Journeying from climate denial to justice:
An interdisciplinary approach

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Early teaching

- Elem/Middle School teacher (1992-1998)
  - Environmental issues vs Social Justice

**Then and Now: Time for Ecojustice Literacies**

James S. Damico

Climate change intersects with deeply rooted systemic injustices. The idea of teaching ecojustice literacies is a key way forward.

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**Then and Now: Time for Ecojustice Literacies**

I am a former elementary and middle school teacher who taught in the 1990s with a commitment to the environment. Students and I explored the effects of environmental devastation in books like Dr. Seuss's *The Lorax* and rainforest preservation and river pollution and restoration in books like Lynne Cherry’s *The Great Kapok Tree* and *A River Runs Wild*. Students in my classroom wrote poetry and short stories about nature and the preservation of animal habitats, studied local conservation issues, wrote letters to political leaders, and led school recycling efforts.

I more clearly see how I carried out my commitments to teach about the environment and to teach about social justice separately.

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Historians like Howard Zinn, including his influential book, *A People’s History of the United States*. Today, from the distance of a few decades, I more clearly see how I carried out my commitments to teach about the environment and to teach about social justice separately, approaching each as having distinct learning goals. (Looking back, I can also identify missed opportunities to do a better job in each of these areas.)

In many ways, my approach, which separated environmental concerns from social justice issues, mirrored what was happening in the United States. The environmental movement in the 1960s and 1970 was a time of widespread public support and significant legislative gains to address air and water pollution and pesticide use and to protect endangered species. For the next few decades and into the twenty-first century, this movement, which was led by predominately white, well-resourced groups like...
Content Literacy Courses

• Professor, Teacher Educator (2004-present)
  • Complex problems (globalization, health care, 9/11)
  • 2008 teaching climate change across content areas
  • Scholarship in preservice teacher ed
    • evaluate website reliability
    • dialogue across climate beliefs
    • ways to read a climate denial text
    • teaching in “post-truth” era and “age of limits”
    • my journey toward “ecojustice literacies"
Interdisciplinary Instructional Approaches

Determine reliability: Are these information sources trustworthy?

Examine climate denial: What techniques are being used?

Explore questions: What inquiry pathways can we pursue?
Interdisciplinary Instructional Approaches

Determine reliability: Are these information sources trustworthy?

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Instructional model: **Civic Media Literacy**

**Select diverse digital information sources**

- Type, purpose, complexity, claims
The Intergovernmental Panel on Climate Change (IPCC) is the United Nations body for assessing the science related to climate change.

Prominent climate change denier now admits he was wrong

Richard Muller, who directed a Koch-funded climate change project, has acknowledged a "fatal flaw" in his study on global warming, which he now admits is caused by human activity.
Instructional model: **Civic Media Literacy**

Select diverse digital information sources
- Type, purpose, complexity, claims

**Make thinking visible** (independent work*)
- Reliability spectrum: *Highly reliable, Somewhat reliable, Somewhat unreliable, Unreliable*

**Traverse sources multiple times**
- T1 (Screenshot)  T2 (live website & prompts)  T3 (whole class deliberation)

* Independence is a pre-requisite for wisdom of crowds.*
Instructional model: Civic Media Literacy

Select diverse digital information sources
Type, purpose, complexity, claims

Make thinking visible (independent work*)
Reliability spectrum: Highly reliable, Somewhat reliable, Somewhat unreliable, Unreliable

Traverse sources multiple times
T1 (Screenshot)  T2 (live website & prompts)  T3 (class deliberation)

Deliberate reliability merits of sources
4 corners, Take A Stand
Primary questions

What are the students’ reasons for their reliability evaluations at T1 and for modifying or maintaining their evaluations at T2?

What impact did the whole-group discussion have on students’ final evaluations at T3?
Daniel: Looking at the Heartland Institute and other organizations they fund... they are typically very conservative maybe even leaning towards Christian conservative values. Not necessarily perhaps, but to me trying to say that that [IPCC] is political and the other [NIPCC] isn’t just categorically false because yeh, you have certain interests within the UN that might speak louder than others but they [NIPCC] call themselves a conservative institute so putting money towards that is saying something significant.
Another example
When determining if a climate change source is reliable, we need the “other side” represented, want more information or evidence to support an argument, and reason through one’s own identity and perspectives.
Interdisciplinary Instructional Approaches

Determine reliability: Are these information sources trustworthy?

