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The Climate Emergency and English Education

English education comrades in arms, teachers and teacher educators, dear and respected colleagues with whom I share commitment to the education and empowerment of our students, passion and common work for social justice, I begin by saying: climate change is more threatening, more urgent, and more relevant to English Language Arts than you may think.[[1]](#endnote-1)

After making climate change increasingly the focus of my research, teaching, and political work for the last seven years, I am not just “concerned,” or “alarmed,” I am in *emergency mobilization mode* (Salamon, 2019). As the now increasingly common phrase has it, climate change is “an existential question,” meaning it is threatening all human existence, all life on earth. And it is happening so fast. Fifty percent of the greenhouse gasses in the air have gotten there in the last 30 years. “We have done as much damage to the fate of the planet and its ability to sustain human life and civilization since Al Gore published his first book on climate than in all the centuries – all the millennia – that came before” (Wallace-Wells, 2019, p. 4). “Our best-case outcome is death and suffering at the scale of twenty-five [Nazi] Holocausts, and the worst-case puts us on the brink of extinction” (Wallace-Wells, 2019, p. 29). The earth is heating at least ten times faster than it has ever warmed before. The six warmest years ever recorded are all after 2010; the 10 highest monthly temperature departures from average have all occurred since 2015. Several recent years’ (2014, 2015, 2016) global average temperatures were near or above 1/10th of a degree Celsius *warmer than the previous year* – at that rate, in ten years, the earth would warm one full degree Celsius.

Conservative estimates on the number of climate refugees in 2050, when high school students today are adults with kids, range from 200 million to more than 1 billion. Even at a 2ºC increase in average global temperature -- the goal of the 2015 Paris Agreement -- the subtropic arid belt will move north from the Sahara, sweeping across the Mediterranean, rapidly increasing climate refugees. [[2]](#endnote-2) Melting of the Greenland ice sheet will submerge coastal cities, home to hundreds of millions. Water shortages around the world will cause major famines in Africa, India, and South America.

But, we are clearly going well past 2ºC. Even with all Paris pledges honored, scientists believe the earth will get to 3.5ºC. Yet, very few countries are meeting their Paris pledges, which are entirely voluntary. Several important countries, led by the United States, are determined to leave the Paris Agreement altogether. Thus, on the “business as usual” pathway we are on, the likelihood is that the earth is heading to 4, 5, and 6ºC warmer, *even in the lifetime of our students*. Four degrees Celsius will see tremendous heat waves hotter than anything in the millions of years of human evolution, the loss of all polar ice, the collapse of food production in China, the western half of India, southern Africa, Australia, and the western United States. Hans Schellnhuber, one of the world’s leading climate scientists, founder and director of the Potsdam Institute, puts it this way:

Expressed in simple numbers, the thermal difference between 2°C and 4°C might translate into the cultural difference between a stable and a failing global society, between a fair and peaceful planet and a world destabilized by climate injustice and the thence-triggered aggressions.

Greenhouse gas emissions are increasing every year, 2018 setting the latest record. Globally the use of coal has doubled since 2000. China poured more concrete (a major climate change contributor) in the last three years than the United States did in the entire 20th Century. So, we are now on a trajectory heading well past 4ºC. Five degrees Celsius takes us back to the Paleocene-Eocene Thermal Maximum, 56 million years ago when Antarctica was covered with forest and crawling with crocodiles. Temperatures at the North Pole reached 77º Fahrenheit. Inland areas were 20º Fahrenheit or hotter than today. There were tremendous downpours in the tropics, and increasing desertification of dry areas north and south of the Equator. At 5ºC humans will be forced into shrinking ‘zones of habitability’ by excessive heat, droughts, and floods.

The earth has seen five previous extinctions before the one we are in now – even though an asteroid played a role in the extinction of the dinosaurs, the current science is that all of the extinctions were primarily caused by increased CO2 in the atmosphere, by the greenhouse effect. At 6ºC the earth hearkens back to 252 million years ago, the End Permian Event, the most severe extinction in earth’s history, when 95% of life on Earth, on land and in the seas, was wiped out. After the Permian Extinction it was millions of years before the Earth again teemed with life. There are some scientists predicting even 8ºC of warming in the lifetime of children today.

