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Notes on “Teaching Climate Change to Adolescents: Reading, Writing, and Making a Difference” by Richard Beach, Jeff Share, and Allen Webb.

GUIDE: This includes Cli-Fi resources, recommended discussion questions, and a short section on why this education matters. In all cases I’ve drawn from the above book, and so I see my work here as selectively compiling works and questions that are especially pertinent to education on climate change, environmental ethics, and the environmental humanities. I’ve underlined the resources for quick viewing; the non-underlined parts are either discussion questions, short descriptions of the subject material that the reading/video regards, or justification for why this education matters.

Recommended by the authors are 4 thematic ways “to frame and organize climate change teaching: Indigenous and postcolonial perspectives, capitalism and consumerism, environmental literature and ecocritical approaches, and systems impacting climate change.” (33)

1. Indigenous and Postcolonial Perspectives:

“Students can inquire into, research, and discuss questions such as:

* How have European/American colonialism, slave trade, and ongoing imperialism created ‘developed’ and ‘underdeveloped’ areas of the world, and how do these areas differ in terms of responsibility for and suffering from climate change?
* How does the history of colonialism impact contemporary ideas of climate justice, ‘climate debt,’ and the concept of climate change ‘loss and damage’ payments from wealthy countries to poor countries?
* How does racism and its history continue to impact thinking about climate change consequences and solutions?
* How do cultural ideas about the role of humans in nature influence thinking about climate change?
* What can be learned from indigenous cultures about sustainable living?
* What can be learned from previous social movements and how they can impact society and policy, that is, the abolitionist movement, the movement against the rubber trade, anti-colonial struggles, civil-rights movements, indigenous-resource exploitation protests?
* How might we establish a cooperative world order to address climate change rather than one based in competition, domination, inequality, violence, and exploitation?” (34-35)

“80pg novella Morning Girl by Dorris can be paired with first chapter of Howard Zinn’s A People’s History of the United States, paired with picture book Encounter (Yolen).” (35)

“Indigenous works for secondary teachers with environmental themes”:

Way to Rainy Mountain (Momaday), Two Old Women (Wallis), Mean Spirit (Hogan), Brother Eagle, Sister Sky (Jeffers), Things Fall Apart (Achebe), The Bleeding of the Stone (Al-Koni)

European works:

The Tempest, Robinson Crusoe, Heart of Darkness, Lord of the Flies. Carly Lettero’s 2010 “Spray Glue Goes. Maggots Stay” from Moral Ground: Ethical Action for a Planet in Peril (Moore & Nelson)

The goal is to explore through literature “the times when humans place themselves above all else in nature, when we see ourselves as distinct from rather than as inclusive of other species or our environment. If literature can help us recognize the false sense of superiority we have imagined for ourselves, it can also instruct us toward a more empathic social narrative that helps us value ourselves, each other, and our environment more fully.” (36)

1. Capitalism and Consumerism

“The way we understand the history of global warming matters to the ethical questions it raises. All humans are not equally responsible for climate change. Some benefitted and some lost out from colonialism, slavery, the Industrial Revolution, militarism, imperialism, increasing inequality, and the concentration of wealth that have been part of capitalist development.” (38)

“Students can inquire into, research, and discuss questions such as:

* How has capitalism economic development impacted climate change?
* What is the role of government intervention, policy, and law to address climate change?
* How extreme is economic inequality in our world? How does this inequality affect the causes, impacts, and solutions of/for climate change?
* How does advertising function to sell not only products but unsustainable lifestyles?
* How might we evolve our thinking about consumption and consumerism to address sustainability and climate change?
* In what ways is capitalism compatible, or can it become compatible, with democracy, human rights, and sustainability?
* How do corporations and wealthy individuals admit or deny their role in climate change? How do they influence government policy regarding climate change?
* What are corporations doing to address climate change? What else might they do?
* What can we do as students to challenge consumerist values, instant gratification, and social competitiveness and adopt values associated with sustainability?
* How does the way we understand history, the words we use, and the way we describe climate change influence our thinking?” (38)

Can have students write autobiographical essays on “their ethical stances toward sustainability and the environment.” (38)

Readings that address capitalism and inequality:

The Great Gatsby or The Pearl (as starting points). Rebecca Davis’ Life in the Iron Mills (free at [www.gutenberg.org](http://www.gutenberg.org)), shows rise of 1800s capitalism and ecological impacts. Henry Mayhew’s London Labour and the London Poor. Stephen Crane’s New York City Sketches (examines poverty and wealth).