Examine climate denial: What techniques are being used?

Explore questions: What inquiry pathways can we pursue?
Start with science: Where are we now?
97 out of 100 climate experts agree humans are causing global warming

Doran et al 2009, Anderegg et al 2010

http://sks.to/consensus
97% OF ENGINEERS AGREE THE BRIDGE AHEAD WILL COLLAPSE. 3% SAY NOT TO WORRY.

WOULD YOU KEEP DRIVING?

WE LISTEN TO EXPERTS. SO WHEN 97% OF CLIMATE SCIENTISTS AGREE MAN-MADE CLIMATE CHANGE IS REAL,

IT'S TIME TO LISTEN.
Climate Change Is Not Negotiable

July 23, 2022

Illustration by Rebecca Chiew/The New York Times; photograph by Tara Moore, via Getty Images
Where are we now? 10 words

It’s warming.
It’s us.
We’re sure.
It’s bad.
We can fix it.

Kimberly Nicholas (2021). Under the sky we make: How to be human in a warming world.

Climate communication: Simple, clear messages, repeated often, by a variety of trusted sources.
How did we get here?

Industry-led climate denial
Industry-led climate denial

- Fossil Fuel
- Public relations
- Media corporations
- Insurance
- Law firms
- Banking/Finance
- Agricultural industry
Interdisciplinary Instructional Approaches

Determine reliability: Are these information sources trustworthy?

Examine climate denial: What techniques are being used?

Explore questions: What inquiry pathways can we pursue?
Climate denial inquiry model
Climate denial texts
- Climate science denial
- Climate action denial

Stories-we-live-by
- Destructive
- Ambivalent

→ Beneficial stories-to-live-by
Climate denial texts

- Climate science denial
- Climate action denial

Stories-we-live-by

- Destructive
- Ambivalent

Climate Denial Inquiry Model
How can we confront climate denial? Critical literacy+, eco-civic practices, and inquiry

James Damico, Mark Baildon, Alexandra Panos

First published: 23 January 2023 | https://doi.org/10.1002/jaal.1276

Abstract

While scientific consensus about human-caused climate change has been clear for decades, denial of this science and denial about the need for timely, responsive action continue in the United States and around the world. The *Climate Denial Inquiry Model* can help educators grapple with the complex components of this denial with critical literacy+ and eco-civic practices of deliberation, reflexivity, and counter-narration to help investigate climate denial texts, stories, contexts, and philosophies. This charts a pathway toward ecojustice-centered stories-To-live by.
Example #1
June 20, 2018

Overview

What does the left get wrong about climate change?
Marc Morano, author of "The Politically Incorrect Guide to Climate Change" debunks the left's myths on climate change.

See how the average temperature in your area is changing.
Explore Climate Science Info

Why Climate Change Is Fake News

Like Reply 3y
1 Reply

View more comments
2 of 4,685
Identify climate denial in text

- Climate *science* denial
If science denial $\Rightarrow$ Critical literacy$^+$ questions

What science denial techniques are used in this text? (FLICC)

- fake experts
- logical fallacies
- impossible expectations
- cherry picking
- conspiracy theories (Cook, 2020)
The fallacies of science denial

- Fake Experts
- Logical Fallacies
- Impossible Expectations
- Cherry Picking
- Conspiracy Theories

- Fake Debate
- Magnified Minority
- Lowered Expectations
- Moving the Goalposts
- Quote Mining
- Slothful Induction

- Red Herring
- Misrepresentation
- Jumping to Conclusions
- Slippery Slope
- Ad Hominem
- Oversimplification

- Blowfish
- False Dichotomy

Cranky Uncle
vs.
Climate Change
How to Understand and Respond to Climate Science Deniers
Dr. John Cook
Founder of SkepticalScience.com
**Fake experts**: Richard Tol as “one of the world’s top United Nations’ scientists.” Tol is an economist, not a scientist and not a climate scientist.

**Logical fallacies**: oversimplification and misrepresentation: climate scientists have been arguing that “CO2 alone controls the climate.”

**Cherry picking**: “We find out that there are not even 97 scientists. One of the surveys was only 77 scientists, and they were anonymous scientists.” Ignores more comprehensive and extensive findings about climate science consensus (Cook et al., 2013; Myers et al., 2021).

