Community-Engaged Anti-Racist Education Project

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The Community-Engaged Anti-Racist Education Project Introduction

Backstory

The Rutgers University Graduate School of Education (GSE) is committed to fostering excellence and equity in education for all students. This commitment is embedded in the design of the GSE's Urban Social Justice Teacher Education Program, which includes deep partnerships with several local school districts as well as with anti-racist, equity-focused community-based organizations (CBOs) that, together with GSE faculty and students, make up the GSE Community School Partnership Network (GSE-CSPN). The GSE-CSPN is a mutually beneficial collaborative aimed at improving both the quality of preparation for GSE educator candidates and the educational experiences of the PK-12 students and families served by the GSE-CSPN member districts and CBOs.

The Community-Engaged Anti-Racist (CEAR) Education Project is a Rutgers-funded project developed in an effort to continue to strengthen and deepen the connections between and among GSE-CSPN members by engaging GSE, school district, and CBO members in developing a shared vision for teaching and learning that centers engagement with CBOs around anti-racist pedagogy and content.

This unique project brought together GSE faculty in Elementary Education and Language Education, K–5 teachers from five GSE-CSPN Partner Districts, and members from five CBOs as CEAR Education Project Fellows. Our first efforts focused on community-building and professional development to collaboratively identify key principles and practices of community-engaged anti-racist education. Later, participants worked in six small teams to develop grade-specific curricular units that embrace and employ the CEAR Education Project Principles and Practices. These units were collaboratively developed, piloted by K-5 teachers, and revised for publication and sharing. The CEAR Education Project engaged the participation of school districts and community organizations around Rutgers, The State University of New Jersey, all of which are designated as urban and serve economically, racially, and/or ethnically diverse students and families.

The curricular units included in the following pages reflect the collaborative work of Rutgers GSE faculty from the programs in Elementary Education and Language Education; teachers from North Brunswick Township Schools, Franklin Township Public Schools, Highland Park School District, New Brunswick Public Schools, and Bound Brook School District (all in New Jersey); and CBO members from New Brunswick Area NAACP, Black Community Watchline, New Labor, New Brunswick Civic League and New Brunswick Tomorrow. The complete list of individual participants can be found in the acknowledgments appendix.

CEAR Education Project Background and Vision

The CEAR Education Project brought together faculty, teachers, and CBO leaders in collective curriculum development. The CEAR Education Project and curriculum were built upon our belief that when teachers and schools partner with community members, they learn with and from their students, students' families, and local communities, enabling them to honor, sustain, and expand community assets. While community-engaged anti-racist efforts begin with individual beliefs and dispositions, they require collective action to bring about changed practices and policies and build an anti-racist world.

Our collective work was grounded in the following shared core beliefs:

- A holistic education should center and build upon the community, family, and cultural knowledges that all students and families bring to the classroom and community spaces.
- Interrupting, disrupting, and dismantling racist practices and oppressive policies where we work is necessary.
- Being (or becoming) aware of race and other aspects of our identities is important to understanding privilege and oppression.
- Institutions in the United States, such as schools, tend to orient to values aligned with white supremacy. By engaging in anti-racist education, we push against these unquestioned norms to better support students and families in their learning.
- Learning about histories and counternarratives of power and oppression shapes our lives and understandings across our homes, schools, and communities.

Developing CEAR Education Project Principles and Practices

A foundational aspect of this work was the development of the CEAR Education Project Principles and Practices. Fellows met weekly for several months, studied the work of critical educational scholars, and engaged in professional development with organizations committed to anti-racist education. From these meetings, Fellows developed a set of principles and practices that were used to guide the curriculum design. The CEAR Education Project Principles and Practices can be found on page 9.

How We Use Language

As part of this approach, the CEAR Education Project team spent considerable time specifying the terms we would use in our work so that we shared a common language and understandings. Our goal is to center the assets of students and families of color, as so much of formal schooling frames students and families of color through a deficit lens. For example, schools commonly refer to students who are newer to English as English language learners. This term prioritizes English as the only goal and centers what students lack, ignoring their other language resources and how they could be used to deepen language and content learning. The CEAR Education Project team uses the term emergent bilinguals to describe students because it centers the assets and strength in developing bilingual and multilingual identities, and it acknowledges the value of all languages without privileging one language over another. We also include the concept of translanguaging, which describes the flexible use of student, family, and community linguistic resources in the practices of multilingual speakers and centers these practices as the norm. For more information about *emergent* bilinguals and translanguaging, we suggest this resource: Translanguaging: A CUNY-NYSIEB guide for educators | www.cuny-nysieb.org/wpcontent/uploads/2016/04/Translanguaging-Guide-March-2013.pdf

In other instances, we did not rename or change terminology, but we deliberately and intentionally defined terms. For example, the word activist can sometimes be defined as someone who helps others, which is partly true, but this definition positions one group as "helpers" and lacks the activist's stance of challenging the political and social status quo. CEAR Education Project Fellows wanted to be certain that our discourse made the clear distinction that an *activist* works in and with communities to understand the local and historical context, name inequities, and take collective action to implement substantive policies and practices to address them. Therefore, an activist was collectively defined as "a person who engages in actions to address injustice and bring about social or political change."

We intentionally use the term *equity* versus *equality*. *Equality* is about providing the same or equal resources for students without a careful understanding of the individual, community, and/or operating structures or systems. This is often seen in a one-size-fits-all approach to addressing concerns. *Equity* is about providing customized resources that address a student's or community's specific expressed strengths and needs and take local and historical contexts into account. CEAR Education Project materials strive for equity.

In framing unit plans and lessons, we refrain from referring to instances of injustice or oppression as *issues* or *problems*. While the latter words are familiar to elementary school students, we want to ensure we do not leave students with the impression that injustice is simply a "problem" that arises out of nowhere or is associated with deficit orientations of communities of color. Instead, lessons for younger students support them in understanding what is fair or unfair, and older students begin to be introduced to systems and structures that perpetuate injustice.

CEAR Education Project units raise awareness and deepen understanding of systemic injustice and make connections to local and historical contexts. Several units focus on how racism and other forms of discrimination are embedded in social institutions all around us, such as education, health care, and housing. These may be found and perpetuated in an organization's policies, programs, hiring practices, and everyday operations. Such policies or practices may not be explicitly stated as discriminatory, but their impact creates injustice and disadvantages groups of people based on their identities (race, class, gender, sexual orientation, language, etc.) while providing benefits for people with certain identities (most often those of the dominant group). These discriminatory policies or practices have likely not originated in our lifetime and aren't operating only in someone else's community. Often they have deep historical roots and have real implications for our local context. It is important that we support developing a deeper understanding of injustices and a responsibility for taking action, beginning with our youngest students.

For example, in one of our lessons, we discuss how individuals for whom English may be a new language often face discrimination or inequitable treatment. A focus on this as a systemic injustice supports students in understanding who this injustice has an impact on, who benefits from this injustice, how our local and/or national history is connected to this injustice, and how policies and practices in our schools may serve to perpetuate language injustice. We see this manifested in a variety of ways in school spaces, including not recognizing the multilingualism of students and families as resources for learning; not allowing and sustaining students' home languages in the classroom or school communities; and promoting only one variety of English (the variety most associated with whiteness, often called "academic English"), to the exclusion of the many Englishes spoken in our communities.

Language Objectives, Supports, and Vocabulary Development

We take an anti-racist approach to language, as we seek to create learning that invites, supports, and extends all students' language resources. We question the assumption that mainstream academic English is the only language that matters for learning and instead invite students to use their home languages, which include named languages, like Spanish (Espinosa, Ascenzi-Moreno & García, 2021; España & Herrera, 2020), American Sign Language, and varieties of English, such as Black Language (Baker-Bell, 2020). Our language objectives work toward two related goals. Some offer scaffolds and extensions for emergent bilinguals to make content accessible and practice new ways to use English for schooling. Others seek to explicitly invite in students' full linguistic resources and extend them for learning, encouraging translanguaging. We believe every teacher should be a language teacher and intentionally include language objectives and supports in lessons to disrupt traditional notions of whose languages count for learning.

Examples of language supports within the curricular units include the use of multilingual resources; learning about student, family, and community language practices; inviting students to participate in activities in multiple languages; incorporating language objectives that support content objectives; and providing language scaffolds to make content accessible.



Overview of CEAR Curriculum Units

UNIT ONE: Our Language Community Grade Level: Kindergarten Subjects: Language Arts and Social Studies

To create a classroom and school community where all language resources are valued, Our Language Community, a unit designed for kindergarten students, aims to challenge and disrupt the following certain norms about language: 1) that one named language is more important or valuable than another (i.e., English in the United States); 2) that English needs to be the sole language of schooling; and 3) that there is only one

correct way to write and speak any given language. The unit focuses on students' identities and language use, the diversity of community languages, and our love of our languages. Students conduct a survey to discover which languages their classmates speak at home and use this information to create multilingual home language posters and books. Through children's literature, students are empowered to use and be proud of all language tools at their disposal. After learning about the power and diversity of language, students create a welcoming and inclusive linguistic classroom community by conducting a Linguistic Landscape Action Project, in which they label classroom items in their many home languages. To act for change, the students and teacher collaborate on a letter to the school principal advocating for permission to label common school items and areas in the languages of the school community. This integrated unit meets New Jersey core content standards in English Language Arts and Social Studies.

UNIT TWO: Say Something: Our Fight for Fairness Grade Level: 2 Subjects: Social Studies and Language Arts

Say Something: Our Fight for Fairness is a unit designed for secondgrade students that analyzes rules and laws for fairness and identifies ways to address rules and situations that are unfair. Through this process, students develop the understanding that each one of us has the power to make a change when things are unfair. Students are guided to think about our nation's history, including fair labor laws and school segregation

laws, and those who have often been on the receiving end of unfair treatment based on their characteristics (race, class, ethnicity, language ability, etc.). The unit concludes with reflection and critical analysis of students' own immediate community. Students and their families identify instances of injustice or unfairness in their community; students then take action toward change by working collaboratively with peers on an advocacy project. This integrated unit meets New Jersey core content standards in English Language Arts and Social Studies.





UNIT THREE: Becoming an Activist for Racial Justice Grade Level: 3 Subjects: Language Arts, Math, and Social Studies

Becoming an Activist for Racial Justice is a unit designed for thirdgrade students that explores anti-racist activism within students' local communities and invites students to become activists themselves. Teachers interested in using this unit will need to make connections with their own local CBOs that work for racial justice. Suggestions for doing so are included in the unit. This integrated unit meets New Jersey core content standards in Language Arts, Mathematics, and Social Studies.

UNIT FOUR: The Power of Music for Social Movements Grade Levels: 3–5 Subject: Music

In this unit, The Power of Music for Social Movements, students in grades three through five analyze activist songs and look closely at their expressive qualities (mood, tempo, and lyrics) and the instruments used to better understand the intent of the song. As a class, students examine what constitutes an injustice and identify injustices in their classroom, school, and/ or community. In small groups, students modify the lyrics of an existing activist song to communicate actions they wish to take in response to an injustice. Through this experience, students begin to develop an understanding of how music is an effective tool for bringing awareness to injustices and encouraging collective action. This integrated unit meets New Jersey core content standards in Visual and Performing Arts.