*The Guardian* newspaper has updated its style guide to no longer use the expression “climate change,” but instead “climate emergency,” “climate crisis” or “climate breakdown.” Instead of “global warming” the paper will use “global heating” (Carrington, 2019). We know language is important; from here on I use those terms.

Does it make sense to talk about the climate crisis in a book on “social justice”? I will argue later in this chapter that everywhere on earth is “ground zero” for climate change, including where your students live, wherever that is. But at the outset, we must see that the climate emergency is based on enormous injustice. Of course, the people who caused the climate breakdown, those who most benefited from the burning of fossil fuels, will not be the first to suffer. Worldwide, millions are already dying every year from climate change and they are predominantly the poor and people of color. A typical example from close to home: the victims of Hurricane Katrina were overwhelmingly poor and African American. Four countries in Africa have been in a climate crisis drought endangering the lives of 20 million, the “biggest humanitarian disaster since WWII” (Gettleman, 2017). Those who are least responsible are suffering first.

Oxfam released a study that found the richest 10 percent of people produce half of the planet’s individual-consumption-based fossil fuel emissions, while the poorest 50 percent — about 3.5 billion people — contribute only 10 percent. Yet those same 3.5 billion people are “living overwhelmingly in the countries most vulnerable to climate change.” (Colorossi, 2015)

The global North and the global South, the same countries that gained, or were devastated, by slavery, colonialism, industrialization, capitalism, neocolonialism, globalization, and neoliberalism are the same ones to be the culprits, and first victims, of the climate breakdown. More specifically, once could say that billionaires are the leading cause of climate change. 70% of climate change is caused by 100 companies (Riley, 2017), "Koch Industries alone routinely released some 24 million tons of carbon dioxide into the atmosphere a year." (from Jane Mayer, *Dark Money*, as quoted in Darby, 2018). And massive disinformation campaigns – “fake news” – denying climate change have been and are being waged by the richest people and corporations in the world, the Koch Brothers, Exxon, American Petroleum Institute, et al.

The climate breakdown is not only a war of the rich upon the poor, it is also a war of the old upon the young. As this chapter goes to print I will be 62. When I was born in 1957 CO2 in the atmosphere was less than 318 parts per million. Scientists tell us that a level below 350 ppm is “safe.” 350 ppm was passed in 1988, when I was 31. We are now at 415 ppm and rising fast. I have lived my life in the period of the Great Acceleration of growth, resource, and energy use and my generation has benefited enormously. Young people today will suffer the consequences. If we are going to try to keep global heating to 2ºC, they must be forced to live with drastically reduced carbon footprints. Compared to the resources I have had, the new generation will have to live on at least 83% less, and that is not taking into account justice issues between First and Third worlds. If climate justice issues are considered, the next generation will need to live on 97% less carbon use than I have (see calculator at Carrington, 2019).

The kind of climate emergency, climate justice pedagogy I advocate in this chapter is not the “It’s the fault of all of us.” and “We just need to recycle and reduce our carbon footprints.” approach that is so often encouraged. That kind of pedagogy is not just a form of denial, it is a dangerous, unjust lie. Instead, citizenship not consumerism, system change not climate change. This chapter advocates for a pedagogy that centers injustice, racial and economic inequality, and challenges the ethics of building walls to protect those who are for the moment safe and keep “Others” out. Indeed, as Christian Parenti (2011) puts it, “If climate change is allowed to destroy whole economies and nations, no amount of walls, guns, barbed wire, armed aerial drones, or permanently deployed mercenaries will be able to save one half of the planet from the other” (p. 11).

The climate emergency means that all human life, indeed all life on earth, is in imminent danger of extinction, thus it is an issue that overtakes all other issues. For that reason, and for fundamental questions of rights and inequality involved in the creation of the crisis, and mitigation and adaptation to it, the climate crisis is the central justice issue of our time.