**Conspiracy theory**: impugn the credibility of climate scientists and suggest that Democrats use climate science to make “political statements” and perpetuate climate change “myths,” “designed so you don’t have to think” point to explanations that climate science is a “hoax” perpetrated by groups to advance their own interests.
Example #2
Climate change refers to long-term shifts in temperatures and weather patterns, mainly caused by human activities, especially the burning of fossil fuels.

Nature-based solutions and Shell | New Energies
Identify climate denial in text

• Climate action denial
If climate action denial $\rightarrow$ Critical literacy$^+$ questions

**What discourses of delay operate in this text?** (Lamb et al, 2020)
- redirecting responsibility
- pushing non-transformative solutions
- surrendering to the problem
- emphasizing the downsides

**What denial frames are evident?**
- technological optimism
- technological shell-game
- fossil fuel solutionism
- individualized responsibility
- climate risk
- greenwashing
- energy poverty (Supran & Oreskes, 2021)
Discourses of delay

pushing non-transformative solutions, focus on existing and new technologies, voluntary not restrictive measures
surrendering to the problem, not possible to mitigate climate change because changing current ways of life is impossible and we should accept our fate which is in nature’s or God’s hands
redirecting responsibility, individuals ultimately responsible, reducing emissions weakens us, benefits others
emphasizing the downsides, making substantial changes will be disruptive; abandoning fossil fuels will prevent access to modern livelihoods for the global poor or will burden our society with large costs (Lamb et al., 2020)

Frame analysis (Fossil fuel savior frame)

technological optimism, future technological breakthroughs will save us from climate change
technological shell-game “strategic ambiguity” about current or potential technologies, such as “clean coal”
fossil fuel solutionism, fossil fuels and the fossil fuel industry offer main solutions to climate change
individualized responsibility emphasizes individual rather than corporate or government responsibility
climate risk presents climate change as a potential “risk” rather than a reality
greenwashing is a corporate public relations strategy to portray an ecologically responsible image
energy poverty will result if alternative energy sources are used (Supran & Oreskes, 2021).
Where can I locate climate denial texts?
Whodunnit?

The Lie-brary

Evidence shows that Big Oil & Gas knew as early as the 1960s that their products would lead to climate change, and that it could have disastrous impacts worldwide.

This collection of internal company documents has been compiled thanks to the efforts of dedicated independent researchers, and academics.

If you have documents or other information that will contribute to the story of the fossil fuel deception, please reach out.

Download The Full Collection Here

Climate Disinformation Database

In DeSmog’s Climate Disinformation Database, you can browse our extensive research on the individuals and organizations that have helped to delay and distract the public and our elected leaders from taking needed action to reduce greenhouse gas pollution and fight global warming.

Have a suggestion on an individual/organization you would like to see researched? Contact Us

PROJECT TOXICDOCS

Columbia University and the City University of New York

Millions of Pages of Previously Classified Documents on Industrial Poisons (and Counting)

Free of Charge. Open to All

Type anything here

Quick Start (5 minutes)
Ongoing climate denial

US oil and gas industry the world’s ‘most important environmental movement,’ energy exec says

American Petroleum Institute calls for more support in White House as gas prices hit new record highs for Memorial Day weekend

Nature-based solutions... well

I reject global warming hysteria. But if those who believe in it were serious, they would promote safe and reliable nuclear energy, instead of destroying our oil & gas industries and subsidizing unreliable and bird-killing wind and solar.

https://www.peoplespartyofcanada.ca/how

torontosun.com

AGA: A climate solution for Canada? Go nuclear even more

4:13 PM · Nov 9, 2021 · Twitter for iPhone

319 Retweets 33 Quote Tweets 1,350 Likes

Aramco Americas Retweeted

@Saudi_Aramco · Aug 26, 2019

#ClimateChange is a challenge that the #energy industry faces. Learn how we are overcoming such challenge

ow.ly/PWpNdVbADi

Coal keeps lights on at COP26 as low wind strikes again

The U.K.’s falling renewable strategy is a national embarrassment. Critically low wind power, far more than the media is willing to admit, contributed to extremely high prices, with the two remaining coal units at Drax offering to saving the day at £435/MWh, nearly 10 times the wholesale price normal.
Other tactics

Hyprocrisy and elitism
Absolutionism
Unreliability of renewables
Ineffective electric vehicles

Consistent climate denial theme:

*no need for regulations!*

“… ever-more enmeshed in broader identity and grievance politics” (p. 7)
Climate science denial still alive!