UNIT FIVE: Making Change through Activism Grade Level: 5 Subjects: Language Arts and Social Studies

Making Change through Activism is a unit designed for fifth-grade students to explore the concept of human rights and the use of activism when those rights are violated. Students examine historical activist movements and their foundations, leaders, goals, strategies, and achievements before making connections to current movements. The



unit highlights social justice and centers marginalized BIPOC voices of empowerment and resistance through a close look at activist movements (including the migrant farm workers' movement, the Stonewall Riots, the Dakota Pipeline protests at Standing Rock, and Black Lives Matter) that have fought and are fighting for the rights of migrant farm workers and LGBTQ+, Black, and Indigenous populations. Students reflect upon important issues in their own communities and become agents of change as they develop an activist artifact. This integrated unit meets New Jersey core content standards in Language Arts and Social Studies.

UNIT SIX: Young People and Environmental Justice Grade Level: 5 Subject: Science

Young People and Environmental Justice is a unit designed for fifth-grade students to explore how to fight for environmental justice to protect the earth's resources and their communities. The unit is developed around videos and texts that examine environmental injustices—such as

the differential impact of pollution based on race and wealth—and highlight youth activism for environmental justice. Importantly, environmental injustices are defined as the result of systemic policies and practices, not individual behavior. Students interview leaders in local CBOs and create action plans using resources and strategies shared by CBOs to hold communities accountable to the law and to protect BIPOC communities in the state of New Jersey. This integrated unit meets New Jersey core content standards in Science.



Eight Principles for Community-Engaged Anti-Racist Curricula and Teaching

Principle 1: Embraces Intersectionality and Multiple Identities

Principle 2: Centers Student, Family, and Community Knowledge, Perspectives, and Experiences

Principle 3: Welcomes and Expands Students' Linguistic Resources

Principle 4: Implements Culturally and Historically Responsive Practices

Principle 5: Critically Analyzes and Disrupts Traditional Notions of Power and Knowledge

Principle 6: Counters Dominant Narratives

Principle 7: Cultivates and Celebrates Joy

Principle 8: Engages Students in Resistance and Action

Practices and Principles

		RELEVANT PRINCIPLES (see above)							
PRACTICES	1	2	3	4	5	6	7	8	
Collaboratively Developed Classroom Norms and Shared Beliefs/Values	x	x			x				
Critical Literacy	a selection of the			X	X	X	The second	X	
Daily Reflection Tools	X	X	X	X	X	X	X	X	
Focus Groups for Collaboration		X	NS. IS	X	X			1.50	
Historical Connections to the Present		X	S. Stelley	X	X	X	and the second		
Inquiry-Based Learning	Star Star Star	X		X	X	1.4.1.1.4	X	X	
Language Objectives for Each Lesson	X	X	X	63825	Service Services	No pis	Margare .	al a la car	
Multilingual Resources	X	X	X			Section in			
Partnerships with Community Members and Community-Based Organizations	x	x		x		1			
Planning Using Backwards Mapping			19.8					Sec. 1	
Project and Problem-Based Learning		X	Sales a	X	X	X		X	
Radical Morning Meeting	X		Carls -		X	X	X		
Small Group/Partner Work		- all is	X		X				
Student/Community Check-Ins	X	X		1.5-125-	X	and some	A STATES	1	
Translanguaging Practices	X	X	X		X			E. W.S.	
Varied Media and Texts	X		Sec. Ser	x	C. S. S.	x	X		
Varied Forms of Expression (Dance, Art, Movement)	X	x					X		

Practices and Principles

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Reflection Questions

Principle 1: Embraces Intersectionality and Multiple Identities

- Am I ensuring that my students feel safe in our classroom environment to share about their identities, especially when these identities are different from their peers?
- Were there identities that were silenced or missing in our classroom learning?
- Am I using an intersectional lens to recognize and disrupt multiple forms and scopes of oppression in our classrooms?

Principle 2: Centers Student, Family, and Community Knowledge, Perspectives, and Experiences

- Am I acknowledging, centering, and celebrating students', families', and communities' cultures, languages, values, identities, and knowledge on a daily basis?
- Are we learning about community-based organizations and sharing this knowledge with students and families?
- Are we partnering with community-based organizations and learning from and with communities?

Principle 3: Welcomes and Expands Students' Linguistic Resources

- Am I making language and content comprehensible (or accessible) to all students?
- Am I encouraging students to draw upon, use, sustain, and expand their full linguistic resources?
- Am I creating space for ways of speaking, reading, writing, and listening that go beyond mainstream (white) English, or the type of English that is often prioritized as "correct" in classrooms?
- Am I intentionally challenging the policing of language in my classroom?

Principle 4: Implements Culturally and Historically Responsive Practices

- Am I encouraging students to challenge histories they've always been taught?
- Am I determining issues/injustices that matter to students, families, and their communities and collaborating on how to address or explore them meaningfully?
- Am I encouraging students to learn history from multiple perspectives and question white-centered histories and their intentions?



Principle 5: Critically Analyzes and Disrupts Traditional Notions of Power and Knowledge

- Am I disrupting traditional ideas about who holds the knowledge and power?
- Am I challenging ideas of learning only happening in school contexts?
- Am I fostering opportunities to learn from knowledge-holders in students' families and communities?

Principle 6: Counters Dominant Narratives

- Am I using literature, texts, and materials that reinforce dominant narratives or ones that provide counternarratives that reflect diverse experiences and perspectives, including, but not limited to, those of my students, their families, and communities?
- Am I using histories and stories to analyze whose voices have been and are silenced?
- Am I supporting students in developing strategies for how to present critiques in various spaces with various groups?

Principle 7: Cultivates and Celebrates Joy

- Are moments of joy cultivated in this lesson?
- Am I creating opportunities to share joy in people's stories and experiences instead of focusing solely on pain and suffering?
- Am I creating an ongoing curiosity, appreciation, and recognition of students', families', and communities' identities and cultures?

Principle 8: Engages Students in Resistance and Action

- Am I preparing students for resisting, thinking critically about, and challenging systems of oppression?
- Am I engaging students in activism and taking action in their schools and communities?
- Am I modeling resistance, taking action, and challenging systems of oppression?



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Acknowledgements

The Community-Engaged Anti-Racist (CEAR) Education Project wishes to acknowledge and thank the New Jersey teachers; members of community-based organizations (CBOs); Rutgers University, Graduate School of Education faculty from the programs in Elementary Education and Language Education; and the many partners who made these CEAR curricular units possible.

CEAR Fellows and Research Assistants

Hannah Batren, Project Coordinator Dan Battey, Faculty Fellow Chloe Bellows, Research Assistant Jian Bland, CBO Fellow Ebony Blissett, Educator Fellow Alex Brumel, Educator Fellow Mary Clairmont, Educator Fellow Bertha-Helena Coquel, Educator Fellow Mary Curran, Faculty Fellow Amanda Dominguez, CBO Fellow Marina Feldman, Research Assistant Sarah Gallo, Faculty Fellow Edie Grauer, CBO Fellow Lucinda Holt, CBO Fellow Jessica Hunsdon, Project Coordinator Nora Hyland, Faculty Fellow Aquaus Kelley, Educator Fellow

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Partners

Philly Children's Movement | phillychildrensmovement.org

The Philly Children's Movement knows that families and schools are critical spaces for building racially just communities. We envision a world in which all people are liberated, whole, and valued. We work to dismantle racism, anti-Blackness, and white supremacy. Our organizing for racial justice happens in schools, community events, child-centered activism, and racial justice campaigns.

Radical Pedagogy Institute | radicalpedagogyinstitute.com

The Radical Pedagogy Institute is a collective of educators based in the greater New Jersey area (this includes NYC) who believe in the transformational power of radical pedagogy and local political organizing. But what exactly do we mean by radical pedagogy? Essentially, we view radical pedagogy as a pedagogy that uses tenets of critical pedagogies—queer, anti-racist, DisCrit, culturally relevant, and other liberatory pedagogies—to re/humanize educational experiences for all students.

New Labor | newlabor.org

New Labor is an organization that educates, organizes, and fights for better work conditions and social justice in the workplace. With a base of around 4,000 members, New Labor organizes to empower its members and amplify their voices in the community, workplace, and political realm.

New Brunswick Tomorrow | www.nbtomorrow.org

New Brunswick Tomorrow is a social impact organization committed to moving people forward since 1975. We address the human issues that impact us all, including the conditions of the neighborhood you live in, your family's health and well-being, and your child's progress and ability to meet their fullest potential.

New Brunswick Area Branch of the NAACP | nbanaacp.wordpress.com

Founded in 1909, the NAACP is the nation's oldest and largest civil rights organization. From the ballot box to the classroom, the thousands of dedicated workers, organizers, leaders, and members who make up the NAACP continue to fight for social justice for all Americans.

The New Brunswick Area Branch is one of over two thousand NAACP local units nationwide. The branch was chartered to serve the following municipalities: Bound Brook, East Brunswick, Franklin Township (Somerset County), Highland Park, Hillsborough, Middlesex Borough, Milltown, New Brunswick, North Brunswick, Piscataway, Sayreville, Somerville, South Brunswick, and South River.

Black Community Watchline | www.blackcommunitywatchline.com

The Black Community Watchline was created to empower individuals to speak out and address instances of anti-Black violence, aggression, and bias. The Watchline provides a platform to report immediate threats of racial violence, microaggressions, and racially motivated experiences that undermine the respect, dignity, and fair treatment that Black people should receive.

The Black Community Watchline is committed to seeing that incidences of violence, harassment, and intimidation are not overlooked, dismissed, or mishandled by public servants, persons of influence, and individuals in positions of power.

New Brunswick Civic League | www.civicleaguenb.com

The Civic League of Greater New Brunswick is a not-for-profit community-based organization, operated to strengthen African American families and other minority family groups. This is accomplished by advocating, promoting, and providing community-based services that empower families and improve their quality of life.

The League supports and conducts programs in the areas of education, training, health care, employment, housing, and economic empowerment with the aim of enhancing the stability and growth of families within their communities. This aim is accomplished in conjunction with corporations, human service agencies, churches, community organizations, schools, and volunteers.