It must become central in our teaching and preparation of teachers, in all disciplines, especially English language arts, which I will argue, is the discipline most relevant and impactful for addressing the climate emergency, more so than the sciences or the social sciences.

Declaring the Emergency & Telling the Truth

Extinction Rebellion (XR), one of the most effective direct action groups forcing climate action, demands that governments “declare the climate emergency” and “tell the truth.” These are also the first steps for any climate pedagogy, for preparing teachers and for teaching public school students. Time to act is rapidly disappearing, as the effects of greenhouse gasses already in the air are delayed and accumulate, and dangerous natural cycle tipping points risk global temperatures spiraling out of control. The October 2018 United Nations Intergovernmental Panel on Climate Change (IPCC) report clarifies that there must be “urgent and unprecedented” effort to reduce global emission of greenhouse gasses by 45% within the next ten years (by 2030), and to zero by 2050, to reach Paris aspirational warming targets (Watts, 2017).[[3]](#endnote-3)

There are many ways our teaching can declare the climate emergency. Students and future teachers can read from some of the powerful essays, chapters, and books on the subject found in references (Lynas, 2008; McKibben, 2010 & 2019; Wallace-Wells, 2017 & 2019; Salomon, 2019). After reading, students can and should be invited to do their own research. After my students read the first chapter of Bill McKibben’s *Eaarth*, I had them choose from more than twenty different topics that McKibben mentions from wildfires to sea ice, and research and present to the class: was McKibben telling the truth? What has happened since he wrote the book and today? What do we now know? Their reading, followed by their own research, and listening to the presentations of their classmates, made it abundantly clear: the climate emergency is upon us.

We must tell the truth. As I mentioned, there has been an enormous climate denial industry funded by fossil fuel companies, right-wing individuals, foundations, “think tanks,” and the Republican Party. This denial movement has obscured the reality and urgency of the climate emergency, especially in the United States. Even leading science museums have ignored or minimized the threat (Marshall, 2014, pp. 99-104). Some, such as Exxon, have known all along from their own scientists about the devastating truth but in cynical self-interest to protect trillions of dollars of fossil fuel assets (that must not come out of the ground) Exxon joined with others to tell, what Bill McKibben (2019) has called, “the most consequential lie in human history” (p. 76). Holocaust denial hasn’t stopped English teachers from teaching about the Holocaust. The Holocaust is an historical event in the past; the climate crisis began in the past, is affecting the present, and will determine the future. Taking action today can prevent millions, indeed billions of deaths. Climate denial must not stop English language arts teachers from teaching about the climate crisis!

I have found the starting point for teaching about global heating is not a debate about whether or not it is happening. The science is settled. In English language arts we don’t need to have students verify the science. Yet, our students can investigate how the information about the changing climate has been shaped and how that framing has influenced the public perception.  They should understand how a small number of enormously wealthy and powerful individuals and corporations have put their own narrow self-interest ahead of the fate of life on earth. (Oreskes and Conway, 2011 (also available as a documentary film); Mayer, 2017; Rich, 2018).

Depending on the community that our students teach in, this kind of denial may be more or less important to investigate. But there are other kinds of denial that are closer to home.

Of course, the mass media is failing to convey the gravity of the crisis. The American president and most politicians are ignoring or failing to take responsibility to address the emerging catastrophe. There are plenty of well-informed people including scientists and environmentalists who are concerned that if the general public is told how dire the situation is with the climate crisis then people will go into despair and refuse to act. There are environmental activists who propose adapting to climate change by strengthening local community bonds – nothing really wrong with that, until you realize that focusing on the local writes off the lives of people worldwide who are suffering first.