Naomi Klein’s “This Changes Everyting: Capitalism vs. The Climate” showcases the relationship directly. Documentary based on the book: <http://tinyw.in/uQ0T> (22 U.S. educators coalesce in Portland, OR to build a curriculum).

Environmental justice: instructors can explore “sacrifice zones” with students and “pose questions such as, ‘Who lives there? Who doesn’t? What is being sacrificed? Who benefits from the sacrifice?’” (39)

A book on the “impacts of denialism and why climate change is not adequately addressed in the media or public discussion”: Don’t Even Think About It by George Marshall. His book’s website is <http://climateconviction.org> . (40)

“Teenagers are the target of a great deal of advertising and we need to help them think critically about consumerism shaping attitudes toward products and lifestyles that adversely impact the environment.” 20-minute “Story of Stuff” video <http://storyofstuff.org/movies> “describes extraction, production, distribution, consumption, and disposal of goods. They discuss how consumerism is related to climate change.” (40)

Young adult novels questioning consumerism: M.T. Anderson’s “Feed.” Scott Westerfield’s “So Yesterday” and “Pretties” and “Uglies.”

1. Environmental Literature / Ecocritical Teaching

Resource: Assocation for the Study of Literature and the Environment (ASLE)

“To apply ecocriticism perspectives, students can address questions such as:

* How are nature, the natural environment, “wild,” rural, suburban, and/or urban areas portrayed in literature or other texts?
* What is the relationship between humans and nature? Are humans part of nature or separated from it? How? Why?
* Is nature portrayed as static or a dynamic interaction of interdependent ecosystems?
* Is nature “romanticized” in literature? How? Why?
* What in nature is shown to be valuable? Is nature valued for the sake of human use (anthropocentric) or for its own sake (deep ecology)?
* Is civilization/industrialization portrayed as destructive of nature? How? What can be done?
* In the era of climate change and species extinction, what rights do or should other, nonhuman, forms of life have? What rights do humans have to impact or devastate other life forms?
* What are the issues of power, class inequality, gender, or race in the representation of nature?
* How are local natural environments related to larger and global ecosystems and how are they impacted by climate change?
* How can human beings live more sustainably in relationship to the environment and other species?
* How can depictions of nature help us better understand the causes, impacts, and/or dangers of climate change or motivate action to address climate change?” (41-42)

Can apply ecocritical perspectives to pastoral writing by Marlowe, Spenser, Sidney, Milton, Gray, and Pope. Can look at Romanticism and Transcendentalism traditions via poems by Wordsworth, Coleridge, Keats, and Shelley. They depict modernity as breaking sacred connections with the natural world.

Henry David Thoreau’s Walden, or his essays Walking, Life Without Princple, and Civil Disobedience “can all be connected to climate change and taking stands to address it.” (42)

“For activities developed by Allen’s students on teaching contemporary environmental writers such as Aldo Leopold, Edward Abbey, Annie Dillard, Barry Lopez, Gary Snyder, Jon Krakauer, and Bill McKibben visit the website: <http://bit.ly/2btMlxN> .”

Ecofeminist perspectives can be applied to popular short stories like “To Build a Fire, All Summer in a Day, The Most Dangerous Game, The Interlopers, The Open Boat, or Eve’s Diary, or to classic novels with a significant role for nature and strongly gendered characters such as Lord of the Flies, Huckleberry Finn, The Scarlett Letter, Wuthering Heights, even The Hobbit and The Lord of the Rings.” (42)

Two advanced recommendations: Jane Smiley’s Pulitzer Prize “A Thousand Acres: a Novel” that is based on King Lear. Or, Barbara Kingsolver’s Animal Dreams, “which portrays how the mythic narrative of conquering and subduing the American West is associated with a masculine need for control and power while ignoring environmental impacts.” (43)

(4) Systems Impacting Climate Change

Agriculture and Food:

“Cowspiracy” film on animal agriculture is available on netflix or for $5 at <http://cowspiracy.com> . There's a 15 minute version at <http://tinyurl.com/jqsjad8>.

Allen Webb, one of the authors of this book, taught “an introductory lecture course on food (syllabus: [www.AllenWebb.net/engl1100spring2014food.html](http://www.AllenWebb.net/engl1100spring2014food.html)). Students examined fast food and healthy eating, the corporatization of the food system, working in the food industry, food justice, and climate change. They read Dinner With Trimalchio (from a Roman novel about the excesses of the ancient super rich), A Modest Proposal, The Jungle (and visited a meat-packing plant), selections from I, Rigoberta Menchu (about migrant farm workers in Guatemala), And the Earth Did Not Devour Him (about Mexican-American migrant farm workers), and The Hunger Games.