Illustration

Andrece Brady is a fine artist, art educator, and curator from Newark, New Jersey. Passionate about rebuilding Black communities through art, Brady is a dynamic artist with a style that transforms through multiple mediums. At her core, Brady is moved by revolution and rebuilding Black communities through art. A multifaceted educator, Brady is a teaching artist and hosts art classes, workshops, and programs, and organizes interactive events for all ages. | andrecebradyart.com

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Shira Golding Evergreen (she/they) is a queer creative based in Ithaca, New York, who collaborates with nonprofits, arts organizations, activists, and educators on projects focused on social and environmental justice. They live and work in a solar-powered, energy-efficient house with their partner, two young kids, and four former feral cats. Shira has designed Education for Liberation Network's annual social-justice planbook for educators, "Planning to Change the World," for over a decade and served as the Director of Education and Outreach for Arts Engine, where she directed the Media That Matters Film Festival (best nonprofit/green website SXSW 2005) and traveled around the country to speak about grassroots film distribution, youth filmmaking, and media justice. | www.upliftedithaca.com

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UNIT SIX Young People and Environmental Justice

UNIT SIX Young People and Environmental Justice

Grade Level: 5

Subject: Science

Suggested Length: 7-8 days (45-minute sessions per day)

Unit Summary

In this unit, students begin to understand how to fight for environmental justice and protect the Earth's resources in their communities. Through a series of five lessons, students analyze and reflect on how the concepts of environmental injustice and environmental justice shape their local communities. The unit focuses on the definition of environmental injustice and the systems that cause and perpetuate this injustice (not individual behaviors) and the differential impact environmental factors, such as pollution and tree coverage, have on specific communities. The unit builds from three videos, one of a Latinx youth activist in Los Angeles, California, another of the Ironbound Community Corporation in Newark, New Jersey, and a final video that highlights youth activism. The videos explore environmental injustices, such as the differential

impact of pollution based on race and wealth, and the ways that communities and young people can fight for environmental justice. The unit includes written texts, ranging from read-alouds of children's literature to informational texts on the Environmental Protection Agency timeline, as well as suggested extension activities.

In addition, the unit draws on local activism and advocacy around environmental justice. Students pose questions to members of local communitybased organizations (CBOs), who discuss how they organize and take action to fight environmental injustice. Lastly, students draw on the strategies shared by CBOs to develop action plans to fight for environmental justice and protect communities of Black, Indigenous, and People of Color in New Jersey.

Community-Engaged Anti-Racist (CEAR) Principles in Unit Six

Principle 3: Welcomes and Expands Students' Linguistic Resources

Students are encouraged to share and express themselves using their full linguistic repertoires, celebrating home languages and translanguaging practices.

Principle 5: Critically Analyzes and Disrupts Traditional Notions of Power and Knowledge

Students are deliberately challenged to disrupt traditional notions of power by realizing that even at a young age, they have a voice and a pathway to power. Through specific and intentional questioning, they are taught to think about the responsibility of having power and what groups of people are often targeted for unfair treatment and why.

Principle 6: Counters Dominant Narratives

The unit disrupts ideas that there is only one dominant, named language and cultural practice and only one correct way to speak a language.

Principle 7: Cultivates and Celebrates Joy

Students share and celebrate their languages and learn and incorporate features of new languages from their peers, families, and community members.

Principle 8: Engages Students in Resistance and Action

Students take action and counter injustice in their school community by creating a more linguistically inclusive print-rich environment.

CEAR Practices

Small-Group/Partner Work: Students work in small, intentional groups on action-based project groups based on student interests.

Translanguaging Practices: Student and community languages are welcomed in all lessons and activities.

Varied Media and Texts: Students engage in a number of texts and formats for sharing ideas, such as Google Forms, Jamboard, and Padlet, to allow for different types of participation.

Critical Literacy: Students bring a critical lens toward understanding environmental injustice as systemic as well as understanding some of its historical and local roots.

Project and Problem-Based Learning: In their final action plan, students use information from videos, readings, peers, and a CBO panel to formulate an action plan to address environmental injustice in their communities.

Partnerships with Community Members and Community-Based Organizations: Lessons bring community voices into the classroom as CBOs discuss local environmental injustice efforts.

Language Objectives for Each Lesson: Lessons build in multilingual resources by including closed-captioning for videos, invite students to reason in their home languages, and include specific language objectives for each lesson.



Participants of the "March for Science" in Saint Paul, Minnesota, April 22, 2017 (Source: *Wikimedia Commons*)

Content Objectives

Students will be able to do the following:

- Define environmental justice and injustice. (Lesson 1)
- Identify environmental injustices and understand how they are systemic. (Lesson 1)
- Articulate how environmental injustice impacts their community both currently and historically. (Lesson 1)
- Deepen their awareness of how environmental injustice impacts their local communities both currently and historically. (Lessons 2 and 4)
- Make connections between environmental injustice and activism. (Lessons 2 and 4)
- Obtain, evaluate, and communicate graphical information about tree coverage equity. (Lesson 3)
- Explain in writing the core ideas of environmental injustice based on race or income. (Lesson 3)
- Identify specific actions being taken in their community for environmental justice. (Lesson 4)
- Create a specific, measurable, achievable, relevant, and timely (SMART) action plan to fight for environmental justice in their local communities. (Lesson 5)
- Compare different approaches to environmental activism. (Lesson 5)

Language Objectives

Students will be able to do the following:

- Make personal connections to the central text ("Toxic Neighbors" video) and concept of environmental injustice using sentence frames. (Lesson 1)
- Provide written and spoken examples of cognates from the central text ("Toxic Neighbors: Taking Action to Solve the Climate Crisis" video) with the support of English or home language subtitles (depending on emergent bilingual (EB) level) and/or the graphic organizer. (Lesson 1)
- Orally share their personal connections to the geographies and content of the film *The Sacrifice Zone*. (Lesson 2)
- Pay attention to science-related cognates in *The Sacrifice Zone* with the use of graphic organizers, English captions, or home language subtitles. (Lesson 2)
- Use sentence frames to write answers to information questions (how, what, when, etc.) about tree inequity with peers. (Lesson 3)
- Draft, edit, and sequentially organize wh- information and hypothetical questions in writing with peers to create an interview guide for environmental justice panelists. (Lesson 4)
- Orally ask at least one *wh* information or hypothetical question to an environmental justice panelist. (Lesson 4)
- Write a SMART plan to fight for environmental justice using complex (subordinate clause/s) or compound (more than one subject or predicate) sentences. (Lesson 5)
- Explain future goals in written SMART action plans. (Lesson 5)

Enduring Understandings

- Environmental injustice relates to other systemic inequities. (Lessons 1, 2, and 3)
- Young people like me take action to fight for environmental justice. (Lessons 1, 2, and 5)
- I can fight for environmental justice in my local communities. (Lessons 4 and 5)
- My language resources (in English and in home and other languages) can help me expand my scientific vocabulary, communicate with more people in my communities, and express myself more fully. (Lessons 1-5)

Essential Questions

- What are environmental justice and injustice? (Lesson 1)
- How does environmental injustice relate to other systemic inequities? (Lessons 1, 2, and 3)
- How does environmental injustice occur in my local communities? (Lessons 3 and 4)
- How do people from my communities take action to fight for environmental justice? (Lesson 4)
- How do young people like me take action to fight for environmental justice? (Lessons 1, 2, and 5)
- How will I take action to fight for environmental justice in my local communities? (Lesson 5)

Centering Student, Family, and Community Knowledge and Experiences

This unit centers the voices of BIPOC youth (specifically Latinx youth and their languages), Newark activists, and local CBOs in defining what environmental injustice is and how to fight for environmental justice. Students make connections to the ways in which pollution affects their local communities through learning about local environmental injustices and the impact they have on health and well-being. Finally, students will develop an action plan around an issue of their choice to hold stakeholders accountable and be agents in combating environmental injustice.

Vocabulary/Conceptual Development

Vocabulary is introduced and practiced throughout lessons by leveraging students' full linguistic repertoires through intentional translanguaging pedagogies (García et al., 2017) in whole- and small-group discussions. For example, students are intentionally paired by shared languages during whole-group instruction and encouraged to use their additional languages during turn-and-talks. Teachers use closed-captioning in English or students' home languages when using videos to support language development. Teachers also leverage language strategies, such as identifying cognates, developing semantic networks around key science vocabulary, and information-question formation, across lessons with additional scaffolds for EB students of varying English-proficiency levels. Sentence frames are used to support connections students make between the stories shared in the videos and their own lives (e.g., "My life is similar to Nalleli's because _____"). In addition to the key vocabulary, specific vocabulary (e.g., *asthma, petroleum, waste, industrial, permit*, and *greenhouse gasses*) is supported by previewing vocabulary in videos and texts. Peer work takes place in students' home languages.

Unit Vocabulary

- Activism
- Activist
- Asthma
- Carcinogen
- Contaminate
- Environmental
- Equity
- Incinerator
- Injustice
- Justice
- Particulate Matter
- Pollution
- SMART Action Plan
- Smog
- Systemic
- To Plant







Lessons Overview

Lesson 1: Environmental Justice

Students are introduced to the terms environmental justice and environmental injustice by watching a video of a student who notices and takes action related to environmental injustice in their community. Students begin to make personal connections to the systemic ways environmental justice affects certain communities.

Lesson 2: Environmental Justice in New Jersey Students extend their general understanding of environmental injustice and apply it to a more local context in New Jersey. They watch the documentary The Sacrifice Zone about a neighborhood in Newark and begin to make personal connections to how environmental injustice shapes their communities. They also begin to reflect on the different ways people like them can take action against environmental injustice.

Lesson 3: Understanding Environmental Inequity Students explore issues of equity by using an online tool to compare the tree equity score in their surrounding communities to understand how environmental injustice relates to income and race. They then use a text (video on urban tree planting) to explore one form of activism that could begin to combat this inequity in their local communities.

Lesson 4: Fighting for Environmental Justice n this three-part lesson, students explore the ways that local communities are fighting for environmental justice by engaging in a panel discussion. On Day 1, students will create an interview protocol that they will use to ask the environmental justice panelists questions. On Day 2, students develop questions for local activists. On Day 3, a classroom visit composed of community activists and/or community-based organization leaders will discuss local environmental justice efforts and respond to students' questions about pollution in their own community.

Lesson 5: Environmental Justice in Action Students plan actions to fight for environmental justice by identifying sources of local pollution (e.g., air, soil, water) and decide on a specific issue to address. Students work in groups to draft specific, measurable, achievable, relevant, and timely (SMART) action plans they can use to fight for environmental justice in their communities.

Assessment

Formative assessment includes students' written ideas in Padlet, Jamboard, and Google Forms during lessons as well as observations of whole-class discussions and small-group work.

Summative assessment includes an environmental justice action plan. In the plan, students will identify the form of environmental justice they are focused

on, the cause(s) of this environmental injustice, ways in which the community has taken action, and additional actions they plan to take in fighting for environmental justice. The plan includes a SMART goal and language features such as communicating about future goals and using complex or compound sentences.

Alignment to Standards

New Jersey Student Learning Standards for Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

New Jersey Student Learning Standards for English Language Arts

NJSLSA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

W.5.6. With some guidance and support from adults and peers, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others.

RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

World-Class Instructional Design and Assessment (WIDA) English Language Development

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.