There are those in our profession who believe that teaching about the climate crisis is not appropriate in English language arts. Despite the fact that it is the most consequential issue facing human beings and life on earth, that it will dramatically impact and even threatens the lives of our students, that it is profoundly a social justice issue where the experiences and perspectives of others matter, that climate fiction is considered one of the most important new literary genres, that although science is involved the real issues are social issues, issues of public persuasion, power, and justice, that students can research, write persuasively and creatively on the topic – still it does not belong in English. The NCTE conference presentation review process has repeatedly turned away highly qualified presentations and conference panels addressing climate change, including in 2018 a fifteen round table session with nearly 40 presenters from all across the country. Ironically, the 2018 NCTE Annual Conference was to be held in the George R. Brown Convention Center in Houston which, barely a year before, held, for months, 10,000 Hurricane Harvey climate crisis evacuees.[[4]](#endnote-4) This round table session was admitted only after a direct appeal to the NCTE president. I have repeatedly proposed a session on teaching about climate change to the Michigan Reading Association, and it has so far been denied every time, and no sessions or presentations on climate change have ever been given at their conference. I could go on. The NCTE resolution that members of the ELATE Climate Change Commission (Rick Beach, Jeff Share, Russell Mayo, David Schaafsma, Todd DeStigter, Rich Novak and myself) submitted was almost unanimously voted for approval by more than 400 people attending the 2018 Annual Meeting (there was one “no” vote), but was dramatically cut back before the Annual Meeting, and again, even the words approved at the meeting, were substantially cut before being brought to the full NCTE membership for online voting. (Another, longer resolution going through the process at the same time addressing “Critical Literacy in Politics and Media” was not cut back in any way.)

Certainly, the climate crisis is a large “wicked” problem that requires quick and dramatic transformation. There are many reasons, economic, political, ideological, psychological, to ignore, downplay, minimize, repress or otherwise deny what is happening. But as teachers and teacher educators vitally concerned about the lives of our students and the world they live in, as readers of this volume committed to social justice, we must no longer deny the climate emergency. We need to prepare students and teachers for the world they will live in. For the sake of the planet, our own credibility, and our responsibility to present and future generations, we teachers and teacher educators must *tell the truth* about the climate crisis (Campbell, 2017, p. 22). Historically the United States is the largest contributor to the climate crisis and even today, on average, Americans have about the largest per capita carbon footprint. Under climate demagogue Trump our country is leading efforts to destroy the Paris Agreement, to go backwards as fast as possible on limitations on greenhouse gas emissions, even when green energy is increasingly affordable. We must energize everyone, perhaps especially American young people, to take action not to stop the climate crisis (it’s too late) but to try to keep damage below extinction levels.

English Language Arts

When I survey classes of future teachers most of them report never having a course or even a substantial curricular unit in high school or college addressing the climate breakdown. To repeat, they have not studied in school the most overwhelming crisis facing humanity and life on earth, a catastrophe that will profoundly shape their world and that must be addressed immediately. OK, that’s the first problem. Secondly, if they have studied climate change, it has been in Earth Science classes where, yes, they have learned the (easy to understand) mechanism of greenhouse gasses and global heating. That science, and the technical steps need to be taken to address the crisis and drawdown emissions, are certainly important, but, despite denialist myths, these questions are settled. What public school students and future teachers haven’t studied are the far more vexed and important social, political and justice questions that the climate crisis raises, including how society will be impacted, the experience of victims, who caused the problem, and what we can do right now to make others aware and foster will to act. While you would think that such questions come up in social science classes, that is rare.[[5]](#endnote-5) The focus in World History/Geography, or American History or Government is typically on the past, not the future. I occasionally hear of climate change addressed in a high school elective in global issues or in a specialized college course, but that is also infrequent.

