

Lesson Overview

How many days are needed to teach this lesson?	3 (based on 90-minute block schedule)
Grade Level(s)	High School
Subject(s)	Environmental Science, Biology, ELA, Social Studies
Lesson Summary	Students explore how climate change affects delivery workers, then write persuasive op-eds to raise awareness and advocate for local solutions.
Standards	Current Curriculum Frameworks - Massachusetts Department of Elementary and Secondary Education HS-ESS2-4 HS-ESS3-5 W.9-10.1 W.9-10.4 W.9-10.5 HS.CP.1 HS.CP.2 HS.GV.3 HS.GV.5 HS-LS1-3 HS-LS2-7
Focus Pulitzer Center news story/stories	<p>“The Impact of Extreme Heat on Delivery Workers” by Jazmín Acuña, Romina Cáceres, Josué Congo, Maximiliano Manzoni, and Juliana Quintana</p> <p>“Work at Risk in the Face of Unseasonable Heat” by Jazmín Acuña, Romina Cáceres, Josué Congo, Maximiliano Manzoni, and Juliana Quintana</p>
Content Advisory	This lesson includes references to heat-related illness and labor conditions that may be sensitive for some students.
Notes on Context	Students at Greater Lowell Technical High School (GLTHS) engage in Environmental Science to understand the interrelationships of the natural world and evaluate solutions to human-made and natural environmental problems. In this course, learning emphasizes

	<p>real-world relevance, scientific inquiry, and civic responsibility, with structured routines and accessible supports to ensure all learners can participate meaningfully.</p> <p>This lesson builds on the syllabus goals by connecting climate change impacts to issues of labor rights and community health, using current reporting and data analysis. By integrating writing through the op-ed format, students practice disciplinary literacy while advocating for solutions to environmental challenges. The approach reflects GLTHS's mission of preparing students for both technical careers and civic engagement, ensuring they can apply science knowledge to pressing global and local issues.</p>
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Lesson Plan

Lesson Objective(s) and Essential Question(s)

Objectives:

- Analyze how climate change intensifies extreme heat risks for delivery workers locally and globally.
- Investigate how gig-economy structures contribute to worker vulnerability and inequity.
- Use evidence from journalism, scientific resources, and community observations to craft persuasive op-eds.
- Advocate for climate and labor justice through structured writing and complementary visual or artistic products.

Essential Questions:

- How does climate change affect delivery workers in our community and around the world?
- Why are gig workers especially vulnerable to extreme heat?
- What actions can we take to raise awareness and advocate for change?
- How can writing an op-ed or creating visual art help us communicate ideas and influence others?

Introducing the Lesson

This unit invites students to investigate the intersection of climate change, labor rights, and civic advocacy by examining how extreme heat impacts delivery workers, particularly those in gig-economy roles. Drawing on Pulitzer Center reporting and local community connections, students analyze real-world data, interpret personal narratives, and engage in empathetic dialogue. They then craft persuasive op-eds for authentic audiences, raising awareness and proposing solutions that connect global challenges to local realities. The design emphasizes student voice, equity, and accessibility. Lessons incorporate multiple modalities of instruction and expression, including structured routines, visual supports, scaffolded writing tools, and opportunities for peer feedback. Students engage through graphic organizers, sentence starters, oral discussions, movement-based activities, and collaborative projects, ensuring that diverse learners can process and express ideas in ways that work best for them.

Writing serves as the bridge between science and society. By embedding writing as a central practice, the unit elevates environmental science beyond content mastery into civic reasoning and advocacy. The op-ed format encourages students to connect scientific concepts to systemic issues, empowering them to advocate for change while showcasing their unique perspectives and strengths. Through multimodal differentiation—visual, verbal, kinesthetic, written, and creative artistic options—students build confidence, strengthen disciplinary literacy, deepen their understanding of climate justice, and develop the skills to contribute meaningfully to a more inclusive and resilient future.

Warm-up/Opening

Before beginning the main resource, students engage in structured discussion to activate prior knowledge and preview central ideas. Key concepts such as heat stress, worker safety, and climate impacts are introduced through visuals, sentence starters, and peer dialogue.