Core Instructional Resources and Materials

Videos

- Climate Reality. (2019, February 12). *Toxic neighbors: Taking action to solve the climate crisis* [Video]. YouTube. | www.youtube.com/ watch?v=gmaeKIhmQDg
- Winokur, J. (Director). (2020). *The sacrifice zone* [Film]. Talking Eyes. | thesacrificezone.org/rutgerscurriculum
- Vox. (2016 December 22). *Why cities should plant more trees* [Video]. YouTube. | youtu.be/aKyvGHycngM
- Climate Justice Activists. (2020, January 29). *Frontline youth: Fighting for climate justice* [Video]. YouTube. www.youtube.com/watch?v=NmRgQcMPlQo
- CBC Kids. (2020 January 6). Want to be a youth activist? [Video]. YouTube. | www.youtube.com/ watch?v=I1Fx3m2oPC4

Websites

American Forests. (2021). *Tree equity score*. | treeequityscore.org

Texts/Media for Extensions (Optional)

Ahuja, N. (2021). Rise up and write it. Harper Festival.

- KING 5. (2020, September 14). *What is systemic racism in America*? [Video]. YouTube. | www.youtube.com/ watch?v=AjQBgBcbOyQ
- United States Environmental Protection Agency. (2022, July). *Environmental Justice Timeline*. | www.epa.gov/ environmentaljustice/environmental-justice-timeline
- Business Insider. (2021, March 21). What happens to NYC's 3.2 million tons of trash | Big business [Video]. YouTube. | www.youtube.com/ watch?v=S758wEniU0c
- Cheddar. (2022, January 13). *Where New York's 14 million tons of trash go – NYC revealed* [Video]. YouTube. | www.youtube.com/watch?v=CiRpwdYlC4

- Lindstrom, C. (2020). *We are water protectors*. Roaring Book Press.
- Metcalf, L. (2020). *No voice too small: Fourteen young Americans making history.* Charlesbridge Press.

Additional Materials

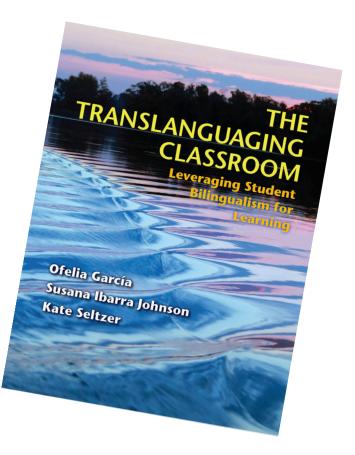
- "Key Vocabulary Lesson #1" handout. https://docs.google.com/document/ d/1A-4H5UNKRrQbsLlm1ubZZOe-voNrgauXzxoQ90ObopI/edit?usp=sharing
- "Toxic Neighbors: Taking Action to Solve the Climate Crisis" Padlet. | https://padlet.com/aquaus_ kelley/la3wij3ishvlwrav
- "Toxic Neighbors: Taking Action to Solve the Climate Crisis" Google Form. | https://docs.google. com/forms/d/e/1FAIpQLSdtBFoNaPPXD2-G-CmrSDXZf0cflkD0THhJS-Mf3Nps7aj9_g/viewform
- "Cognates in Toxic Neighbors" handout. | https://docs.google.com/document/d/1uH_ SLT0iLpyFd8QxZywEeRiMzjuf2Pb7BJucSRXHz_s/ edit
- Key Vocabulary chart | https://docs.google. com/document/d/18ifnygv-0FnJEmxD-4jSA_ vhe4aTVQ8l/edit
- "Cognates in Toxic Neighbors" handout
- "The Sacrifice Zone" Exit Ticket. | https://docs. google.com/forms/d/1muKwDO3UNytXaCgTBPCf_ wF8Vhq9E_yLo89JQJq4w7g/edit
- "Environmental Justice Tree Equity + Action" Jamboard. | https://jamboard. google.com/d/1kzDOAqW33Ful2gIMuZ25_ ZU0X29AOIBA5CF4h11L2ic/viewer
- "Key Vocabulary Lesson #3" handout. | https://docs. google.com/document/d/1vH5xTVGlgv7m1AHD6 OFvGlHItfwlYB5eLzi1A9t7VXU/edit
- "Question Brainstorm for Environmental Justice Visitors" handout. | https://docs.google.com/ document/d/1MoNLViPJcILtzSeWAJYJmVPkfz8bR 5vJ/edit

Resources for Building Background

García, O., Johnson, S. & Seltzer, K. (2017). *The Translanguaging classroom. Leveraging student bilingualism for learning.* Caslon. New Jersey's Environmental Justice Law, N.J.S.A. 13:1D-157, which was signed into law on September 18, 2020

Extensions (Optional)

Action plans can be sent to three or more CBOs to correspond with inquiries about support. By networking with local CBOs as well as government agencies, educators can locate support for students to enact their action plans.



UNIT SIX, LESSON ONE Environmental Justice

Grade Level: 5

Subjects: Science

Suggested Length: 1 day (45-minute session)

Lesson Overview

Students are introduced to the terms "environmental justice" and "injustice" by watching a video of a student who notices and takes action related to environmental injustice in their community. Students begin to make personal connections to the systemic ways environmental justice affects certain communities.

Content Objectives

Students will be able to do the following:

- Define environmental justice and injustice.
- Identify environmental injustices and understand how they are systemic.
- Articulate what impact environmental injustice has on their community both currently and historically.

Language Objectives

Students will be able to do the following:

- Make personal connections to the central text and concept of environmental injustice using sentence frames.
- Provide written and spoken examples of cognates from the central text ("Toxic Neighbors: Taking Action to Solve the Climate Crisis" video) with the support of English or home language subtitles (depending on the emergent bilingual [EB] level), and/or the graphic organizer.

Essential Questions

- What are environmental justice and injustice?
- How does environmental injustice relate to other systemic inequities?
- How do young people like me take action to fight for environmental justice?

Instructional Resources and Materials

- "Toxic Neighbors: Taking Action to Solve the Climate Crisis" video | youtu.be/qmaeKIhmQDg
- "Key Vocabulary Lesson #1" handout | docs.google.com/document/d/1A-4H5UNKRrQbsLlm1ubZZOe-voNrgauXzxoQ90ObopI/edit?usp=sharing
- "Toxic Neighbors: Taking Action to Solve the Climate Crisis" Padlet | padlet.com/aquaus_kelley/la3wij3ishvlwrav
- "Toxic Neighbors: Taking Action to Solve the Climate Crisis" Google Form | docs.google.com/forms/d/e/1FAIpQLSdtBFoNaPPXD2-G-CmrSDXZf0cflkD0THhJS-Mf3Nps7aj9_g/viewform
- "Cognates in Toxic Neighbors" handout
- *Cognates* anchor chart

Vocabulary/Conceptual Development

Drill: The metal machines used to dig holes in the earth.

Environmental: A word that describes the natural world and our surroundings; related to the environment.

Injustice: A situation in which a person or a group of people are treated unfairly, ignored, or disrespected, and/or where a person is discriminated against based on their identity or membership in a particular group.

Justice: When the rights of a person or group of people are recognized and respected.

Oil Well: The large hole made to take petroleum from deep in the ground.

Pollution: A harmful or poisonous substance in the environment. (Synonym: contamination, a cognate with Spanish.)

Systemic: Part of a system where many parts contribute to the same results repeatedly.

Toxic: Containing poison that can make you sick or die.

Cognates from the Video

action/acción, activism/activismo, asthma/asma, chemicals/químicos, coalition/coalición, community/comunidad, contamination/contaminación, injustice/injusticia, justice/justicia, organize/organizar, pollution/polución, problem/problema, resolve/resolver, respiratory/ respiratorio, sacrifice/sacrificio, scientists/científicos, solar/solar, systemic/sistémico, urban/ urbano, zones/zonas.

Centering Student, Family, and Community Knowledge and Experiences

The central text (video) is of a Latinx young person who recognizes an environmental injustice within their community and takes action. Experts in the central text are predominantly Black, Indigenous, and People of Color who speak in varieties of English. Students make connections to their local communities, environments, and lives, including how environmental injustice shapes their health and well-being. Spanish-English cognates invite students to utilize and expand their entire linguistic repertoire. Many lesson materials are bilingual (Spanish-English).

Potential Challenges

Students may understand pollution as an issue of individual choice and behaviors rather than thinking of it as a systemic problem.

Students may not have considered the ways in which power, class, and race have shaped the levels and types of contamination across communities.

Lesson Procedures

Introduction and Brainstorm

Introduce the lesson by making a connection to the broad concepts of justice and injustice.

Today we're starting a new unit in which we think about justice and injustice. What do you think of when you hear the word "justice"? What do you think justice means? What do you think of when you hear the word "injustice"? Can you think of an example of a justice or injustice?

Possible student responses include "not treating people right, just/unjust, equitable/inequitable, fair/unfair," and/or "right/wrong." Draw on students' contributions to define "justice" and "injustice."

Support students in recognizing how they can use words they know in Spanish to help them determine the meaning of words in English (cognates).

Does anyone know how to say the word "justice" in Spanish? ("Justicia.") Write both the English and Spanish on the board. What about injustice? ("Injusticia.") Write both the English and Spanish on the board.

What do you notice about these two sets of words? Yes, they look a lot alike. Does anyone remember the special term we use for words that are written and sound mostly alike in two different languages? That's right, "cognates."

We're going to watch an eight-minute video about a young woman from California named Nalleli Cobo, who may have some things in common with you. As you watch the video, I want you to do two things:

 Notice how this video relates to the topic of justice and injustice.
 If you know Spanish or another language, write down the words you hear in English that have cognates, like justice and justicia.

Preview of the Vocabulary

Preview the following key vocabulary for emergent bilingual (EB) students: "environmental, oil well, drill(ing)," and "toxic."

Viewing of the Video

Play the video "Toxic Neighbors: Taking Action to Solve the Climate Crisis." Depending on your students' EB levels, play the video with English captions or Spanish subtitles (use the auto-translate setting in YouTube).

Reflection on the Video

After viewing the video, give students ten minutes to respond to the following prompts independently or by using the "Toxic Neighbors: Taking Action to Solve the Climate Crisis" padlet:

1) What stood out to you while watching this video?

2) What personal connections do you make to this video? Why did you make these connections?

3) How do you think this video relates to the topic of justice or injustice?

4) What cognates did you notice in this video?

5) What questions do you have about what you observed in this video?

Include the following sentence frames for additional writing support:

1) The things that stood out to me while watching this video were _____ because

2) The personal connections that I made with this video were ______ because _____.
3) This video relates to the topic of justice or injustice because ______.
4) A cognate I noticed was ______. In [name language], we say ______.
5) The questions that I have about what I observed in this video are



Whole Group Discussion

Review the responses and choose two to three students to share out to the whole group. Focus the discussion on the concept of environmental injustice, and ask the following questions to help students connect this concept to their own lives:

1) What does "environment" mean? What impact do humans have on the environment?