English language arts teachers typically have more open curriculum and can foster critical inquiry about the climate emergency through reading, writing, speaking/listening, and digital media production, including addressing the ethical and moral dimension of the catastrophe and differing human experiences portrayed in fiction, autobiography and nonfiction. Utopian and dystopian literature about the future is a staple in our discipline. While I think all content areas need to address climate change, Bill McKibben wrote an endorsement of *Teaching Climate Change to Adolescents: Reading, Writing, and Making a Difference[[6]](#endnote-6)* (the book that Rick Beach, Jeff Share and I published with Routledge and NCTE in 2017) that points to the vital role of English language arts:

The scientists and engineers have done their work, providing a timely warning on climate change and producing the technologies like solar panels that would help take it on. It's the rest of us that have so far failed, and it's largely a failure of...imagination, precisely the reason that we have English class. This book will help many teachers understand their craft in light of the planet's great crisis. (back cover)

Allow me a moment to review some key points from *Teaching Climate Change to Adolescents* about how English classes are already addressing climate breakdown. In the second chapter we set forward four simple first steps English language arts teachers are taking including reading climate fiction short stories, persuasive and creative writing addressing the climate crisis, reading informational text, and viewing climate crisis documentaries and images. The third chapter describes in depth ELA inquiry-based curriculum frameworks including Indigenous/postcolonial perspectives, capitalism and consumerism, environmental literature and ecocriticism, and social system analysis. Subsequent chapters describe ELA teachers using cli-fi fiction, film, eco-poetry, classic, and young adult literature, the use of place-based, persuasive, and creative writing, critical media analysis, drama and gaming activities, and interdisciplinary teaching – all emphasizing students engaged in critical inquiry, meeting language arts standards, and taking action to educate others and address policies. The book has a complementary wiki website with tremendous resources for ELA teachers at: [*http://climatechangeela.pbworks.com*](http://climatechangeela.pbworks.com)*.*

Since 2017, I have undertaken additional ELA teaching about the climate crisis including units on international climate short stories, climate fiction novels, and students writing and presenting in the community “climate justice manifestos.” In Fall 2018 I taught an introductory literature course on climate refugees featuring *The Grapes of Wrath*, contemporary cli-fi, young adult literature, film, raps and poetry. I designed the course to pilot materials for secondary teaching and I wrote about it for the *English Journal* (Webb, 2019). (Syllabus at: <http://allenwebb.net/engl1100f18.html>.) In this class students read the Universal Declaration of Human Rights and Pope Francis’ 2015 Encyclical Letter “Laudato si’: On Care for Our Common Home” (Introduction and Chapter 1) addressed to all people on earth. The Pope describes the impact of climate change on poor communities around the world and the desperate situation of climate refugees:

There has been a tragic rise in the number of migrants seeking to flee from the growing poverty caused by environmental degradation. They are not recognized by international conventions as refugees; they bear the loss of the lives they have left behind, without enjoying any legal protection whatsoever. Sadly, there is widespread indifference to such suffering, which is even now taking place throughout our world. Our lack of response to these tragedies involving our brothers and sisters points to the loss of that sense of responsibility for our fellow men and women upon which all civil society is founded. (par 25)

Climate breakdown endangers the habitability of the earth, and threatens all of us. To address it, we must develop awareness of its impacts and empathy with victims. We need to see that all of us on earth are in this together, we need to work with other countries, and support our most vulnerable “brothers and sisters.” Addressing the climate emergency is not merely a rational process, it calls for full engagement of our emotions, imagination, creativity, awareness of others, and developing a sense of community. Literature classes can be ideal forums to foster global understanding and cooperation. What discipline is better suited?

