment and (2) the consumption of goods, services and experiences is a primary pathway to happiness.

So, how might literacy educators help students identify and examine these stories-we-live-by? In our work as classroom teachers and teacher educators (Baildon & Damico, 2011;



Damico, Honeyford & Panos, 2016), we advocate inquiry-based instructional approaches where a key guiding principle is to help students pose and pursue questions about topics and texts, in this case, about these stories-we-live-by. Critical literacy principles and practices are crucial to help students better understand “how texts work” (Luke & Freebody, 1997) and explore questions like: Where do these stories come from? How do they shape our understandings and experiences? What are the consequences of these stories-- benefits, drawbacks, and limitations -- for which populations?

However, while examples of critical literacy work in classrooms continue to increase, efforts that directly target climate change remain scarce. Notable exceptions include resources from Rethinking Schools and the Zinn Education Project, such as *A People’s Curriculum for the Earth* (Bigelow & Swinehart, 2014), which include detailed activities and lesson plans for teaching about climate change and environmental justice across content areas. Also, Beach, Share, and Webb (2017), who focus on English language arts classrooms, offer an abundant array of resources, which are also accessible through a website ([climatechangeela.pbworks.com](http://climatechangeela.pbworks.com)) and blog ([ETCCCsite.com/blog](http://ETCCCsite.com/blog)). These examples highlight what more focused attention to climate change can look like and point to the potential of ecolinguistics.

### **Ecolinguistics and Climate Justice Literacy**

While linguistics - and the tools of critical language and literacy studies - offer frames to analyze the wide, diverse array of texts in our lives which shape our thoughts and actions within the communities and the larger society we belong to, the “eco” in ecolinguistics emphasizes *ecosophy*, or ecological philosophy, which is a set of value priorities and related rules and norms to guide people’s actions (Naess, 1989). Everyone makes decisions and acts in the world based

on an ecosophy, whether they are consciously aware of it or not. Similarly, everyone reads, evaluates, and creates texts based on a set of values and priorities. While readers making their values and priorities explicit is central to critical literacy studies, the importance of claiming one's ecosophy, and ecological commitments more broadly, has not been. For the three of us as educators and researchers, our ecosophy acknowledges and builds from the existing scientific evidence about climate change.

The term *climate change*, used routinely in scientific research for decades (e.g., Plass, 1956), refers to changes in the global climate system that result in longer-term changes, from decades to millions of years, in weather patterns. While the global climate system is always changing, scientists have shown that this global warming trend is tied to human greenhouse gas emissions, primarily carbon dioxide and methane, and the countries most responsible include China, the United States, the European Union, India, and Russia (Freiderick, Ge, & Pickens, 2018). As a result, the planet is in the midst of a long-term trend where an escalating global temperature has been leading to rising sea levels, the loss of glaciers, permafrost and sea ice, as well as to an appreciable spike in heat waves, droughts, the expansion of deserts, changes in seasonal patterns (growing seasons, bird migration, insect infestations), and greater occurrence/intensity of droughts, flooding, and fires (Environmental Protection Agency, 2019). It also bears mentioning that all these findings have been common knowledge in the climate science community since 1979 (Rich, 2019). Thus, we proceed here with an ecosophy that deeply values the protection and renewal of essential ecosystems that humans and all other species depend on (Stibbe, 2015, p. 2).

Moreover, because an ecosophy includes values and norms, it is possible to identify stories-we-live-by as destructive, beneficial, or ambivalent in terms of the ecosophy.

“Destructive stories” do not protect essential ecosystems, “beneficial stories” do, while “ambivalent” stories are mixed (Stibbe, 2015).