97% Consensus on Climate Change? Survey Shows Only 59% of Scientists Expect Significant Harm

By James Taylor, H. Sterling Burnett, Anthony Watts, Linneea Lueken
Published November 8, 2022
Interdisciplinary Instructional Approaches

- Determine reliability: Are these information sources trustworthy?
- Examine climate denial: What techniques are being used?
- Explore questions: What inquiry pathways can we pursue?
Inquiry pathways to investigate climate denial

- economic
- political
- historical-cultural
- socio-psychological
- geographic
- media
Contexts of climate denial

**economic**, industrial extractive capitalism

**political**, partisan gridlock, undue influence of corporate lobbyists

**cultural-historical**, legacies of colonialism, dominant stories or myths

**socio-psychological**, motivated reasoning, desire to be part of tribe

**geographic**, diverse climate impacts around the world

**media**, blurs lines between fact and opinion, real and fake news, etc.
Denial contexts

- economic
- political
- historical-cultural
- socio-psychological
- geographic
- media
Inquiry pathways: Economics

• Can an economic system of capitalism adequately address climate change?
• To what extent are regulatory measures necessary to address climate change?
• Is neoliberalism (as an economic and political project) irreconcilable with successfully addressing climate change?
• Can we have prosperity without growth?
• How do Indigenous economic models help address climate change?
Inquiry pathways: Politics & Civics

- What has been the role of government in promoting climate denial?
- How do stories of freedom support or combat climate denial?
- Why are climate change and denial politically divisive issues?
- What best explains the range of climate change beliefs in the United States despite the overwhelming scientific evidence and consensus about the existence and causes of human-caused climate change?
- Is the U.S. Government more committed to promoting private (corporate) interests or the public good?
Inquiry pathways: History

• What are the historical contexts of climate change and climate denial?
• Was the climate crisis avoidable?
• What historical narratives (or cultural assumptions) are central to understanding climate denial?
• In what ways have religious or faith traditions and communities contributed to and/or resisted global warming?
• How do mechanisms of climate change denial work?
• How is climate change and climate denial affecting society?
• How is climate denial and inaction affecting well-being?
• What language might be most useful to help people navigate the psychological and emotional landscape of climate change?
Inquiry pathways: Media

• What role has the media played in spreading climate denial?
• In what ways should social media be regulated to ensure climate misinformation and climate denial aren’t spread?
• Should media companies accept fossil fuel advertising dollars?
• In what ways can we enact “ecomedia literacy”? (Lopez, 2021)
Inquiry pathways: Geography

• What are the impacts of climate change on vulnerable populations in different parts of the world?

• Where is climate denial a significant problem and why?

• How does the Global North-South divide inform explanations of climate change and denial?

• How is climate change denial part of my life, family, community?
New Jersey joins states suing fossil fuel companies over climate change damage

OCTOBER 15, 2022 / 11:07 AM / CBS/AP

Puerto Rican Cities Sue Fossil Fuel Companies in Major Class-Action, Climate Fraud Case

Municipalities aim to hold industry liable for damages from catastrophic 2017 hurricanes.

By Dana Drugmand on Oct 3, 2022 @ 15:25 PST
6 min read

The Dirty Truth About Utility Climate Pledges

Can Nations Be Sued for Weak Climate Action? We’ll Soon Get an Answer.

Vanuatu, a disaster-prone Pacific country, has secured United Nations approval to take that question to the International Court of Justice.

The New York Times

In Montana, It’s Youth vs. the State in a Landmark Climate Case

Sixteen young Montanans have sued their state, arguing that its support of fossil fuels violates the state Constitution.

The New York Times

The fossil fuel industry’s invisible colonization of academia

Corporate capture of academic research by the fossil fuel industry is an elephant in the room and a threat to tackling climate change.
Inquiry pathways: Arts
Contexts of climate denial →

**Contexts for climate justice**

- **economic**, industrial extractive capitalism
- **political**, partisan gridlock, undue influence of corporate lobbyists
- **cultural-historical**, legacies of colonialism, dominant stories or myths
- **socio-psychological**, motivated reasoning, desire to be part of tribe
- **geographic**, diverse climate impacts around the world
- **media**, blurs lines between fact and opinion, real and fake news, etc.
EnvironmeNTal Justice is our Celebration of defiance against the onslaught of oppressive toxins and toxic oppressions that threaten to submerge our homes.