An additional list of Cli-Fi Resources and Materials, by genre

* Note: overlaps may exist with the aforementioned readings, but I’ve included them here as they’re categorized differently – by genre, rather than by theme.

Books already commonly taught that have explicit climate change themes:

Steinbeck’s The Grapes of Wrath, Wordsworth, Hatchet, Walden, Dune, Lord of the Flies, Frankenstein, Macbeth, The Tempest, Candide (54)

Picture books:

Global deforestation crisis: The Lorax, Lynne Cherry’s The Great Kapok Tree and A River Ran Wild (history of a river transformed by different groups of humans, Indigenous to industrialists).

Allsburg’s Just A Dream (future of environmental catastrophes). Brother Eagle, Sister Sky (beautiful paintings and Chief Seattle’s 1850s speech on indigenous perspective about human-nature relations). Jeanette Winter’s Wangari’s Trees of Peace. Kleiner’s Please Don’t Paint Our Planet Pink (if CO2 were visibly pink).

Poetry:

Hirshfield’s “Global Warming,” Ward’s “Hurry Up Please It’s Time,” Rae’s “One World Down the Drain,” and Haas’ “The State of the Planet.” Gary Snyder’s “Mid-August Sourdough Mountain Lookout.” Wordsworth’s “The World is Too Much With Us.”

Poets of color: Keith Kool (Dr. Octopus) and his poem Trees. Richard Williams (Prince Ea) and his slam poems Dear Future Generations: Sorry and Man vs Earth (available at <http://tinyurl.com/oruj7ob> and <http://tinyurl.com/za3c2og>).

Nick Drake’s poetry collection The Farewell Glacier (gives nonhuman organisms and elements a voice and the idea of ice shelves / glaciers as an “enormous library of all the winters that have ever happened on the planet”) Poem “I Am a Long Story” is recommended.

Cli-Fi Short Story Anthologies, and Short Stories:

I’m With the Bears anthology, Winds of Change anthology, and Everything Change: An Anthology of Climate Fiction. The collection “Drowned Worlds: Tales from the Anthropocene and Beyond” has stories about consequences of sea-level rise.

“Under the Weather: Stories about Climate Change” is for upper elementary and middle-school students and “focuses on stories of young people who are making a difference in their communities.” (59)

The Grandchild Paradox explores anger from younger to older generations. “Into the Storm” is about a coup attempt in Canada after upset that the Canadian government did nothing to stop climate change. “LOSD and Fount” is a story “told from the point of view of an artificially intelligent robot about the last man on an island shrinking due to rising sea levels.” (available free at <http://climateimagination.asu.edu/everything-change>)

Ghost Birds, by Russell. Spider the Artist, by Okorafor. Covehithe, by Miéville

Cli-Fi Film:

The Day After Tomorrow (Emmerich). James Hansen explaining his paper “Ice Melt, Sea Level Rise, and Superstorms” in lay terms at <http://tinyurl.com/h5ae22b> . … “Chloe and Theo” (Sands). “Age of Stupid” (Armstrong) shows perspective “of one of the last humans alive in the year 2055” (60).

Interstellar (Nolan). Odyssey 2050 (Bermejo). Snowpiercer (Bong). Take Shelter (Nichols). “Resources to support English teachers using the films discussed above are available at: [http://ourplaceinnature.wikispaces.com/Cli-Fi+Film](http://ourplaceinnature.wikispaces.com/Cli-Fi%2BFilm) . For a list of movies from 2004-2017: <http://tinyw.in/dRsR> . For films organized by topics: <http://tinyw.in/igy3> . More titles can be found on this book’s website: <http://tinyurl.com/glflxg2> .” (60)

Young adult cli-fi literature:

The Hunger Games (Collins), The Uglies (Westerfield), “The Carbon Diaries, 2015” (Lloyd), Love in the Time of Global Warming (Block), Exodus (Bertagna), Ship Breaker (Bacigalupi), Nature’s Confession (Morin), and White Horse Trick (Thompson).

Special focus on drought and freshwater scarcity: Memory of Water (Itaranta), Water Wars (Stratcher), Birthmarked (O’Brian).