So, let’s return to our two stories-we-live-by to see an ecolinguistics perspective in action. The first story, *humans are the center of existence, separate from nature*, can more readily be read as destructive, primarily because it supports or justifies human exploitation of natural resources. Acclaimed journalist, Naomi Klein (2014), traces this story back to the Scientific Revolution, early capitalism, and colonialism in the 17<sup>th</sup> century, but its roots can also be traced to humanism or human-centric views of the Renaissance period if not back to Ancient Greece. It is a story of progress based on the dominance of nature by humans, primarily white men with wealth and property, in which “the world [is seen] as something that exists only to gratify human desires” (Lasch, 1991, p. 527). It is a story that has been shaped by dominant systems and structures tied to gender (patriarchy), race (systemic racism and discrimination), class (economic inequality), and space or place (colonialism) (Klein, 2014). As a result, any type of text that privileges human experience at the expense of adverse environmental impact, such as the aforementioned sport-utility vehicle commercial, highlights how this story-we-live-by is destructive.

The second story-we-live-by, *acquisition of goods, services, and experiences is the primary pathway to life fulfillment*, is also destructive. It is ecologically unsustainable as greater levels of energy expenditure, with high CO<sub>2</sub> emitting fossil fuels as the dominant energy source, are needed to match consumption levels. Using an ecolinguistics perspective, President George W. Bush’s entreaty for U.S. citizens to “go shopping” in response to the Sept. 11, 2001 attacks, therefore, contributes to a destructive story. The Delta Airlines ad that promotes the acquisition of global experiences is also destructive, given the devastating CO<sub>2</sub> atmospheric impact of

airline travel. Rates and practices of consumerism (with the US in particular in mind) have also been producing skyrocketing quantities of waste that is increasingly difficult to manage. This story is also destructive due to associated damaging impacts, namely the links of consumerism to rising debt levels, escalating working hours, fracturing of community ties, and contributions to an epidemic of loneliness.

There are many ways to mobilize the study of such stories in the classroom. Teachers can guide students to identify specific destructive stories (such as the ones we identified) across a range of texts (fiction/non-fiction, print/digital) with core critical literacy questions (What story is being valued? Who benefits from this story? Who doesn't?). This might include students inquiring into destructive stories in their own lives as readers, citizens, and consumers. Where are these stories in social media? In their homes and schools? In conversations among their friends and families? What other destructive stories are evident? Exploring these stories in the classroom positions them as worthy of inquiry.

Doing this type of investigative work with texts with an ecolinguistics lens promotes climate justice literacy in classrooms. Literacy educators can also promote climate justice literacy by identifying and exploring “beneficial” stories-we-live-by (Stibbe, 2015).

### **Beneficial Stories-we-live-by**

Beneficial *stories-we-live-by* can “re-story” our relationships to each other and the world (Kimmerer, 2013; Latour, 2019). Three overlapping sets of these beneficial stories emphasize indigenous narratives of place, gender and climate justice, and youth activism and civic engagement.

## Indigenous narratives of place

Indigenous voices, perspectives, and ideas from groups like *Idle No More* and *Indigenous Climate Action* are a generative source of *stories-we-live-by*, especially in places like Canada where warming (or overheating) is happening three times more quickly than the global average (<http://canadians.org/systemchange>). The *This Changes Everything* website, for example, narrates a more justice-centric *story-we-live-by* called “Reinventing a Clean and Just Economy” (<https://thischangeseverything.org/wp-content/uploads/2015/12/Lesson-Plan-5.pdf>). This story explores the experience of Henry Red Cloud, who left his steel industry job to start his own solar power company and create jobs for his North Dakota Indian Reservation. In this example, students come to understand a synergy of benefits for the community, economy, and the environment as Henry Red Cloud aims to help First Nations people achieve energy independence. Similarly, the biologist, lyrical science writer, and member of the Potawatomi Nation, Robin Wall Kimmerer (2013), writes about the braiding together of healing stories from science, literature, and indigenous knowledge to imagine and create a different relationship with the world – one based on regenerative, reciprocal relationships. Students might consider their own lives and media landscapes for more of these stories, and they might consider what such stories would mean if enacted in their own homes and schools.

## Gender and climate justice

Another series of *stories-we-live-by* centers on the relationship between gender and climate justice. Joane Nagel (2016) demonstrates how gender inequalities create intersectional vulnerabilities to climate change impacts and limit access to resources after climate related disasters, while masculinist climate research agendas shape attitudes toward climate change risks

and limit political participation in processes that affect mitigation and adaptation policies (p. 5). To address these inequities, especially climate change denial which is predominantly driven by affluent white males (Nagel, 2016), there are examples like the Mary Robinson Foundation for Climate Justice (<https://www.mrfcj.org>) and the podcast, *Mothers of Invention*, where Mary, the first female President of Ireland teams with writer/comic, Maeve Higgins, to highlight inter-generational climate activists whose climate justice gender work intersects with issues related to race, colonialism, social class and poverty.

