Climate Justice for Inclusive STEM Research and Communication Module
Instructor Guide

Introduction

The introduction of the module is designed to show why climate justice is relevant in STEM. You might not use this entire module, but it is an excellent place to get ideas for using climate justice as a framework for research, dissemination, careers, and inclusive practices in STEM. This module includes 5 case studies. The overarching goals of this module is to introduce students to the concept of inclusivity in STEM and how it relates to climate and environmental justice.

Objectives

1. Understand the significance of the relationship between climate justice and STEM
2. Discuss STEM case studies centered around climate justice
3. Examine the different ways climate justice is related to specific STEM fields
4. Explore current efforts bridging the gap between CJ and STEM

Preparation for teaching

1. Situating the Scientist: Creating Inclusive Science Communication Through Equity Framing and Environmental Justice (Polk & Diver, 2020)
2. The Cloud Is Material: On the Environmental Impacts of Computation and Data Storage
3. Metals in the drinking water of First Nations across Canada
4. An energy justice based approach for electrification planning - An agent-based model
5. The climate is changing. Engineering education needs to change as well
6. Why we need data science in the fight for climate justice

In-class activities to expect

1. Small group/partner discussions and sharing

Suggestions for future learning:

1. Project option:
   a. Create a poster about how students can use climate justice in their life, research, and career
2. Future connections:

CJIT

     a. Reflect on how climate and environmental justice can impact your research and coursework

     b. Reflect on how students can be more inclusive science communicators?

Suggested readings:
1. [Climate justice existential toolkit](#)
2. [Teaching STEM Through Climate Justice and Civic Engagement](#)
3. [From Empowerment to Response-Ability: Rethinking Socio-Spatial, Environmental Justice, and Nature-Culture Binaries in the Context of STEM Education](#)
4. [Social and Environmental Justice in the Chemistry Classroom](#)
5. [Teaching Sustainability and Environmental Justice in Undergraduate Chemistry Courses](#)
6. [Green chemistry as just chemistry](#)

For more information, see [Teaching Climate Justice Resources](#)

Related modules

[Engineering climate justice](#)

[Climate justice in biology](#)