

What is Climate Literacy?

Warming Stripes by Professor Ed Hawkins (University of Reading), <https://showyourstripes.info/>

What Is The Issue?

Climate literacy is critical to understanding the complex interaction of human social, economic, historical, and political systems with the biogeochemical systems upon which we depend—and to [envison and work towards just solutions](#). As we design learning experiences relevant to our shifting global climate, we must consider what knowledge needs to be centered. The eight essential principles defined in the third edition of the consensus-based [U.S. Climate Literacy Guide](#) ([video overview](#)) for educators, communicators, and decision-makers frame the climate literacy goals for [life-long, life-wide, and life-deep learning](#) for people of all ages.

WHY IT MATTERS TO YOU

- **All People** need to be prepared for climate change, which means understanding “how the climate system works, how human actions influence climate, and how climate influences people and other parts of the Earth system. Climate literacy is important because people who understand the processes, causes, and effects of climate change are better able to assess evidence and claims about evidence, discuss options to manage risks, and take well-informed actions” ([Climate Literacy Guide, p. 2](#)).
- **All Educators** should teach to promote climate literacy and [just climate action](#).

Things To Consider

- The 2024 guide [Climate Literacy: Essential Principles for Understanding and Addressing Climate Change](#) is the first major rewrite of the 2009 edition. The guide recognizes that climate literacy is an interdisciplinary endeavor and therefore climate learning opportunities need to draw from all eight essential principles of climate literacy—instead of teaching them in isolation from each other.
- Additionally, the guide names climate literacy as a lever for fostering needed societal changes in how we live in the world and actions we can take to mitigate or adapt to climate change. We need to focus on both individual and collective learning to meet these goals.

Recommended Actions You Can Take

Read the [Climate Literacy \(CL\) Guide](#) for details on eight essential principles:

- 1) **How We Know:** Scientists understand the [climate system through interdisciplinary observations](#) and modeling (pp. 10-12). [Climate research is coproduced](#) from [natural \(e.g., ice cores\)](#) and [community records](#).
- 2) **Climate Change:** Greenhouse gases shape Earth's climate (pp. 13-14) (e.g., [greenhouse effect](#), [greenhouse gasses from human activities & their impacts](#), [carbon reservoirs and atmospheric modifications](#)).
- 3) **Causes:** [Burning fossil fuels and other human activities](#) are causing the planet to warm (pp. 15-17) (e.g., [industrial](#) and [land-use activities](#), [inequitable resource distribution](#), [emissions trends](#), [fuel production](#)).
- 4) **Impacts:** Rapid warming and other large-scale climate changes threaten [human](#) and ecological systems (pp. 18-21) (e.g., [sea level rise](#), [carbon dioxide concentration](#), [vulnerable social systems](#), [more extreme events](#)).
- 5) **Equity:** Climate justice is possible if [climate actions](#) are equitable (pp. 22-24). A [Just Transition](#) will disrupt [oppression](#) and [unequal distribution of resources](#) that caused climate change. See GIS maps: [EJScreen](#) & [CEJ](#).
- 6) **Adaptation:** Humans can adapt social, built, and natural environments to better withstand the impacts of climate change (pp. 25-26) (e.g., [preserve lives & cultures](#), [green tech](#), [regeneration](#), [social system shifts](#)).
- 7) **Mitigation:** Reducing emissions of greenhouse gases from human activities to net zero by 2050 can help limit global warming and climate change impacts (pp. 27-28) (e.g., [drawdown](#), [treaty](#), [education](#), [framing](#)).
- 8) **Hope and Urgency:** A livable and sustainable future for all is possible with rapid, just, and transformational climate action (pp. 29-30). Take [collective action now](#), [learn about climate emotions](#), and [actively hope!](#)

Read [CL Guide](#) glossary (pp. 31-37) & [how to communicate about climate](#).

Use a [climate justice framework](#) to design learning experiences.

Consider how [climate justice](#) and [mental health issues](#) are interrelated.

Explore ed resources for [climate literacy](#) and [global sustainability goals](#).

REFLECTION QUESTION

- Which principles of climate literacy are you most comfortable designing for—and which are challenging? Why?
- How will you need to [frame climate literacy in your local context](#) to expand learning opportunities and to [foster collaboration with colleagues](#)?
- What organizations, networks, or governmental groups are involved in climate literacy work that you could leverage?
- What [local ecological and social issues](#) are there in your context that allow you to connect to climate learning experiences?

Attending to Equity

- CL Guide now includes key concepts of equity, climate justice, emotions, and action. A key addition was the intentional interweaving of Indigenous Knowledges, ways of knowing, historical observations, experiences, and leadership across essential principles.
- [Climate impacts are not felt equally by all peoples and communities. Climate change is also an amplifier for existing and historical environmental injustices.](#)
- The disproportionate impacts of climate change will only worsen if climate education does not become more holistic and evenly distributed. ([OECD, pp. 9-13](#)).
- Use the [2024 CL Guide](#) as it aligns with the [IPCC's 6th Report](#) on issues of equity.

ALSO SEE STEM TEACHING TOOLS:

- #12 [Teaching Climate Science](#)
- #78 [Politics of Climate Teaching](#)
- #84 [Let's Talk Climate!](#)
- #97 [Climate Justice Learning](#)

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