The podcast offers powerful models of women working for climate justice, such as the Black Lives Matter activist, Sarra Tekola, the daughter of a climate refugee from Ethiopia, who calls for community-based solutions to climate change. She connects feminism, climate justice, and the Black Lives Matter movement to help people understand and address issues of state violence toward women of color as deeply rooted in particular colonialist legacies. She is a founding member of *Women of Color Speak Out* (<https://wocspeakout.com>), a collective of Seattle activists working to educate their community about the climate crisis by connecting climate action to other social movements that helps people see that it is possible to dismantle deeply rooted forms of oppression and imagine more sustainable futures. Students can explore to what extent these perspectives are present in their lives and in their engagements with media.

### **Youth activism and civic engagement**

These are also beneficial *stories-we-live-by* grounded in youth-led activism and civic engagement found in projects like *This Is Zero Hour* (<http://thisiszerohour.org/>), the *Sunrise Movement* (<https://www.sunrisemovement.org/>), *Extinction Rebellion* (<https://rebellion.earth/>), and School Strike for Climate (<https://www.schoolstrike4climate.com/>) -- all grass-roots efforts

to shape climate-related public policy grounded deeply in what long-time consumer advocate and public intellectual Ralph Nader calls the “moral power” of youth (Nader, 2019). *Extinction Rebellion*, for example, is an international network dedicated to non-violent direct action to convince governments to respond swiftly to our climate and ecological emergency. The *Sunrise Movement* in the United States has also been engaged in political action, leading efforts with the Green New Deal, proposed legislation to confront climate change and economic inequality.

These overlapping and intersecting stories across indigenous perspectives, gender, race, economics and geography offer compelling climate justice examples of community-based efforts to cultivate, nurture, and sustain relationships within and across a range of contexts. These stories confront insidious destructive stories-we-live-by demonstrating how it is possible to build solidarity and forge alliances “as a lived process of ongoing political and ethical action and education (Mitchell, 2007, p. 717). Again, identifying these stories is a worthy endeavor in and of itself; yet, rather than reduce examples of these stories to a simple cataloging of “good” or “bad,” we advocate inquiry-based approaches where students explore key features of these stories and examine how specific examples align with or challenge their own views, values, and experiences.

Being a climate justice literacy educator entails working with destructive as well as beneficial stories. In our own work with preservice and inservice teachers we think it is important to clearly articulate core understandings about climate change that provide an essential entry point for this work, and we have found three ideas to be particularly useful.

### **Three core understandings**

#### **#1: Climate change is a complex socioscientific topic and wicked problem**

In the United States, there are varied perspectives about climate change (Leiserowitz et al., 2014; 2019), associated with different political affiliations, values, or “cultural worldviews” (Kahan et al., 2012; Lombardi and Sinatra, 2012; McCright and Dunlap, 2011; Leiserowitz, et. al., 2011; Weber and Stern, 2011). Recent data point to a changing trend with more Americans thinking that global warming is happening and that it is human-caused (Clark, 2019), yet the findings remain mixed and shaped by the type of questions asked (Annenberg Public Policy Center, 2019). Ultimately, then, climate change is not just about science; it must be understood as a socioscientific topic that cuts across political, civic, geographic, economic, social, cultural, psychological, and historical dimensions (Damico, Panos & Baildon, 2018; Klein, 2014), across traditions in natural science, environmentalism, activism for human justice, economics, politics, and religion (O’Brien, 2017).

Climate change is also “a global problem, felt on local scales, that will be around for decades and centuries to come” necessitating answers to questions about science, economics, society, politics, morality, and ethics (NASA, 2019). From a policy studies perspective, climate change can even be understood as a “super wicked problem” because there isn’t much time to address the problem, the people who caused the problem are attempting to provide solutions; the central authority needed to address the problem is weak or non-existent; and the discounting of the problem pushes policy responses into the future (Levin, et. al, 2012).