(Use these questions to be explicit about the fact that "environmental" is the adjective or way to describe something related to the environment.)
2) So if "environmental" relates to the natural world, including the impacts humans have on the environmental world, what is "pollution"?
(As students respond to this question, ensure that they understand that pollution is "something harmful that humans add to the environment.")
3) If an unhealthy environment can also be described as an environmental injustice, what are some examples of environmental injustices?
4) What impact do environmental injustices have on our health and wellness?
5) What environmental injustices might be impacting your health and wellness and that of your family and/or community?
6) Remember when we talked about things that are systemic? "Systemic" is "part of a system in which power and other factors cause the same things to happen over and over." How do you think the concept of environmental injustice is systemic?
7) What cognates did you notice in the video?

Create and begin an anchor chart that can be added to throughout the unit for cognates that students identify.

Closure

Prompt students to complete the "Toxic Neighbors: Taking Action to Solve the Climate Crisis" Google Form. They will use the form to describe examples of environmental injustice in places they have lived.

Assessment

Formative assessment will include observations of student participation in discussions and small group work; comprehension checks in whole group discussions; and review of student artifacts (padlet responses). For example, initial questions in the padlet ask students about connections between the video and their lives, which serves as a pre-assessment to gauge the connections students make between the central concepts and their lives. The whole group discussion provides insights into students' understanding of central concepts of environmental injustice, pollution, effects of pollution, and the ways in which communities experience these.

Alignment to Standards

New Jersey Student Learning Standards for Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

World-Class Instructional Design and Assessment (WIDA) Language Development

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Resources for Building Background

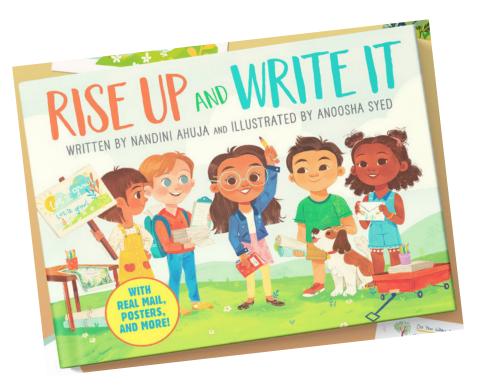
"What Is Systemic Racism in America?" video to explain systemic racism. youtube.com/watch?v=AjQBgBcbOyQ

Extensions (Optional)

Read-aloud of the book *Rise Up and Write It*, by Nandini Ahuja, to illustrate the concrete ways students can recognize and take action about local environmental injustice.

References

Ahuja, N. (2021). *Rise up and write it*. Harper Festival.
Climate Reality. (2019, February 12). *Toxic neighbors: Taking action to solve the climate crisis* [Video]. YouTube. | youtube.com/watch?v=qmaeKIhmQDg
KING 5. (2020, September 14). *What is systemic racism in America*? [Video]. YouTube. | youtube.com/watch?v=AjQBgBcbOyQ



Cognates in "Toxic Neighbors"

Remember that cognates are words that are written and sound very similar across two languages and share a similar meaning. For example, the words "toxic" and "tóxico" are cognates because their sound, spelling, and meaning are alike in English and Spanish.

As you watch the video, jot down words you hear or see (in the captions) that you think have cognates.

Recuerde que los cognados son palabras que se escriben y suenan muy similares en dos idiomas y comparten un significado similar. Por ejemplo, las palabras "tóxico" y "toxic" son cognados porque su sonido, ortografía y significado son similares en inglés y español.

Mientras mira el video, anote las palabras que escucha o ve (en los subtítulos) que cree que tienen cognados.

English

Spanish



(in any languages)

justice	justicia	Something fair
injustice	injusticia	Algo injusto

UNIT SIX, LESSON TWO Environmental Justice in New Jersey

Grade Level: 5

Subject: Science

Suggested Length: 2 days (45-minute sessions per day)

Lesson Overview

Students will extend their general understanding of environmental injustice and apply it to the context of New Jersey. They will watch the documentary *The Sacrifice Zone* about a neighborhood in Newark, New Jersey and begin to make personal connections to how environmental injustice shapes their communities. They will also begin to reflect on the different ways people like them can take action against environmental injustice.

Content Objectives

Students will be able to do the following:

- Deepen their awareness of the impact of environmental injustice on their local communities from a both current and historical perspective.
- Make connections between environmental injustice and activism.

Language Objectives

Students will be able to do the following:

- Orally share their personal connections to the geographies and content of the film *The Sacrifice Zone*.
- Pay attention to science-related cognates in the *The Sacrifice Zone* with the support of graphic organizers, English captions, or home language subtitles.

Essential Questions

- How does environmental injustice relate to other systemic inequities?
- How do young people like me take action to fight for environmental justice?

Instructional Resources and Materials

- The Sacrifice Zone by Julie Winokur film | thesacrificezone.org/rutgers-curriculum
- "Key Vocabulary Chart"
- "Cognates in Toxic Neighbors"
- "The Sacrifice Zone Exit Ticket"

Vocabulary/Conceptual Development

Asthma: A medical condition that makes it hard to breathe (cognate: asma).

Carcinogen: A substance that can cause cancer (cognate: carcinógeno).

Environmental: A word that describes the natural world and our surroundings; related to the environment.

Incinerator: A machine that burns trash (cognate: incinerador).

Cognates from the Documentary

activism/activismo, contaminated/contaminado, dioxin/dioxina, gasses/gases, industrial/ industrial, injustices/injusticias, march/marcha, predictor/predictor, proximity/proximidad, sacrifice/sacrificio, toxic/tóxico, and zones/zonas.

Centering Student, Family, and Community Knowledge and Experiences

The central text (video) is of local community members in Newark who recognize environmental injustice and take action. Experts in the central text are predominantly Black, Indigenous, and People of Color who speak in varieties of English. Students make connections to their local communities, environments, and lives, including how environmental injustice shapes their health and well-being. Spanish-English cognates and whole-group discussion strategies invite students to utilize and expand their entire linguistic repertoire. Many lesson materials are bilingual (Spanish-English).

Potential Challenges

Students may think that human-caused pollution is equally distributed across communities rather than understanding the impact race and class have on where pollution is concentrated.

Students may think that environmental injustice is something that happens to other people, not to them.

Emergent bilingual (EB) students may be confused by words they already know in general uses being used in more content-specific ways (e.g., verb *lead* vs noun *lead*; verb *permit* vs noun *permit*).



Watch The Sacrifice Zone at thesacrificezone.org

Lesson Procedures

Introduction and Warm Up

Last class, we watched a video about Nalleli Cobo and how she noticed environmental injustice in her community and took action. Today we are going to think about environmental injustice in New Jersey. We're going to watch a documentary film called The Sacrifice Zone that takes place in Newark, New Jersey.

Assessing Student Knowledge

Before watching the film, facilitate a pair-share activity with the students to assess students' knowledge of context and help them build a personal connection to the film's content. First ask them,

Who has heard of or been to Newark, NJ? What do you know about Newark, NJ?

Possible student responses include "the airport," "going for immigration or refugee appointments," and/or "refineries." Students in other states may not have experience with or knowledge of Newark, NJ.

Group Share

Last week in the video with Nalleli Cobo, her community in California was described as a "sacrifice zone." What do you think that means?

Possible student responses include "a place that is harmed by pollution" and/ or "a sacrifice because the advantages from producing that pollution are not experienced by those in the communities where the harm is being done."

Do you think "sacrifice zones" exist in New Jersey or other states? Where are some examples? Remind students of any details about Newark that they brought up before to help make connections between sacrifice zones and Newark. Why do you think this documentary is entitled The Sacrifice Zone?

Preview of the Vocabulary

For EB students, preview key vocabulary using the Key Vocabulary chart.

You may need to also review the following words with EB students: "garbage, waste, trash" (synonyms), "wasteland, lead" (noun, not verb), "permit" (noun; i.e., "a permit to pollute"), "environmental, health risks," and "greenhouse gasses."

Like last time, there are lots of cognates in science and this film. Jot down any you notice. For example, "Does anyone know how to say "sacrifice" in Spanish? ("sacrificio"). What about "zone"? ("zona").

"Carcinogens" are discussed in this film. Does anyone know what that word means? Right, "something that causes cancer." Does anyone want to guess how to say it in Spanish? Sí, carcinógeno—it's a cognate. Great—keep those bilingual minds working as you watch.

Introduction of the Film

Before we watch the film, let's remember what we've learned about privilege and injustice.

Ask students the following questions to have them connect the concepts of privilege, injustice, and the placement of environmental harms in lower-resourced communities:

1) What are some privileges that we take for granted?

Student responses may include the following: "clean water," "access to food, housing, and unpolluted air," etc.

2) Who does our society work for?

Student responses may include the following: "Society works for the wealthy, those with home and food security," etc.

3) How are people harmed by unequal privilege?

Student responses may include the following: "People's health may be harmed," "People cannot move and therefore have less access to clean water and food," etc.

Viewing of the Film

Watch the film with English captions or Spanish subtitles, depending on your students' EB levels, and use the auto-translate setting in YouTube. Pause at intervals for discussion and to assess understanding. For example, pause the video at 5:26 and ask the following questions:

Why do you think a street would be known as the "chemical corridor"?
 If we know that living close to factories may harm our health, why do people live close to factories? What other choices or options might exist or not exist?

Include the following sentence frames for additional writing support:
1) People live close to factories because ______. Other choices or options that might exist are ______. Other choices or options that might not exist are ______.
2) Some possible solutions that might help to prevent people from being exposed to toxic and polluted environments are ______ because ______.

Possible student responses may include "because they can't afford to move," "to be close to family," "they lived there before the factory was there," "cheap housing may not be available elsewhere," and "they may have to move farther away from family or work."

Dividing the Lesson

Depending on the length of your class periods and depth of your discussions during the documentary, you may not get through the entire documentary in a single class period. When you stop on Day 1, say to students,

We'll continue to watch this documentary during our next class. Before then, ask people you know (family, friends, community members, etc.) if they have heard of unfair health risks related to the environment in parts of New Jersey or in our state.

At the start of Day 2, say to students, Last class, we watched part of this documentary on environmental injustice in Newark, NJ. What did you learn from talking to your family, friends, and community members about environmental injustices they have heard about in New Jersey or in our state?

Field student responses. What do you remember about the environmental injustice in Newark, NJ that we watched last time?

Field student responses. Let's watch the rest of the video to see how people take action to fight these environmental injustices.

Closure

Today and with Nalleli Cobo, we saw examples of people engaging in activism or taking action to stop environmental injustice. What environmental injustices might be impacting the health and wellness of you, your family, and/or your communities?

Hoy y con Nalleli Cobo, vimos ejemplos de personas que participan en el activismo o toman medidas para detener la injusticia ambiental. Qué injusticias medioambientales podrían estar impactando tu salud y bienestar, los de tu familia, o los de tus comunidades?