I trust I have convinced you of the relevance of addressing the climate crisis in English language arts. I have also worked on preparing and inservicing secondary ELA teachers to teach about the crisis. My methods courses now always include units about making climate change a thematic topic. In Spring 2018 I taught a graduate English education seminar “Teaching About Climate Change.” The full syllabus of this course is on line (http://allenwebb.net/engl6780s18.html) and includes links to resources of interest to teacher educators, from short stories and rap lyrics to relevant articles, book chapters, films, websites, and activities. In this class teachers designed climate movement/messaging action projects. They also created semester-long climate crisis curriculum that they could use in their own school settings. A high school teacher took a science fiction class she was teaching and brought in a focus on imagining future impacts of the climate emergency. Another put together an extended unit about students examining their relationship with nature by writing “mini-memoirs” using *Encyclopedia of an Ordinary Life* as a mentor text. An African American teacher put together curriculum specifically to address African American students featuring connecting environmental issues to communities of color, identifying African Americans making leading contributions to the environmental movement, and including young adult and cli-fi literature by African Americans including *Hurricane Song* by Paul Volponi, *Orleans* by Sherri Smith, and *Parable of the Sower* by Octavia Butler. Another teacher had students write blogs bringing together reading from the powerful climate change analysis *Six Degrees* and the YA novel *Feed*. Her students analyzed the stance of public figures on the climate crisis and researched social movements. A middle school teacher put together a climate change unit built around *The Giver*. Two doctoral students teaching freshman composition put together climate crisis courses, one focused on persuasive writing the other on service learning. So they could be broadly shared, all of these projects were posted on Wikispaces. Alas, soon thereafter, Wikispaces shut down. Fortunately, I also had students write up a blog post (with links and images) about their curriculum plans. These are posted on the ETCCC blog (English Teachers Concerned about Climate Crisis/http://ETCCCsite.com). ETCCC has many valuable ideas and material for ELA teachers and teacher educators, and the blog is eager for contributions from readers of this chapter, their students, and other ELA teachers.

Climate Change Ground Zero

Living in Kalamazoo, Michigan as concerned as I am about the climate breakdown, I had it pretty firmly in mind that my family and community would be spared the earliest and most frightening impacts. A biologist and one of the founders of the Climate Change Working Group at our university gave lectures in my classes about the realities of climate change, and its impacts on the Great Lakes region including increasing numbers of hot days in the summer, local plant and animal species unlikely to migrate north fast enough. Another scientist told me “Michigan will first become like Tennessee, then like Texas.” (Where will that leave Texas?) I met with city officials and community leaders working on our climate action plan. One dimension of the plan is preparing for climate refugees we expect to be coming to our community from a flooding Florida or a baking Southwest in some probably not too far off future.

Then in February this last winter an event happened that started to change the way I think about my local area and the climate crisis. If you didn’t experience them, maybe you read in the news about record low-temperature setting “polar vortices” that swept across the Midwest and North East caused by warming at polar latitudes and loosening of the jet stream winds that kept cold air farther north. During one of these vortices when local temperatures were minus 17ºF and natural gas supplies used to heat homes were already stressed, there was a fire at a natural gas compressor station that was part of a system supplying more than 4 million people. At about 10 o’clock at night across the state we received an alert siren on our cell phones urging us to immediately reduce temperatures in our homes to conserve gas. Industries across the region shut down to preserve gas. Fortunately, these efforts were enough to continue to provide homes with heat. But what if things had been slightly worse? This is what the climate breakdown does, it creates crisis stress on whatever systems are already in place, threatening disaster. At minus 17ºF and no heat millions of people in Michigan would have been forced to get in their cars and head south becoming climate refugees, causing who knows what havoc on the roads and in the overcrowded areas they would flee to. And who knows how many people, likely at least thousands especially in poorly insulated homes, might have frozen to death. In 2019, Michigan had become a climate change “ground zero.”

The more I thought about it, the more I began to see we were already a “ground zero.” In February, 2018, a year earlier, record flooding of the Kalamazoo River led to viral videos of people on jet skis zooming down local streets, and to millions of dollars of destruction of homes in some of the poorest neighborhoods. Because of an unusually warm spring followed by a cold snap, 2012 was the worst year ever recorded for Michigan agriculture, leading to loss of 90% of fruit and 50% of other food crops. This year I was invited to talk about climate change to a local 6th grade class English class taught by one of my former students. During the course of my visit one student explained, “my family just moved to Michigan from Florida because our house had been flooded three times.” I also had worked with churches welcoming Syrian refugee families to our town – refugees fleeing a war significantly connected to record droughts in the Middle East. The climate refugees were already here in our town! Indeed, how many other climate refugees, perhaps from New Orleans, or Houston, or from Southern Mexico, or Central America, or North Africa fleeing drought, had already found their way to my town, my university, and local schools?