Most importantly, the framing of climate change as a sociological or socioscientific (rather than strictly a scientific) topic helps keep issues of inequality and injustice central because “sociologists are unique among scientists in [their] relentless focus on inequality” (Harlan, Pellow, & Roberts, 2015).



## **#2: Engagement with climate change is mediated primarily by a complicated, diverse array of “motivated” digital texts and “motivated” readers**

As a general rule, it is necessary to view all texts as “motivated” because they represent particular interests and agendas. This includes texts that have a global reach and come in the form of advertising, branding, and sponsored content that represent an “epic scramble to get inside our heads” (Wu, 2017), especially texts that promote denialism (rejecting what has been found to be accurate or true) or “manufacture” doubt and uncertainty about established scientific findings by blurring and distorting fact and opinion about climate change (Oreskes & Conway, 2010; Washington & Cook, 2011). For example, denialist texts, such as the statement that “climate change is a hoax”, might try to persuade readers to reject the fact that climate change is occurring, deny that it is being caused by human activity, or dismiss the urgency of taking action. These denialist texts are most prevalent in the United States, England, and Australia where climate science is politicized and polarized, leading some to call climate denial an Anglo-Saxon phenomenon (Painter, 2011).

As readers, we also all come to texts with particular ideas, values, perspectives and positions of relative privilege which “motivate” us to receive and accept information that aligns with our beliefs or confirms pre-existing perspectives as we gravitate towards “echo chambers” (Jamieson, 2008; Manjoo, 2008; Prior, 2013; Kahne & Bowyer, 2017). This means that we all must understand the ways texts try to influence us in particular ways as well as how we might be swayed as readers to locate and use texts that align with our beliefs, values, and attitudes. Of central importance here is making one’s ecosophy, which is often tacit, explicit.

### **#3: Climate change is about climate (in)justice**

Today there is greater recognition that different language is necessary to describe our present reality and to help clarify more prudent courses of action (Monbiot, 2018; Nader, 2019). Leading environmentalists, authors, and activists, including Bill McKibben and Paul Hawken, believe terms like “climate chaos” or “climate volatility” are more accurate, while Greta Thunberg (2019), the 16-year old from Sweden and key leader in the global climate justice movement, has exhorted her followers to “stop saying ‘climate change’” and to “instead call it what it is: climate breakdown, climate crisis, climate emergency, ecological breakdown, ecological crisis and ecological emergency.”

Some scholars, educators, and activists have also framed climate change more pointedly in terms of climate justice (Robinson, 2018) with an emphasis on structural inequalities and concomitant calls for comprehensive, inclusive and systemic change (Klein, 2014; Lewis, 2015; Newberry & Trujillo, 2019; Smith, Tuck, & Yang, 2019; Tuck & Yang, 2018). This stems from the fact that the most devastating climate change consequences, such as limited food and water sources, will likely be felt most in some of the world’s poorest countries where injustices compound over time when communities lose assets and income, especially when extreme weather events continue to occur (Islam & Winker, 2017). The injustices intensify further because the countries and communities who use significantly less fossil-fuel-based energy are least responsible for climate change as unsustainable consumerism and carbon reliant economies in more affluent countries continues to drive our current climate crisis (Harlan, Pellow, & Roberts, 2015).

### **The Journey Ahead**

While these three core understandings, and the preceding consideration of destructive and beneficial stories-we-live-by, are grounded in climate change science and research on inequitable impacts of climate change, one's ecosophy can lead to different interpretations of these stories. The community in which one resides also has an impact on the ways stories-we-live-by are dealt with in the classroom. Because climate change remains a deeply divisive and politically partisan issue in the United States, teachers who work in communities where climate change denial is more prevalent are likely at greater risk of being sanctioned negatively by peers, administrators, or community members. Yet, this does not mean teaching through climate change justice literacy is not possible.