Support students in making personal connections from the video to how environmental injustice shapes their communities. Follow with a focus on taking action by asking students,

What have you heard about people taking action to stop environmental injustice in your local community? Qué son ejemplos que has escuchado sobre personas tomando acción para parar la injusticia medioambiental?

End by drawing on the cognates they learned today.

What are two cognates you noticed in the film? ("Cognates" are "words in two languages that share a similar meaning, spelling, and pronunciation." For example, "educación" [Spanish] and "education" [English] are cognates.)

Nalleli Cobo is a Los Angeles youth activist who has been fighting toxic oil wells in her South LA community since she was nine years old. (Source: *Last Chance Alliance*)



Assessment

Formative assessment will include teacher observation of students' discussion. The Exit Ticket assesses students' understanding of the concepts of environmental injustice and activism and their ability to make personal connections to these topics. It also assesses EB students' ability to recognize cognates.

Alignment to Standards

New Jersey Student Learning Standards for Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

World-Class Instructional Design and Assessment (WIDA) Language Development

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Extensions (Optional)

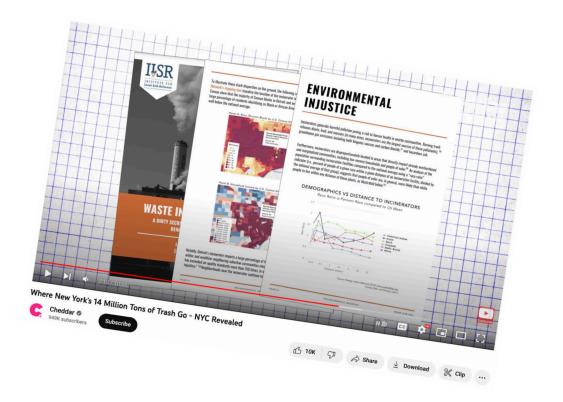
- If you cannot access *The Sacrifice Zone*, you may use the following alternative resources:
- "What Happens to NYC's 3.2 Million Tons of Trash" video | youtube.com/watch?v=S758wEniU0c
- "Where New York's 14 Million Tons of Trash Go NYC Revealed" video (7:08-7:48)
 youtube.com/watch?v=CiRpw-dYlC4&t=428s
- This timeline is an additional resource that puts environmental justice in more historical context and includes the contributions of people of color:
- Environmental Justice Timeline | epa.gov/environmentaljustice/environmental-justice-timeline

Notes (Optional)

For EBs, extend their metalinguistic awareness of suffix endings to cognates, so students begin to understand how suffix endings work in both English and Spanish (-tion = -cion; -ant = ante).

References

Winokur, J. (Director). (2020). The sacrifice zone [Film]. Talking Eyes. | thesacrificezone.org/rutgers-curriculum



Environmental Justice in New Jersey Key Vocabulary Chart

Vocabulary Word	How I say this in my additional language [Spanish]	Image	Definition
carcinogen	[cancerigeno]	Danger Carcinogen	A substance that can cause cancer.
environmental	[ambiental]		A word that describes the natural world and our surroundings; related to the environment.
incinerator	[incinerador]		A machine that burns trash.
asthma	[asma]		A medical condition that makes it hard to breathe.

The Sacrifice Zone Exit Ticket

Before you leave class today, answer the following questions.

1. Name _

2. What environmental injustices might be impacting the health and wellness of you, your family, and/or your communities? [Qué injusticias medioambiental es podrían estar impactando tu salud y bienestar, los de tu familia, o los de tus comunidades?]

3. Today and with Nalleli, we saw examples of people engaging in activism or taking action to stop environmental injustice. What examples have you heard about people taking action to stop environmental injustice? [Hoy y con Nalleli, vimos ejemplos de personas dedicándose al activismo o tomando acción para parar la injusticia medioambiental. Qué ejemplos ha escuchado de personas que toman medidas para detener la injusticia ambiental?]

UNIT SIX, LESSON THREE Understanding Environmental Inequity

Grade Level: 5

Subjects: Science

Suggested Length: 1 day (45-minute session)

Lesson Overview

Students explore issues of equity by using an online tool to compare the tree equity score in their surrounding communities to understand how environmental injustice relates to income and race. They will then use a text (video on urban tree planting) to explore one form of activism that could begin to combat this inequity in their local communities.

Content Objectives

Students will be able to do the following:

- Obtain, evaluate, and communicate graphical information about tree coverage equity.
- Demonstrate their understanding in writing of the core ideas of environmental injustice based on race or income.

Language Objectives

Students will be able to use sentence frames to write answers to information questions (how/what, etc.) about tree inequity with their peers.

Essential Questions

- How does environmental injustice relate to other systemic inequities?
- How does environmental injustice occur in my local communities?

Instructional Resources and Materials

- "Why Cities Should Plant More Trees" video | youtube.com/watch?v=aKyvGHycngM
- Tree Equity Score website | treeequityscore.org
- "Environmental Justice Tree Equity + Action" Jamboard | jamboard.google. com/d/1kzDOAqW33Ful2gIMuZ25_ZU0X29AOlBA5CF4h11L2ic/viewer
- "Understanding Environmental Inequity Key Vocabulary" handout

Vocabulary/Conceptual Development

Equity: The right of every individual to receive the resources necessary to have the same opportunities as their peers, regardless of their gender, race, and social position.

Particulate matter: The solid and liquid particles, or tiny pieces of things, in air. Some are so small they cannot be seen with our eyes.

Smog: The dirty air that is a combination of smoke and other pollutants.

To plant: Placing seeds in the ground so that something will grow.

Centering Student, Family, and Community Knowledge and Experiences

Histories of exclusion lead to contexts where not everyone needs the same thing. After decades of neglect, some communities require more resources than others. For example, communities could receive equal resources for tree planting, but an equitable approach would take into consideration that some areas already benefit from high tree-equity covering and may not need as many new trees planted as a place that has had trees removed or damaged due to pollution, etc. Students start to make connections to their local communities, environments, and lives, including how environmental injustice shapes their health and well-being. Spanish-English cognates and whole-group discussion strategies invite students to utilize and expand their entire linguistic repertoire. Many materials are bilingual (Spanish-English).

Potential Challenges

Students may think that human-caused pollution is equally distributed across communities.

Students may believe that environmental injustice is something that happens to other people, not to them.

Emergent bilingual students may have confusion between words they already know in general uses that are employed in more content-specific ways (e.g., verb *permit* vs noun *permit*).



Riverview-Fisk Park, Jersey City, New Jersey. (Source: *Wikimedia Commons*)

Lesson Procedures

Introduction

Show the word "equity." We've discussed this concept before. What does this concept mean to you?

Student responses may include "fairness" or "justice."

Does equity mean that every person or community should receive the exact same thing?

Listen for students' understanding that making things fair may mean different things for different people or communities.

What is inequity then?

Listen for ideas that there is unfairness or injustice for groups of people as opposed to unfairness for an individual person.

Viewing of Video

Today we are going to think about a component of the environment that can help combat pollution—planting trees. We're going to watch a short video about trees in urban areas. First let's go over some key vocabulary that will help us understand the video.

Use Key Vocabulary Lesson 3 to preview vocabulary.

Watch the video "Why Cities Should Plant More Trees."

To ensure the video is accessible to all students, including emergent bilingual students, use subtitles and English captions and slow the playback to 75 percent speed to assist in comprehension.

Whole Group Discussion

Use the following questions to assess what students understood in the video and to set up the activity on tree equity:

Why is planting trees important? Do you think there are the same amount of trees in all parts of the world? The United States? New Jersey [your state]? New Brunswick [your city]? Let's find out.

Tree Equity Tool

Let's look at this online tool that shows us how many trees are in an area. It is called the "Tree Equity Score." Based on that title, what are some things it might show us?

Listen for answers like "the distribution of trees is not fair across all areas."

Log on to the Tree Equity Score website and read the following opening paragraph:

A map of tree cover in any city in the United States is too often a map of race and income. This is unacceptable. Trees are critical infrastructure that every person in every neighborhood deserves. Trees can help address damaging environmental inequities like air pollution.

Point out the different facets the tool uses, like tree canopy, income, and race, to determine a score.

Tell students, A lower equity score means it is a priority to plant many more trees.

Type in New Brunswick [your city] into the tool and ask students what they notice. Listen for an understanding of the Tree Equity Score map key. (The key goes from orange, which is a low tree equity score, to green, which is high). Plan in advance to find focal communities with different demographics and income levels. Compare scores and correlations with the demographics and income levels, and ask students what they notice about the tree equity scores.

Small Group Work

Have students work in small groups to complete the "Environmental Justice – Tree Equity + Action" Jamboard. (Group emergent bilingual students according to their home language and encourage **translanguaging**, allowing multilingual students to use their full linguistic repertoire.) Students will need a computer with internet access for this.

Include the following sentence frames for additional writing support:

 The toxic chemicals and pollutants that pose health hazards to nearby communities are _____.
 Trees might help to reduce air pollution by _____.
 I noticed that the Tree Equity Score in the image above is _____.
 I wonder _____. The landmark in the Google Earth image that is located in the same area of the Tree Equity Score is _____.

Closure

Today we have learned about one aspect of environmental inequity: differences in tree equity scores and how lower tree equity scores often overlap with communities with fewer financial resources. We also know that planting trees is a way to combat air pollution. This is particularly important in areas with incinerators and other major pollutants that we have been learning about.

To complete our work today, take five minutes in your groups to find local places where we can sign up to support planting trees as a first step in promoting environmental justice.

Students search for places and share resources with one another. For example, the New Jersey Tree Foundation provides information for multiple programs that support planting trees in local communities across the state.

Assessment

Formative assessment will include observation of students during the initial whole group discussion to assess their understanding of environmental equity. In addition, through the small group activity, students' ability to interpret and communicate graphical information about equity will be assessed.

Alignment to Standards

New Jersey Student Learning Standards for Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

World-Class Instructional Design and Assessment (WIDA) English Language Development

Standard 4: English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.

Extensions (Optional)

- Read aloud We Are Water Protectors, by Carole Lindstrom.
- New Jersey Tree Foundation | njtrees.org

References

American Forests. (2021). Tree equity score. | treeequityscore.org

Vox. (2016, December 22). *Why cities should plant more trees* [Video]. YouTube. | youtube.com/watch?v=aKyvGHycngM

Understanding Environmental Inequity Key Vocabulary

Vocabulary Word	How I say this in my additional language [Spanish]	Image	Definition
equity	[equidad]	EQUALITY EQUITY 1. Equality is giving people the same thing/s. 2. Equity is fairness in every situation.	Providing what people need to live healthy, happy lives. It may not be the same thing for everyone.
particulate matter	[material particulado]		The solid and liquid particles, or tiny pieces of things, in air. Some are so small they cannot be seen with our eyes.
smog	[esmog/niebla tóxica]		The dirty air that is a combination of smoke and other pollutants.
to plant	[sembrar]		Placing seeds in the ground so that something will grow.