Of course, ELA students and future ELA teachers can and should watch video and read articles, autobiographies, and testimonies of those on the front lines of the climate crisis.  *Climate Justice: Hope, Resilience, and the Fight for a Better Future* (2018), by Mary Robinson, former President of Ireland and UN Climate Change Ambassador, tells stories about people from frontline communities who become leaders addressing the climate crisis. It’s a good book for our students in secondary school or college. To help future teachers see how the climate crisis is already close to home, ELA methods instructors (or students), wherever you are, can invite people living in their own communities to speak about climate crises, including floods, fires, storms (500 tornadoes in 30 days in USA, May 2019!), droughts, heat, etc. Survivors, representatives of any of local climate events or refugee groups —potential speakers likely include fellow students in many American public schools — could be interviewed by students, invited to speak in ELA classes. ELA students and teachers could undertake “Foxfire” type projects to tell their stories, and help make climate emergency and questions of climate justice come alive with local dimension.

Young People Taking Action

A student once asked me, “If we start doing something about climate change now, how long before we get back to normal?”

Alas, there is no going back. The climate will never again be “normal,” as “normal” has been defined during the last 12,000 years of the Holocene and the rise of human civilization. The devastating impacts of the carbon humans have put into the air during my life time will last for thousands, perhaps millions of years. In human scale, for eternity.

While I profoundly disagree with those who advocate soft pedaling the impact of climate change so as to not “scare” or “depress” people, I do believe it is critical that ELA teachers and teacher educators address the overwhelming, disturbing, and depressing feelings the topic can create in our students. The way to do this: take action.

Taking immediate and dramatic action to reduce and quickly eliminate greenhouse gas emissions could make a world of difference. Yes, no matter what, we will go past the Paris targets of 1.5ºC and 2º with dire consequences. We likely have no choice but to go to 3ºC. But, emergency mobilization on the order of what our country did during WWII, including working with other countries of the world to decarbonize our economy and dramatically drawdown emissions, we may still be able to prevent 4ºC, the temperature that means a “failing global society.” And the degrees beyond 4º which lead to mass death and extinction. For the sake of human beings and all life on Earth we must do our damndest. In only a few years it will be altogether too late.

The way we as a society mitigate (reduce the impact) and adapt (respond to the impacts) is all about social justice. In *This Changes Everything: Capitalism vs. the Climate* (2015) Naomi Klein argues that climate change creates an opportunity to develop broad coalitions and address present and historic inequities that are woven into carbon-based capitalism. We see this approach in the Green New Deal which aims to achieve net-zero greenhouse gas emissions through a fair and just transition for all communities and workers, including:

promoting justice and equity by stopping current, preventing future, and repairing historic oppression of indigenous peoples, communities of color, migrant communities, deindustrialized communities, depopulated rural communities, the poor, low-income workers, women, the elderly, the unhoused, people with disabilities, and youth (referred to in this resolution as “frontline and vulnerable communities”). (Ocasio-Cortez, 2019)

For our students and for their students educating others about the scale, urgency, and strategies to address the climate emergency is a key form of action. There are many ways to educate others and *Teaching Adolescents about Climate Change: Reading, Writing, and Making a Difference* is rich with examples and ideas. My students have written poetry, short stories, and persuasive essays that they shared with others face-to-face and online. Two students have written cli-fi novels as senior thesis projects, one wrote a children’s book. Many created blogs and wikis and climate crisis “culture jams” that they distributed via social media. My students created an online climate change cook book for college students featuring not only recipes but also information about food justice and carbon footprints. My students have organized public events including showing climate change documentaries on campus and serving on a panel afterward to lead discussion, holding a public tree planting event, leading community reading discussion about *Don’t Even Think About It* at the downtown library, and creating a climate change “teach-in” where students, professors, and community members spoke. One class wrote “Climate Manifestos” (assignment and manifestos at: <http://allenwebb.net/envs4120manifesto.html>) that they published on line and many read from at a rally to support the youth climate lawsuit (Juliana v. US, Our Children’s Trust) in a park downtown, many spoke from their manifestos on public panels at the university, shared copies from tables set up around campus, some sent versions to corporations they are working for, and used them to address interior designers and Spanish language teachers. My students have learned about and participated with groups working to address the climate crisis, including researching and presenting to our class about climate action groups and joining the youth-led Sunrise Movement (in Nov 2018 one sat in Nancy Pelosi’s office to demand a climate focused congressional committee).