In our recent work with future teachers with varied beliefs about climate change (alarmed to dismissive), we have found that guiding them through an inquiry process where they evaluate competing online sources about climate change and deliberate their evaluations with peers can help them investigate and challenge their own beliefs and work toward more scientifically-based understandings of climate change (Damico & Panos, 2016; 2018). Another approach to address political polarization is to bring local issues and related stories into the classroom. The need to respond to a timely and consequential problem in the community, such as groundwater contamination or dealing with a "super storm" like Hurricanes Sandy, Irma, Maria, Dorian, and Harvey or wildfires like the deadly 2018 Camp Fire in northern California, can redirect or minimize more rigid political differences as people come together across these differences to address problems at hand.

A recent example from our work with current literacy teachers highlights what this can look like. A middle school language arts teacher, who works at a politically conservative religious school in Florida, designed a climate justice inquiry for her students to examine the water health of the state's largest inland body of water, Lake Okeechobee, which is currently suffering from industrial pollution and toxic algae. Her inquiry took the form of critically evaluating the types of news stories being written about the issue, field trips to local parks and the lake, student-created photo essays about the local environment and its health, and making connections with local environmental and climate-focused activist groups, and the project culminated in a whole class podcast shared with their schoolmates. While she expressed concern about the political nature of climate change as a broad topic, she found that positioning the inquiry project with her students through a local environmental issue shifted the story to children's lives and opportunities, rather than entrenched political debates.

Literacy educators are uniquely positioned to help students identify and examine ecologically destructive and beneficial stories-we-live-by that circulate in an escalating array of complicated, motivated texts about climate change. Literacy educators can begin this work by enriching their own understandings of the climate crisis and making climate justice more central in their classrooms. This includes exploring relationships among nature, community, and place within their own communities and beyond to help develop and articulate their own ecosophies, which, in turn, can spark students' explorations of their ecosophies and how to more intentionally engage with the "word and the world" in ways that align with their ecosophies. Teachers finding ways to collaborate with colleagues across subject matter areas to understand and address climate justice as fundamentally inter- or transdisciplinary is also key (Damico & Baidon, 2011); Beach, Share & Webb, 2015).

There is no shortage of important work to do.

For Peer Review

### Take Action

1. Learn more about climate justice education. Consult web sites like the Alliance for Climate Education (<https://acespace.org>), Climate Visuals (<https://climatevisuals.org>), and English Teachers concerned about climate change (<https://etcccsite.com>).
2. Develop or sharpen critical language skills by taking free ecolinguistics course online led by Arran Stibbe, Professor of Ecological Linguistics at the University of Gloucestershire (<http://storiesweliveby.org.uk/>).
3. Develop and define your own ecosophy. Use Stibbe as example (2015, p. 14-15)
4. Identify at least one destructive story-we-live-by and locate texts that represent this story. You can draw from this article for examples or from <http://storiesweliveby.org.uk/>.
5. Identify at least one beneficial *story-to-live-by* and locate texts that represent this story.
6. Teach examples with your students and reflect on what happens.
7. Seek colleagues within and across your content area to collaborate on the design and implementation of climate justice learning activities for students.
8. Connect with colleagues, parents, and other community members to advocate for climate justice education (curriculum, professional development, etc.) at school, district and state-wide levels.

## References

- Annenberg Public Policy Center. (2019, June 06). Do Most Americans Believe in Human-Caused Climate Change? It Depends on How You Ask. Retrieved from <https://www.annenbergpublicpolicycenter.org/do-most-americans-believe-human-caused-climate-change/>).
- Baildon, M. & Damico, J.S. (2011). *Social studies as new literacies in a global society: Relational cosmopolitanism in the classroom*. Routledge/Taylor & Francis.
- Beach, R., Share, J., & Webb, A. (2017). *Teaching climate change to adolescents: Reading, writing, and making a difference*. Routledge.
- Bigelow, B., & Swinehart, T. (Eds.). (2014). *A people's curriculum for the earth: Teaching climate change and the environmental crisis*. Rethinking Schools Limited.
- Bush, G. H. W. (October 1, 2001). Weekly compilation of presidential documents. *Government Publishing Office*, 37(41), 1454-1463. <https://www.govinfo.gov/content/pkg/WCPD-2001-10-15/html/WCPD-2001-10-15-Pg1454-2.htm>
- Comber, B. (2001). Critical literacies and local action: Teacher knowledge and a "new" research agenda. In B. Comber & A. Simpson (Eds.), *Negotiating critical literacies in classrooms* (pp. 271-282). Mahwah, NJ: Lawrence Erlbaum.
- Clark, M. L. (2019, January 31). *The Mason-Yale climate change survey: Tracking evolving public perceptions*. Retrieved from <https://www2.gmu.edu/news/574366>.