UNIT SIX, LESSON FOUR Fighting for Environmental Justice

Grade Level: 5

Subject: Science

Suggested Length: 3 days (45-minute sessions per day)

Lesson Overview

In this three-part lesson, students explore the ways that local communities are fighting for environmental justice by engaging in a panel discussion. On Day 1, students will create an interview protocol that they will use to ask the environmental justice panelists questions. On Day 2, students develop questions for local activists. On Day 3, a classroom visit composed of community activists and/or community-based organization leaders will discuss local environmental justice efforts and respond to students' questions about pollution in their own community.

Content Objectives

Students will be able to do the following:

- Identify specific actions being taken in their community for environmental justice.
- Deepen their awareness of how environmental injustice impacts their local communities both currently and historically.
- Make connections between environmental injustice and activism.

Language Objectives

Students will be able to do the following:

- Draft, edit, and sequentially organize information and hypothetical questions using wh-questions (Who? What? Where? etc.) in writing with peers to create an interview guide for environmental justice panelists.
- Orally ask at least one information or hypothetical question to an environmental justice panelist.

Essential Questions

- How does environmental injustice occur in my local communities?
- How do people from my communities take action to fight for environmental justice?

Instructional Resources and Materials

- This unit requires building a relationship with local community activists committed to fighting for environmental justice. Invite two or three activist guests to visit the class.
- "Frontline Youth: Fighting for Climate Justice" video | youtube.com/watch?v=NmRgQcMPlQo
- "Want to Be a Youth Activist?: Here Are Some Tips" video youtube.com/watch?v=I1Fx3m2oPC4
- No Voice Too Small: Fourteen Young Americans Making History, by Lindsay H. Metcalf
- "Question Brainstorm for Environmental Justice Visitors" handout

Vocabulary/Conceptual Development

Activism: Actions people take to address injustice and bring about political or social change.

Activist: A person who engages in actions to address injustice and bring about social or political change.

Cognates from the "Frontline Youth" Video

alliance/alianza, colonization/colonización, culprit/culpable, devastate/devastar, displacement/ desplazamiento, genocide/genocidio, indigenous/indígena, initiative/iniciativa, and intersectional/interseccional.

Centering Student, Family, and Community Knowledge and Experiences

Students ask community activists about how they work to ensure environmental justice. Students make connections to their local communities, environments, and lives, including how environmental injustice shapes their health and well-being. Spanish-English cognates invite students to utilize and expand their entire linguistic repertoire.

Potential Challenges

Students and teachers may not be aware of community-based organizations or community activists fighting for environmental justice in their local communities. Parents and families are good sources of community knowledge to help build these relationships.

We suggest community outreach as a way to build relationships, by listening and building trust over time. This requires getting to know community partners and learning about their organizations, strengths, and ways to engage in mutually beneficial activities.

Students may have difficulty formulating questions to ask environmental justice panelists.

Emergent bilingual (EB) students may confuse the different syntax structures of "do" versus "can" information questions (e.g., "Where DOES environmental injustice occur?" and "What actions CAN I take?"). The word "do" can be particularly confusing as it does not have a parallel question word or structure in Spanish and many other languages.

Lesson Procedures

Introduction

Recently we watched a video about activism for environmental justice in Newark. The activists took action to address a specific environmental injustice in their community. Today we are going to think about environmental injustices in our own communities and develop questions for local community organizations about actions that we can take to address these injustices. We are doing this to prepare to interview community activists and/or community-based organization leaders.

[Provide information about specific community activists and the community-based organizations collaborating on this activity.]

Before watching the "Frontline Youth: Fighting for Climate Justice" video, share these questions and assess students' prior knowledge through a pair-share activity. Students turn and discuss the questions. Ask for students to share responses.

1) What environmental injustices were raised by Nalleli in The Sacrifice Zone?

2) What environmental injustices did we see with the Tree Equity Scores?

3) What other environmental injustices do you see in your local communities (e.g. water, air, and/or soil pollution)?

4) What actions are being taken in your local communities to fight these injustices?



Introduction of Activism

Taking action against environmental injustice is a form of activism. What is "activism"?

Potential student responses may include "protesting," "changing laws," and/or "fighting discrimination."

What examples of activism have you heard about or seen? What is an "activist"?

Potential student responses include "people who engage in actions to fight against social or political injustice."

Who are activists you know or have heard of?

Potential student responses include "Nalleli and Maria from the Ironbound Community Corporation [The Sacrifice Zone], Martin Luther King, Jr., Malcolm X, Malala Yousafzai, Nelson Mandela, César Chávez" as well as people in their families and communities.

View the "Frontline Youth: Fighting for Climate Justice" Video

Do you know anybody personally who you consider an activist? Can youth (young people) be activists? Of course, remember Nalleli!

Let's watch this video and see what other youth are doing.

Watch the video "Frontline Youth: Fighting for Climate Justice."

Debrief After the Video

Pair and share after the video. Strategically place EB students from the same home languages together, and encourage students to use all of their linguistic resources to support comprehension and when they share with one another.

Ask students to turn to their partner to discuss the following questions: 1) What did you notice in the video? 2) What are some ways that you can be an activist?

Ask two to three pairs of students to share out before transitioning to the next step.

View the "Want to Be a Youth Activist? Here are Some Tips." Video

Now we are going to watch another short video that gives ideas of how young people like you can be activists. As you watch, write down examples of actions you can take to be an activist.

Watch the video "Want to Be a Youth Activist? Here are Some Tips."

Prompt students to return to their pairs to discuss the examples of actions they can take to be activists. This will support the interview questions they will develop during Day 2 Session.

Ask two to three pairs of students to share their examples of actions they can take to be activists.

Read Aloud

Over the course of this unit, we've seen videos and read about many young activists. Now we're going to read aloud a book that provides more examples of the ways young people like you can take action for change. As you listen, jot down the names of activists who inspire you.

Read aloud the book No Voice Too Small: Fourteen Young Americans Making History, by Lindsay H. Metcalf.

Fourteen Young Americans Making History

Edited by LINDSAY H. METCALF, KEILA V. DAWSON, and JEANETTE BRADLEY Illustrated by JEANETTE BRADLEY

Debrief After the Read Aloud

After the read aloud, prompt the students to pair and share.

Turn to your partner to discuss the following questions:1) Who is one young activist who stood out to you in this book? Why?2) What are some ways that you can be an activist?

Next time, we are going to think about other ways of learning from activists who fight for environmental justice. We are going to interview community activists from local organizations.

Day 2 Session Develop Questions for Activists

We are going to welcome some visitors who are local community activists and/or community-based organization leaders. Before that, we are going to develop interview questions for our visitors who are addressing environmental injustice in our community. Our conversations will help us to better understand how to fight for environmental justice. We will use our questions to interview community leaders about environmental justice issues in our communities.

Model for students how to write questions, reminding them of the helpful "whquestions" words. Use the "Question Brainstorm for Environmental Justice Visitors" handout. Brainstorm with students and write out examples on board to model with students. Create pairs of students or have them select a partner.

Questions should address the environmental injustices that exist and actions that activist leaders are taking to fight for environmental justice in local communities.

Pairs will develop one question about environmental injustices in the community and one question about actions to take. Then combine the pairs to form small groups, so students can work together to further refine their questions. The small groups will share four questions with the whole class. Use the "Question Brainstorm for Environmental Justice Visitors" handout.

Discussion of Student Questions

Compile the questions from each group, and then prioritize as a class which questions are the most important ones to ask the activists.

Let's make sure our questions focus on the following two areas: 1) Environmental injustices that are taking place in the community, and 2) Specific actions that community activist leaders are taking to address them.

Day 3 Session Community Leader Classroom Visit

Organize a classroom visit with two to three community activists and/or communitybased organization leaders who are committed to fighting for environmental justice.

Today we are happy to welcome our guests, XXXXX, who are local community activists. I would like to ask each visitor to introduce themselves, the community organization they work in, what communities they advocate for, and what issues they are passionate about?

Allow each community partner to introduce themselves. Then ask students to take turns asking the visitors their questions developed during the Day 2 Session.

Thank you for joining us. We have some questions students prepared that we'd like to ask you. [Students ask questions.]

Provide students with Post-It notes so they can write answers to the two questions while listening to the panelists. Ask students to put their names on the Post-it notes you will collect and review to assess comprehension.

Closure

Students, please join me in thanking our guests. We know how busy you are and are grateful that you gave us your time today.

As you leave today, please write your answers to this question: What actions are community leaders taking to fight for environmental justice? Ask students to share one answer and put their Post-it notes on the board (or use digital platforms like Padlet or Jamboard to collect students' responses).

Assessment

Students' understanding of activism will be assessed through observation of the whole group discussion focusing on their understandings of environmental justice and connections to specific actions they and others can take as activists in their local community. The form and content of students' questions will be assessed via the brainstorming document and observations of students' questions during the visit with community activists. Students will demonstrate comprehension by writing their Post-it notes.

Alignment to Standards

New Jersey Student Learning Standards for Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources, environment, and address climate change issues.

World-Class Instructional Design and Assessment (WIDA) English Language Development

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Notes

PEB students who are newer to developing questions and responses will need differing levels of scaffolds to write syntactically accurate questions in English. Sticking to information-word questions (rather than questions that are yes/no, hypothetical, and/or tag, etc.) will streamline this complexity for them. This lesson pairs well with explicit teaching on the syntax of questions and responses, including in the negative, since this syntax and the word not do not have an equivalent term or structure in languages like Spanish.

This unit and this lesson in particular require that teachers build relationships with community activists and/or community-based organizations. These relationships require continued connection and mutually benefited opportunities.

Extensions (Optional)

Teacher and students will write thank you notes to the participating community activists and/or community-based organization leaders, including some action steps the students identified during the Day 3 Session. The teacher can encourage the use of the student's home language in this activity.

References

- CBC Kids. (2020, January 6). *Want to be a youth activist?* [Video]. YouTube. youtube.com/watch?v=I1Fx3m2oPC4
- Climate Justice Activists. (2020, January 29). *Frontline youth: Fighting for climate justice* [Video]. YouTube. | youtube.com/watch?v=NmRgQcMPlQo

Metcalf, L. (2020). *No voice too small: Fourteen young Americans making history.* Charlesbridge Press.

Fighting for Environmental Justice Question Brainstorm for Environmental Justice Visitors

Wh-Questions					
Wh	o Wh	at Wh	en Where	Why	How*
*It does not begin with Wh-, but it works in the same way.					
			Examples		
			Examples		
Where	does		ental injustice	occur	near us?
Wh- word	question verb	subject		action verb	additional info
What	acti	ons	can	I	take?
	obje	ct	question	subject	action verb

Directions

In this activity, you will work with different groups of partners to brainstorm questions for our panelist of environmental justice activists.

Here are some sample questions:

- 1. Where does environmental injustice occur near us? (Information question.)
- 2. What actions can I take? (Question about actions.)
- 3. If you could change one local environmental injustice, what would it be? (Hypothetical question: "If you could. . .")