Discussion Questions ([Think-Pair-Share](#)):

- “Embedded [Card Sort](#) Activity

These routines encourage students to share personal experiences, organize information into categories, and establish a common foundation for deeper exploration.

Preparing to Engage with the Focus Resource(s)

“[The Impact of Extreme Heat on Delivery Workers](#)” by Jazmín Acuña, Romina Cáceres, Josué Congo, Maximiliano Manzoni, and Maximiliano Manzoni

This story illustrates how climate change intensifies extreme heat events and creates new risks for vulnerable workers. By documenting the experiences of gig delivery drivers in Paraguay, the article connects scientific data on rising temperatures with human stories of health challenges, economic pressures, and systemic inequities.

Before diving into the Pulitzer Center article, students build background knowledge and vocabulary to support comprehension and critical thinking. Key terms such as climate change, gig economy, heat stress, and op-ed are introduced using visuals, sentence starters, and real-world examples.

<ul style="list-style-type: none"> ▶ Climate Change 101 with Bill Nye National Ge... ▶ Beyond sweat: Heat’s danger for outdoor work... 	Urban Heat Island Lab
What Does Op-Ed Mean? - Making Politics Simple Heat Safety Guided Notes Heat Safety Presentation	Gig Economy Worksheet “Working in a gig economy”
Podcast Note Catcher Student Podcast	Climate Change and Its Impact on Communities - Guided Notes Climate Change and the Workforce Understanding Impacts and Solutions

Students will engage with videos, articles, guided notes, graphic organizers, and a podcast to build a multi-layered understanding of climate change and its social, economic, and community impacts. Using structured note-catchers and scaffolds, students will identify key problems, analyze solutions, examine workforce and community vulnerabilities, and make connections between global climate reporting and their local environment. These supports ensure that all students—including those who benefit from visual organization, modeling, and structured routines—can access complex content and synthesize ideas across multiple media sources.

Exploring the Resource(s)

These activities help students engage deeply with the reporting, build empathy, and prepare to draft an informed and persuasive writing piece. Visuals and sentence starters to support students who benefit from structured writing.

[Heat and Safety Pre-Reading Vocab](#) (word bank)

- Assign out based on the number of students in class - When completed becomes Word Wall.

Focus Resources: [Work at Risk in the Face of Unseasonable Heat Article to be Read](#) (graphic organizer)

[Comprehension Questions](#) Discussion Questions (Whole-Class or Small Groups)

- These activities help students process the emotional and systemic dimensions of the reporting, preparing them to write their opinion piece final product (an op-ed) with empathy, clarity, and purpose.

Processing the Resource(s)

Scenario activities and perspective exercises provide opportunities to check comprehension, emphasize individual insights, and reinforce the link between climate data studied in class and worker safety in practice.

[Delivery Person Interview Roleplay Presentation](#)

([Voices for the Heat Student Interview Reporting Sheet – Summer Delivery Conditions](#))

- [interview scripts - food courier \(bike-based\)](#)
- [interview scripts - mail carrier full time](#)
- [interview scripts - local courier \(scooter\)](#)

[Temperature Comparison from article to our location](#)

<ul style="list-style-type: none">• interview scripts - parcel driver van• interview scripts - bicycle messenger urban two years	
Take a Stand: Climate, Work, and Justice Activity	Step-by-Step Pre-Write Voices from the Heat Journal Prompt

Exit tickets prompt learners to summarize causes, effects, and prevention strategies for heat-related illness in one clear statement.

Use [sentence starters](#) and visuals to support participation: [Exit Ticket Presentation \(PDF\)](#)

Performance Task

Writing a Persuasive Op-ed on Climate and Worker Justice

Students synthesize what they've learned about climate change, labor conditions, and civic advocacy by writing a persuasive op-ed. Their op-ed focuses on the impact of extreme heat on delivery workers—locally or globally—and proposes solutions to raise awareness or influence policy. Students use evidence from the Pulitzer Center article, supplemental resources, and community observations to support their claims.