- Damico, J.S. & Baildon, M. (2011). Content Literacy for the 21<sup>st</sup> Century: Excavation and Elevation and Relational Cosmopolitanism in the Classroom. *Journal of Adolescent and Adult Literacy*. 55(3). 232-243.
- Damico, J.S., Honeyford, M. & Panos, A. (2016). Designing inquiries that matter: Targeting significance, diversity, and fit. *Voices in the Middle*. 23(3), 25-32.
- Damico, J.S. & Panos, A. (2018). Civic Literacy as 21<sup>st</sup> Century Source Work: Future Social Studies Teachers Examine Web Sources About Climate Change. *The Journal of Social Studies Research*.  
<https://www.sciencedirect.com/science/article/pii/S0885985X17301365>
- Damico, J.S. & Panos, A. (2016). Reading for Reliability: Preservice Teachers Evaluate Web Sources about Climate Change. *Journal of Adolescent & Adult Literacy*. 60(3), 275-285.
- Damico, J.S., Panos, A., & Baildon, M. (2018). "I'm not in the truth business": The Politics of Climate Change with Pre-Service Teachers. *English Teaching: Practice & Critique*. 17(2), 72-89.
- Dunkerly-Bean, J., Bean, T., & Alnajjar, K. (2014). Seeking Asylum: Adolescents explore the crossroads of human rights education and cosmopolitan critical literacy. *Journal of Adolescent & Adult Literacy*, 58(3), 230-241. doi:10.1002/jaal.349
- Environmental Protection Agency. *Overview of Greenhouse Gases*. (2019, April 11). Retrieved from <https://www.epa.gov/ghgemissions/overview-greenhouse-gases>.
- Fairclough, N. (2014). *Critical language awareness*. New York, NY: Routledge.



- Francis, P. (2015). *Encyclical Letter Laudato Si' of the Holy Father Francis on care for our common home*: St Pauls Publications.
- Freidrick, J., Ge, M., & Pickens, A. (September 26, 2018). This Interactive Chart Explains World's Top 10 Emitters, and How They've Changed. *World Resources Institute*. Retrieved from <https://www.wri.org/blog/2017/04/interactive-chart-explains-worlds-top-10-emitters-and-how-theyve-changed>
- Freire, P., & Macedo, D.P. (1987). *Literacy: Reading the word and the world*. Westport, CT: Bergin & Garvey.
- GretaThunberg. (2019, May 4). [Tweet]. <https://twitter.com/gretathunberg/status/1124723891123961856>
- Harlan, S. L., Pellow, D. N., Roberts, J. T., Bell, S. E., Holt, W. G., & Nagel, J. (2015). Climate justice and inequality. *Climate change and society: Sociological perspectives*, 127-163.
- Islam, S. N., & Winkel, J. (2017). Climate Change and Social Inequality Multimedia Library. *United Nations Department of Economic and Social Affairs*. Retrieved from <https://www.un.org/development/desa/publications/working-paper/wp152>.
- Jamieson, K. H. (2008). *Echo chamber: Rush Limbaugh and the conservative media establishment*. Oxford: Oxford University Press.
- Janks, H. (2018). Texts, Identities, and Ethics: Critical Literacy in a Post-Truth World. *Journal of Adolescent & Adult Literacy*, 62(1), 95-99. doi:doi:10.1002/jaal.761
- Kahan, D.M., Peters, E., Wittlin, M., Slovic, P., Ouellette, L.L., Braman, D., & Mandel, G. (2012). The polarizing impact of science literacy and numeracy on perceived climate change risks. *Nature Climate Change*, 2(10), 732–735. doi:10.1038/nclimate1547