Of course, for future teachers a key way to act, as I have discussed, is to plan teaching the topic. That is important, but not sufficient.  Our students and the students they teach can and should become part of the young people’s creative and direct-action uprising that is, perhaps, the greatest hope of saving our planet, including the Sunrise Movement.[[7]](#endnote-7) At 15-years-old Greta Thunberg, in October 2018, at first alone, engaged in a school strike climate protest. As her protest became an example, thousands of middle school and high school students joined her.[[8]](#endnote-8) In March 2019, in 2000 cities worldwide, 1.4 million young people (including some of the future English teachers in my class) inspired by Greta Thunberg undertook a global school strike to demand that governments act on climate change, apparently the largest strike in world history. Thunberg and other student leaders continue to strike regularly and call for adults to join the next global strike for the climate on September 20, 2019.

In a class conversation inspired by *The Grapes of Wrath* and our other reading about climate refugees, my student Nichole pointed out that rather than pulling the world apart, the climate crisis is presenting an opportunity: for all human beings to come together to protect our common home. English students at all levels can and should join in the activism necessary to protect their future. As Mother Jones once said, “Don’t mourn. Fight like Hell.”

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1. This provocative sentence plays on the first sentence of William Wallace-Wells article (2017), “It is, I promise, worse than you think.” and book (2019). [↑](#endnote-ref-1)
2. Specifics about climate crisis impacts at specific average global temperatures above the preindustrial average in this and the following two paragraphs are based on paleoclimatological research reported in Lynas, 2008. [↑](#endnote-ref-2)
3. IPCC reports are conservative as they involve consensus of a large number of scientists and approval by a diversity of political actors. Some scientists argue that we need to reduce to zero emissions in ten years. XR argues for five years. [↑](#endnote-ref-3)
4. Future NCTE Annual Convention sites all have climate crisis connections. The Baltimore Convention Center (NCTE 2019) is on the Inner Harbor waterfront – and Baltimore is currently suing 26 fossil fuel companies because the new waterfront developments are “on the front lines of climate change.” Denver, Colorado (NCTE 2020) has suffered extreme heat waves, water scarcity, wildfires, beetle infestations. Louisville, Kentucky (NCTE 2021) identified as “the fastest warming urban heat island in the United States” is experiencing extreme rainfall, flooding, heat waves, and insect infestations. [↑](#endnote-ref-4)
5. Social studies and all teachers seeking to address climate crisis and social justice can benefit from the rich Rethinking Schools volume *A People’s Curriculum for the Earth* by Bigelow and Swinehart. [↑](#endnote-ref-5)
6. We were delighted to learn that in early 2020 *American Educator*, the magazine of the American Federation of Teachers, will include most of the first chapter and some of the second chapter of our book. The magazine is distributed to 800,000 teachers and educational professionals. [↑](#endnote-ref-6)
7. The direct action of public school students played a key role in the Civil Rights Movement, see Eyes on the Prize documentary, “No Easy Walk.” An excellent resource for us and our students to learn about non-violent direct action is *This is an Uprising*, Engler & Engler. [↑](#endnote-ref-7)
8. Watch Greta Thunberg’s 11 minute Ted Talk here: https://www.ted.com/talks/greta\_thunberg\_the\_disarming\_case\_to\_act\_right\_now\_on\_climate. [↑](#endnote-ref-8)