Step 1: With your partner, brainstorm at least 1 question for the panelists regarding environmental justice.

1. _____

(Wh-word)

Now brainstorm at least 1 question regarding actions to fight for environmental justice.

1. _____

(Wh-word)

If you have time, brainstorm additional questions for the panelists.

1. _____

(Wh-word)

2. _____

(Wh-word)

3. _____

(Wh-word)

Check off if the question has each of these components:

Component	1	2	3	4	5	6	7
Wh-word							
Question verb (does, can, is)							
Question mark							
Is it about environmental justice?							
Does it incorporate vocabulary related to environmental justice?							
Are you interested in the answer?							
Does it help you imagine actions related to environ-mental justice?							

Question #

UNIT SIX, LESSON FIVE Environmental Justice in Action

Grade Level: 5

Subject: Science

Suggested Length: 1–2 days (45-minute sessions per day)

Lesson Overview

Students plan their own actions to fight for environmental justice by identifying sources of local pollution (e.g., air, soil, water) and decide on a specific issue to address. Students work in groups to draft specific, measurable, achievable, relevant, and timely (SMART) action plans that they can use to fight for environmental justice in their local communities.

Content Objectives

Students will be able to do the following:

- Create a SMART action plan to fight for environmental justice in their local communities.
- Compare activists' different approaches to environmental activism.

Language Objectives

Students will be able to do the following:

- Write a SMART plan to fight for environmental justice using complex (subordinate clause/s) or compound (more than one subject or predicate) sentences.
- Explain future goals in written SMART action plans.

Essential Questions

- How do young people like me take action to fight for environmental justice?
- How will I take action to fight for environmental justice in my local communities?

Instructional Resources and Materials

• Our "SMART Goals Related to Environmental Justice" handout.

Vocabulary/Conceptual Development

SMART Action Plan: A plan that is specific, measurable, achievable, relevant, and timely.

Centering Student, Family, and Community Knowledge and Experiences

Students will decide on environmental injustices they want to address that is relevant to their own communities. They will draw on the experiences and knowledge shared by the Community Leader Classroom Visit in Lesson 4. Students will generate a SMART action plan to fight for environmental justice in their community.

Potential Challenges

Students' action plans address changing individual behavior instead of the systems that perpetuate the injustice.

Additional time will be needed to teach how to formulate a SMART goal if students are unfamiliar with this type of planning.

Lesson Procedures

Introduction

Yesterday we thought about youth activists and the types of actions they take to address environmental injustice. We asked questions about environmental injustices in our community and how community members fight for environmental justice.

What actions can we take in our own communities to fight environmental injustice?

Use a pair-share activity to generate actions students can take in their community inspired from the prior lesson's Community Leader Classroom Visit. Place students into pairs or have students self-select a partner. Pairs will receive a Post-it note to write down ideas for actions. These will be added to the board and read aloud to highlight the actions students can take to address environmental injustice.

Possible student responses include "protest, walk out, strike, rally, post on social media," etc.

Review SMART Goals and Future Tense

We have focused on SMART goals in the past. Does anyone remember what the different letters represent?

Have students answer and review what each aspect means. As a reminder, SMART Action Plan: S is for specific, M is for measurable, A is for achievable, R is for relevant, and T is for timely. "Our SMART Goals Related to Environmental Justice" handout has a written example provided.

In previous lessons, we talked about the importance of trees and tree planting. Would this be a good SMART goal for tree planting?: "I'm going to plant lots of trees."

Have students answer. Then point out that although the plan is relevant, it lacks specificity, which is important for a SMART action plan.

Pass out the "Our SMART Goals Related to Environmental Justice" handout. Say to students, Let's imagine that tree planting was our action plan. Let's work through a SMART goal for the plan using the sentence stems.

Model a SMART Goal

Specific: Our specific goal is that we will each attend two tree-planting events with 'X local organization' and bring two people from our family, friends, and/or community.

Measurable: We will track the progress we make toward our goal by attending one event by [insert deadline, i.e., month, end of school year, etc.] and a second by [insert deadline].

Achievable: Our goal is achievable because we can work with the organization we already found that does this, and we will support each other to achieve it.

Relevant: Achieving this goal is important and meaningful to us because our area has limited tree covering. Tree covering is important to purify the air and reduce health problems.

Timely: Our goal will be achieved by [insert deadline].

The sentence frames on the SMART goal handout and model about tree planting will support all students, including emergent bilingual students, as they structure sentences for their SMART plan.

Point out to emergent bilingual students, I noticed something in the sentences. They state, "I WILL attend . . ." and "I WILL complete..." Is this something that already happened? (No.)

Right, it is something that WILL happen. Remember that when we write in English about something in the future, we put the helping verb "will" before the action verb. So, "I WILL attend, I WILL eat lunch this afternoon, I WILL ride the bus home on Thursday."

Develop Action Plans

Help students develop their action plans by taking the following steps:

1) Brainstorm topics and ask students to choose an issue of environmental injustice in your community (other than tree planting, for example, air, food, soil, or water pollution). Group students by the focus of their environmental injustice.

2) In groups, use "Our SMART Goals Related to Environmental Justice" handout to create goals and actions around their identified issues of environmental injustice.

Support students in taking action that addresses injustices systemically. For example, redirect students away from talking individually to community members about not littering. Rather, focus students on the systems in place that address trash and recycling (e.g., Why is there litter? Where is there litter in our community? Are garbage bins easily accessible in public places where people are eating and spending time? What factors determine where we find garbage and recycle bins? Are they distributed in all public spaces? How often are public garbage bins emptied? Who is already working to fight against this injustice? What actions are they taking? What can we do to support these efforts?).

Feedback on SMART Goals

Using a projector, share to the class each group's page one of the SMART handout on a goal that is specific to environmental injustice. Ask each group to present their goal with the class and review the steps to achieve the goal. As each group presents, the rest of the class will provide feedback focused on creating systemic change and engaging the community in action towards environmental justice.

Ask students to respond to these questions on page two of the SMART handout:

Specific: What specific details do we learn about this plan? Does it focus on individual issues or broader systemic issues?

Measurable: How will achieving the goal be measured?

Achievable: What skills and ability are needed to achieve this goal? Does the group have the skills and ability to achieve this goal?

Relevant: Why is this goal important to the group?

Timely: When does the group expect to take action and achieve their goals?

Closure

Write answers to these questions with your name on a Post-it note to submit to the teacher.

Which group's SMART goals inspire you to take action? How might you begin to take action today?



Illustrated portrait of Autumn Peltier by Ethical Comics. Autumn Peltier is an Anishinaabe Indigenous rights advocate from the Wiikwemkoong First Nation on Manitoulin Island, Ontario, Canada. She was named Chief Water Commissioner for the Anishinabek Nation in 2019. In 2018, at the age of thirteen, Peltier addressed world leaders at the United Nations General Assembly on the issue of water protection (Source: *Wikimedia Commons*)

Assessment

Formative assessment will include observations of student participation in small group discussions and work as well as comprehension checks during wholeclass discussions. The summative assessment will be via the SMART handout, which will demonstrate how students think about environmental justice, activism, and ?

Alignment to Standards

Science

5-ESS3-1: Obtain and combine information about ways individual communities use science ideas (measuring air quality, planting trees, etc) to protect the Earth's resources and environment.

New Jersey Student Learning Standards for English Language Arts

NJSLSA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

RI.5.7: Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

World-Class Instructional Design and Assessment (WIDA) English Language Development

Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the content area of Science.

Extensions (Optional)

Orient students to youth activism and the work of a First Nations youth activist for clean water in the video "On National Child Day, Meet Clean Water Activist Autumn Peltier." | youtube.com/watch?v=A33XRMLBbOc

Repeat the lesson with SMART Goals focused on environmental injustices in the school context. Consider ways to implement the action plan. What specific steps are needed? Who takes which roles and responsibilities? How can students inform school administration about the issue? What community partners could be involved?



Environmental Justice Action Plans: Our SMART Goals Related to Environmental Justice

As you brainstorm your environmental injustice, consider whether the injustice is focusing on an individual challenge or a broader systemic challenge.

Our Group's Environmental Injustice: _____

Activist Team Members' Names: _____

Use this chart to brainstorm each component of your SMART goal with your team members.

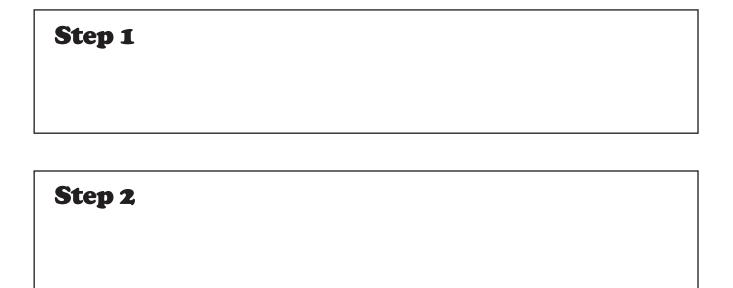
Specific	What specifically are you going to achieve?	Our specific goal is
Measurable	How will you measure your progress?	We will track the prog- ress we make toward our goal by
Achievable	Do you have the skills and abilities necessary to achieve your goal?	Our goal is achievable because we can
Relevant	Why is achieving this goal important to you? How is it meaningful?	Achieving this goal is im- portant and meaningful to us because
Timely	How much time do you have to achieve your goal?	Our goal will be achieved by

Tree Planting Example

Specific	What exactly are you going to achieve?	Our goal is that we will each attend two tree-planting events with X local organization and bring two people from our family, friends, and/or community.
Measurable	How will you measure your progress?	We will track the progress we make toward our goal by attending one event by [month, year] and a second by [month, year].
Achievable	Do you have the skills and abilities necessary to achieve your goal?	Our goal is achievable because we can work with the organi- zation we found that plants trees, and we will support each other to attend the tree-planting events.
Relevant	Why is achieving this goal important to you? How is it meaningful?	Achieving this goal is important and meaningful to us because our area has limited tree cover- ing. Tree covering is important to purify the air and reduce health problems.
Timely	How much time do you have to achieve your goal?	Our goal will be achieved by [Month, year].

Steps to Reach our Goal

You can't achieve your entire goal at once. Think through the steps, in order, that you'll need to take to achieve your goal.



Step 3

Step 4

Potential Partners

You can't achieve your goal alone. Brainstorm and research local resources that can help you reach your goal (e.g., local activists, educators, and/or community and family members, etc.).

Person/Organization	How they will support us	Best way to contact them

Group Presentations: Our SMART Goals Related to Environmental Justice

Answer the following questions for each group:

Specific: What specific details do we learn about this plan? Does it focus on individual issues or broader systemic issues?
Measurable: How will achieving the goal be measured?
Achievable: What skills and ability are needed to achieve this goal? Does the group have the skills and ability to achieve this goal?
Relevant: Why is this goal important to the group?
Timely: When does the group expect to take action and achieve their goals?

Group 1

Group 2

Group 3