- Kahne, J., & Bowyer, B. (2017). Educating for Democracy in a Partisan Age. *American Educational Research Journal*, 54(1), 3-34. doi:10.3102/0002831216679817
- Kimmerer, R. W. (2013). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Milkweed Editions.
- Klein, N. (2014). *This changes everything: Capitalism vs. the climate*. New York: Simon & Schuster.
- Lasch, C. (1984). *The minimal self: Psychic survival in troubled times*. New York, NY: WW Norton & Company.
- Lasch, C. (1991). *The true and only heaven: Progress and its critics*. New York, NY: WW Norton & Company.
- Latour, B. (2019). *Down to earth: Politics in the new climate regime*. Cambridge, UK: Polity Press.
- Leetaru, K. (2019, July 01). Is The Quest For The Perfect Selfie Destroying Nature? *Forbes*. Retrieved from <https://www.forbes.com/sites/kalevleetaru/2019/06/30/is-the-quest-for-the-perfect-selfie-destroying-nature/#372fae7437b2..>
- Leiserowitz, A., Maibach, E., Rosenthal, S., Kotcher, J., Ballew, M., Goldberg, M., Gustafson, A., & Bergquist, P. (2019). Politics & Global Warming, April 2019. *Yale University and George Mason University*. New Haven, CT: Yale Program on Climate Change Communication. DOI: 10.17605/OSF.IO/NBJGS.
- Leiserowitz, A., Maibach, E., Roser-Renough, C., Feinberg, G., Rosenthal, S., & Marlon, J. (2014). Climate change in the American mind: Americans' global warming beliefs and

attitudes in November, 2013. Yale Project on Climate Change Communication: Yale University and George Mason University. New Haven, CT. Retrieved from: <http://environment.yale.edu/climate/publications/>

Levin, K., Cashore, B., Bernstein, S., & Auld, G. (2012). Overcoming the tragedy of super wicked problems: Constraining our future selves to ameliorate global climate change. *Policy sciences*, 45(2), 123-152.

Lewis, A. (Director) & Barnes, J. & Lewis, A. (Producers). (September 13, 2015). *This Changes Everything* [motion picture]. This Changes Everything.org.

Lombardi, D. & Sinatra, G.M. (2012). College students' perceptions about the plausibility of human-induced climate change. *Research in Science Education*, 42(2), 201-217.

Luke, A. (2014). Defining critical literacy. In J.Z. Pandya and J. Avila (Eds.), *Moving critical literacies forward: A new look at praxis across contexts* (pp. 19–31). New York, NY: Routledge.

Luke, A., & Freebody, P. (1997). The social practices of reading. In S. Muspratt, A. Luke, & P. Freebody (Eds.), *Constructing critical literacies: Teaching and learning textual practice* (pp. 185-226). Cresskill, NJ: Hampton Press.

Manjoo, F. (2008). *True enough: Learning to live in a post-fact society*. Hoboken, NJ: John Wiley & Sons.

- McCright, A. M., & Dunlap, R.E. (2011). The politicization of climate change and polarization in the American public's views of global warming, 2001-2010. *The Sociological Quarterly*, 52(2), 155-194.
- Miller, S., Warren, S., & Clair, L. S. (2017). Don't bust the biological soil crust: Preserving and restoring an important desert resource. *Science You Can Use Bulletin*, 23. Fort Collins, CO: Rocky Mountain Research Station. 1-10.
- Mitchell, K. (2007). Geographies of identity: the intimate cosmopolitan. *Progress in human geography*, 31(5), 706-720.
- Monbiot, G. (November 14, 2018). The Earth is in a death spiral. It will take radical action to save us. *The Guardian*. Retrieved from:  
<https://www.theguardian.com/commentisfree/2018/nov/14/earth-death-spiral-radical-action-climate-breakdown>.
- Nader, R. (April 24, 2019). Children's moral power can challenge corporate power on climate crisis. *The Litchfield Country Times*. Retrieved from  
[http://www.countytimes.com/opinion/ralph-nader-children-s-moral-power-can-challenge-corporate-power/article\\_a5eb5f80-58ec-5874-85de-529f01364351.html](http://www.countytimes.com/opinion/ralph-nader-children-s-moral-power-can-challenge-corporate-power/article_a5eb5f80-58ec-5874-85de-529f01364351.html)
- Næss, A. (1990). *Ecology, community, and lifestyle: Outline of an ecosophy* (1st pbk. ed). Cambridge: Cambridge University Press.
- NASA: Global climate change. (2019). Climate change effects. Retrieved from  
<https://climate.nasa.gov/effects/>
- Nagel, J. (2015). *Gender and climate change: Impacts, science, policy*. New York: Routledge.