Climate Justice = Racial Justice

Climate Justice Alliance
Communities United for a Just Transition

Justice on Climate, Race & Immigration.
THIS IS AN EMERGENCY.

Life on Earth is in crisis. Our climate is changing faster than scientists predicted and the stakes are high. Biodiversity loss. Crop failure. Social and ecological collapse. Mass extinction. We are running out of time, and our governments have failed to act. Extinction Rebellion was formed to fix this.

WE HAVE A MORAL DUTY TO TAKE ACTION — WHATEVER OUR POLITICS.

An Indigenous peoples’ approach to climate justice

by Daseke Mmolong (KwaZulu Natal) and Kuda Geete (Zimbabwe)
Youth at UNFCCC Conferences.

Youth climate leaders at COP26 turn ideas into action

15 November 2021

Young climate activists joined world leaders, negotiators and senior figures to demand immediate action to limit planetary warming to Celsius and secure their future.

Environmental Education:
Climate Justice Projects Combine Science and Citizenship
Schools and districts can help students make connections between course content, environmental issues, and public policy.

By Suzie Boss
April 10, 2021
Give up your climate guilt. Sharpen your curiosity.

Join Dr. Leah Stokes and Dr. Katharine Wilkinson as they tell stories about the powerful forces behind climate change — and the tools we have to fix it. Subscribe wherever you get podcasts.

Apple podcasts • Spotify podcasts • Google podcasts • Stitcher

“Fascinating.”
— The New Yorker

“The best, most important podcast out there right now.”
— The Guardian

“Superb work.”
— Bill McKibben
Climate Action Against Disinformation

A global coalition of over 50 leading climate and anti-disinformation organisations

Learn more
Welcome to the Existential Toolkit - A Growing Hub of Resources for Climate Justice Educators

An Exisitential Toolkit for Climate Justice Educators

Who is most vulnerable

Third edition. December 2021

In recent years, international scrutiny of climate change is increasing. Yet, it is not sufficient to address the urgency of the issue. It must be addressed at the scale of the system. It is not enough to focus on the impact of climate change on polar bears. Yet, we must also consider the impact of climate change on humanity. The impact of climate change on humanity is not just a matter of survival. It is a matter of justice. It is a matter of human rights. It is a matter of the future of our planet.

How to Change Everything: The Young Human's Guide to Protecting the Planet and Each Other


Young leaders are showing the world that this moment of increasing danger climate change is also a moment of great opportunity — an opportunity to change everything for the better.

No Planet B: A Teen Vogue Guide to the Climate Crisis


A small volume made up of short student-friendly readings that offer lots of teaching possibilities.
We need to confront all forms of climate denial to advance ecological justice or ecojustice.

A website for teachers, administrators, college & university educators, and

https://www.denialtojustice.com/
Interdisciplinary Instructional Approaches

Determine reliability: Are these information sources trustworthy?

Examine climate denial: What techniques are being used?

Explore questions: What inquiry pathways can we pursue?
What about *stories-we-live by*?
Stories-we-live-by: **Destructive**, **Ambivalent**, or **Beneficial**

- humans are center of existence, separate from nature,
- primary goal of a society is perpetual economic growth without limits,
- consumerism is primary pathway to fulfillment,
- nature is solely a resource to be used for human purposes

- *all life is treated with respect, care, responsibility, especially for most vulnerable populations, species;*
- *primary goal of society is human, ecological, and planetary well-being with recognition of limits;*
- *civic engagement for common good is necessary for more just and meaningful lives and futures* (Damico & Baildon, 2022).
What type of crisis is this? A religious community’s response to the 2018 Camp Fire catastrophe

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Ambivalent stories-to-live-by

(a) we are in this together;

(b) together we will make it through; and

(c) confronting challenges can help us become stronger community, hope, blessing & solidarity
Questions to guide action

What destructive stories are we (am I) living by?
What ambivalent stories are we (am I) living by?

How do we (I) transition from destructive stories to beneficial stories-to-live-by?

How do we (I) transition from ambivalent stories to beneficial stories-to-live-by?
Thank you!