Cli-Fi Novels:

Odds Against Tomorrow (Rich), The Rapture (Jensen), Robinson’s “The Capital Trilogy: Forty Signs of Rain, Fifty Degrees Below, and Sixty Days and Counting”. Atwood’s MaddAddam trilogy, Kingsolver’s Flight Behavior, Bacigalupi’s The Water Knife, The Admiral (Gilbert), Arctic Drift (Cussler), Arctic Rising (Bucknell), Polar City Red (Laughter), The Sea and the Summer (Turner), Ultimatum (Glass). (63)

A “short dystopian work, as much essay as novel, The Collapse of Western Civilization: A view from the Future” (Oreskey & Conway) (63).

The Word for World is Forest – Ursula Le Guin. Samuel Alexander – Entropia: Life Beyond Industrial Civilization. In Spite of Darkness – Alixa Garcia, Octavia’s Brood. Undrowned by Gumbs. The Deep by Rivers Solomon

50 Simple Things You Can Do to Stay in Denial: A Graphic Novel – Derrick Jensen, Stephanie McMillan. Stories for Kids Who Want to Save the World – Benedetto and Ciliento

A list of other recommended cli-fi novels: <http://tinyw.in/zvbD>

Testimonials:

“George Marshall (2015) interviewed survivors of the 2011 Bastrop fire in Texas and 2012 Hurricane Sandy in New Jersey.” (63)

“Testimony of Yeb Sano, Filipino representative at the 2013 UN climate talks speaking while Typhoon Haiyan was ravaging his hometown” -- full 17 min speech: [IISD VIDEO: Philippines delegate Naderev Saño COP19 Warsaw](https://vimeo.com/79117298) , 7 min version: <http://tinyurl.com/hnol24x> , written version: <http://tinyurl.com/jp4n3ls> .

Graphic novel Zeitoun (Eggers), Right to be Cold (Watt-Cloutier), The Big Swim (Saxifrage). When Glaciers Slept: Being Human in a Time of Climate Change (Jackson).

Additional resources, activities, and readings: <http://tinyw.in/YjZG>

“Literature and the Cli-Fi Imagination”

Why teach Cli-Fi?

“Scientists are typically very careful about making specific predictions about future events, and, both by attitude and training, they rarely speculate on how changes in the natural environment will impact human societies.. This is where fiction writers, knowledgeable about climate research, make an enormous contribution.” (51)

“Cli-fi literature fosters imagination about future climate change effects that might, one day, actually take place and/or it shows us future worlds that help us better understand our own. Climate fiction foregrounds the impacts of climate change on individuals and societies in ways that are meaningful to readers.” (51-52)

Cli-fi allows students “to identify with characters and imaginatively place themselve sinto a world different from their own, a world where the consequences of climate change could be experienced in the present.” (52) “If and when students discover, by their own investigation, that seemingly fictional events are, in fact, based on probable scientific knowledge, then they are more likely to take seriously acting soon to avoid a projected dystopic future (Beach, 2015).” (52)

“As you are teaching cli-fi now and in the future, there are and will be, disturbing global warming occurrences taking places. Alas, you can count on changing weather patterns, increasing heat, droughts, fires, extreme storms and rain, floods, melting ice, rising sea levels, species extinction, human migration, national and international political debate and conflict, and an increasing sense of crisis taking place while you are teaching. In this sense, cli-fi literature is relevant right now. Students can bring in information about current events in the world and talk about them in the context of the cli-fi they are reading in their ELA classes.” (52)

Cli-fi “lets students imagine characters’ underlying, conflicted values and ethical perspectives.” (52)

“Cli-fi emphasizes the dangerous consequences of ignorance, denial, and inaction. Cli-fi clarifies that something needs to be done now, in the present, to forestall what might happen in the future. It typically shows characters engaging in future adaptation and mitigation efforts, thus providing examples, models, and a sense of urgency for how society can address climate change (Whiteley, Chiang, & Einsiedel, 2016).” (53)

“Cli-fi creates opportunities for important discussion about questions such as: What is the role of government in addressing climate change? What cultural or social habits do we now need to stop/control to preserve the planet? What can individuals or groups do to bring about a different future from that portrayed in climate fiction?” (53)

“The cli-fi author, Kim Stanley Robinson (2015) describes the value of cli-fi literature in changing perspectives:

Reading fiction is a very powerful experience. So I believe that if it’s done right it can change one’s view. You come back to reality and you have a kind of double vision. You have your normal daily vision and then you have your science-fiction vision, the future, interposed on it or behind it, so you get a kind of 3D in time. And it helps you to make decisions about what do I do today to help the situation for my grandchildren.” (53)

References

Beach, R., Share, J., & Webb, A. (2017). Teaching climate change to adolescents: Reading, writing, and making a difference. Routledge.