- Newberry, T., & Trujillo, O. (2019). Decolonizing Education Through Transdisciplinary Approaches to Climate Change Education. In E. T. Linda Tuhiwai Smith, K. Wayne Yang (Ed.), *Indigenous and Decolonizing Studies in Education: Mapping the Long View*. New York: Routledge.
- O'Brien, K. J. (2017). *The violence of climate change: Lessons of resistance from nonviolent activists*. Washington, DC: Georgetown University Press.
- Oreskes, N., & Conway, E. M. (2010). *Merchants of doubt: How a handful of scientists obscured the truth on issues from tobacco smoke to global warming*. 1st U.S. ed. New York: Bloomsbury Press.
- Plass, G. N. (1956). The carbon dioxide theory of climatic change. *Tellus*, 8(2), 140-154.
- Rich, N. (2019). *Losing Earth: A recent history*. New York: Farrar, Straus and Giroux.
- Robinson, M. (2018). *Climate justice: Hope, resilience, and the fight for a sustainable future*. Bloomsbury Publishing USA.
- Scollon, R., & Scollon, S. (2001). Discourse and intercultural communication. In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), *The handbook of discourse analysis* (pp. 538-547). Oxford, MA: Blackwell Publishers.
- Shannon, P. (1990). *The struggle to continue: Progressive reading instruction in the United States*. Portsmouth, NH: Heinemann.
- Smith, L. T., Tuck, E., & Yang, K. W. (2019). *Indigenous and Decolonizing Studies in Education: Mapping the Long View*. New York: Routledge.

- Stibbe, A. (2015). *Ecolinguistics: Language, ecology and the stories we live by*. London: Routledge.
- Tuck, E., & Yang, K. W. (Eds.). (2018). *Toward what justice?: Describing diverse dreams of justice in education*. New York, NY: Routledge.
- Veblen, T. (1899). *The theory of the leisure class: An economic study of institutions*. New York, NY: Penguin Books.
- Washington, H. & Cook, J. (2011). *Climate Change Denial: Heads in the Sand*. New York: Earthscan.
- Weber, E. U., & Stern, P. C. (2011). Public understanding of climate change in the United States. *American Psychologist*, 66(4), 315.
- Wu, T. (2017). *The attention merchants: The epic scramble to get inside our heads*. Visalia, CA: Vintage.

### More to Explore!

- Indigenous Rapper and Climate Change Activist Xiuhtezcatl Martinez's music:  
<https://www.youtube.com/watch?v=E4kGHvWFHYk&feature=youtu.be>. TedX Video:  
<https://www.youtube.com/watch?v=o2V2yVkedtM>
- Greta Thunberg's (climate justice activist and teenager) Twitter Feed:  
[https://twitter.com/GretaThunberg?ref\\_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor](https://twitter.com/GretaThunberg?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor). Ted Talk:  
[https://www.ted.com/talks/greta\\_thunberg\\_the\\_disarming\\_case\\_to\\_act\\_right\\_now\\_on\\_climate?language=en](https://www.ted.com/talks/greta_thunberg_the_disarming_case_to_act_right_now_on_climate?language=en)
- Rethinking Schools Climate Justice Resource Kit:  
<https://www.rethinkingschools.org/climate-justice-resource-kit>
- Wiki focused on Climate Change in the English Language Arts Classroom:  
<http://climatechangeela.pbworks.com/w/page/100551079/FrontPage>
- The Cloud Institute focuses on preparing school systems and communities to educate for sustainable futures. <https://cloudinstitute.org/>