[Voices for the Heat Writing Worksheet](#)

The op-ed format allows students to express their voice, advocate for justice, and apply interdisciplinary skills in a real-world context. Students practice critical reading of journalism and data while developing empathetic reasoning through discussion and reflection. They strengthen structured writing with organizers, sentence starters, and peer feedback, and apply civic engagement by writing for authentic audiences such as the school newspaper, local officials, or community bulletins.

Performance Task Extension: Creative Advocacy Product

Students extend their op-ed argument by creating a complementary creative advocacy product that translates their message into a visual, artistic, or public-facing format. They select one option that reinforces the problem, evidence, and solution presented in their op-ed while communicating to a broader audience.

Students choose one of the following products:

- [Sketch & Solve: Climate Change Comic Challenge](#)
Students illustrate a short comic that depicts the heat-related problem facing workers, who is affected,

and how their proposed solution improves conditions. [Rubric](#)

- [PSA Poster Creation](#)
Students design a public-service announcement poster that raises awareness about worker heat risks and encourages community or policy action aligned with their op-ed. [Rubric](#)
- [Heat Safety and Worker Issues Summary Table Art](#)
Students transform essential data and key points into a visually organized infographic that highlights causes, impacts, and actionable solutions. [Student Self-Assessment Checklist](#)
- [Social Media Awareness Post \(Paraguay's Delivery Drivers Face the Heat\)](#)
Students produce a social-media style message or multi-slide post that connects insights from the Pulitzer Center article to their own perspective and calls the public to action. [Rubric](#)

This creative component allows students to deepen their understanding by communicating complex climate and labor issues through accessible, audience-centered media. It reinforces their advocacy skills, strengthens multimodal literacy, and provides an authentic outlet for students to amplify their message beyond the written op-ed.

Assessment

▶ How does excessive heat impact the health of labourers | Burnt to Build

Throughout the project, students complete various graphic organizers that track their understanding of the issue, evidence from the article, and proposed solutions. These are reviewed for completion and used to guide feedback. Informal reflections (e.g., “What did you learn today?” or “What questions do you still have?”) are incorporated into class activities, with teacher feedback provided on student responses, visuals, and group work to monitor engagement and understanding throughout the unit.

[Summative Assessment/Common MidPoint Assessment \(PDF\)](#)

- [Peer Review Protocol](#)
- [Op-Ed Rubric](#)

Students exchange drafts and use a structured peer feedback form to assess clarity, empathy, and effectiveness of their writing. This builds collaboration and revision skills. Students are assessed using a rubric that evaluates clarity of argument, use of evidence, organization, voice, and civic relevance. These tools ensure that assessment is ongoing, supportive, and aligned with both content knowledge and communication skills.

Citations

BBC News. [Extreme Heat and Worker Safety](#). BBC, 2025.

Brisk Teaching. [Student Podcast on Heat Safety](#). Brisk AI.

Centers for Disease Control and Prevention. [About Heat and Health](#). CDC.

Edpuzzle. [Heat Stress Video Lesson](#). Edpuzzle.

Google Docs. [Comic Template](#). Google Docs,
Massachusetts Department of Elementary and Secondary Education. [Massachusetts Curriculum Frameworks](#).
Massachusetts DOE.

National Institute for Occupational Safety and Health. [Heat Stress Recommendations](#). CDC/NIOSH.

Newsela. [Climate and Labor Reading](#). Newsela.

Occupational Safety and Health Administration. [Heat Illness Prevention](#). OSHA.

Population Education. [Take a Stand Video](#). Population Education.

Pulitzer Center. [The Impact of Extreme Heat on Delivery Workers](#). Pulitzer Center.

Safelyio. [OSHA Heat Illness Prevention: Heat Stress Safety Video for Workers. YouTube](#), 22 June 2025.

[Safety MGMT Study. Heat Safety Training Video. YouTube](#)

Sunrise Movement. ["These 10 Op-Eds from Youth Climate Strikers Explain Their Need to Take Action."](#)
Medium, 2019.