# Lesson 3: Brainstorming Climate Change Solutions

## Learning Outcomes

Students will:

- Listen to various perspectives on climate change to help formulate meaningful and equitable solutions.
- Develop a comprehensive understanding of climate change and its far-reaching impact on different aspects of their daily lives.
- Brainstorm adaptation and mitigation solutions for their CIC project, and assess the practicality of their ideas.

## Essential Question

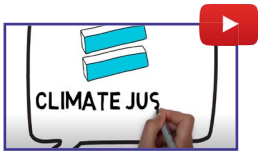
- Why did you choose this particular climate change problem? How does it connect to you, your family, or your community?
- How does listening to the stories and voices of our youth and Elders inspire you?
- Can you tell an engaging story about the climate solution ideas you are exploring?
- Does your solution take into consideration climate justice for those who suffer from disproportionate climate change impacts?
- What are some possible resources that you may want to tap into for your project?

## Note to Teacher

- This lesson includes an introduction to climate justice as one tool for evaluating a project. This introduction aims to foster a deeper understanding of the importance of climate justice in addressing the disproportionate impacts of climate change on vulnerable communities.
- Use the "Find Your Entry Point Worksheet" or Wordcloud from Lesson #1 as a starting point for brainstorming.
- Consider documenting the mind-mapping process and project assessment processes in Lesson #3 as it may aid in the storytelling process. Students and teachers should add photos and videos to their Canva Pro profile as "assets" that can be used in a final project.
- There are no handouts for Lesson #3.
- For this lesson, we recommend using a tool called EJSCREEN, which was created by the U.S. Environmental Protection Agency (EPA). This tool helps people look at maps and data to better understand how environmental issues—like air or water pollution—affect different communities, especially those that may be more vulnerable.
  - Unfortunately, this tool is currently unavailable to the public due to decisions made by the current federal administration. We've chosen to keep the link in the curriculum in case it becomes available again in the future.
  - In the meantime, CIC staff are more than happy to help you find local tools or resources to support your students in learning about environmental justice in your community. Feel free to reach out—we're here to help!

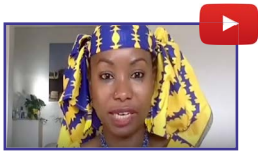
## Classroom Discussion and Activities

- **Climate Change Justice and an Interconnected World View** (20 minutes)
  - Watch Definition of Climate Justice -(3:21)
    - Important background information to consider sharing: An essential component of climate justice is the understanding of the interconnectedness of environmental issues with numerous aspects of our lives. Beyond the environment, climate change impacts health, mental wellness, culture, identity, and community. Recognizing this interconnectedness is crucial for developing climate change solutions. It is important to address environmental concerns while also prioritizing equity, social justice, and the well-being of all individuals and communities.




  - Watch Climate change is impacting coffee growers (4:13). This video tells the story of the economic impacts climate change has on communities.
  - Indigenous perspectives take climate justice and extend them beyond the human realm, focusing on the interconnectedness of all beings.

    - **Listening to our Youth**
      - Watch Indigenous activists on tackling the climate crisis (5:00)
      - Discussion questions -
        - How did the work of young climate activists resonate with your own interests in climate justice and action?
        - As a young person, do you feel like you can make a difference in climate change?

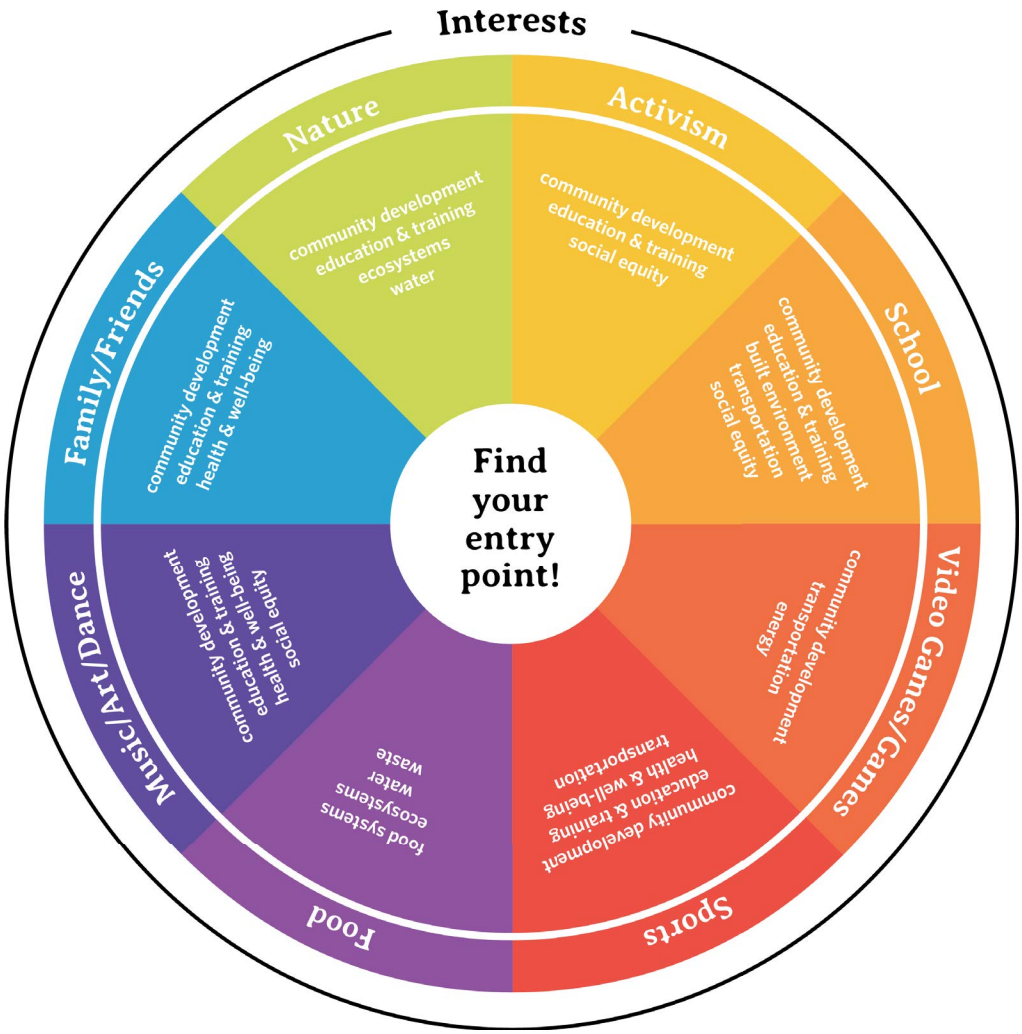


- **Brainstorming Your Solutions** (20 minutes)

### Teacher's Note

- Start by having students reference their Entry Point Worksheet from Lesson #1. Then zoom in. Think Local. Think Microscopic. Think of the smallest intervention possible that aligns with their entry point, that, if adopted on a wider scale, would be effective. For example, if school leadership provided incentives to students to walk, bike, or take public transportation to and from school, they might do so more often.
  - If neighbors saved seeds from their backyard gardens, you could create a community seed bank of locally adapted seeds to support future, resilient gardens.
  - Think about how climate change impacts your home. How do you use water? Do you collect rainwater? Can you limit your use of water? Can you reuse water?
  - What do you do with leftover food or scraps? Do you have a place to dispose of organic waste? Can you limit your food waste?

- Entry Point Graphic - Use this graphic, created by a former CIC participant, to assist with brainstorming and help students connect their interests to climate solution pathways. Not all entry points or pathways are reflected here, but this is an opportunity to be creative!

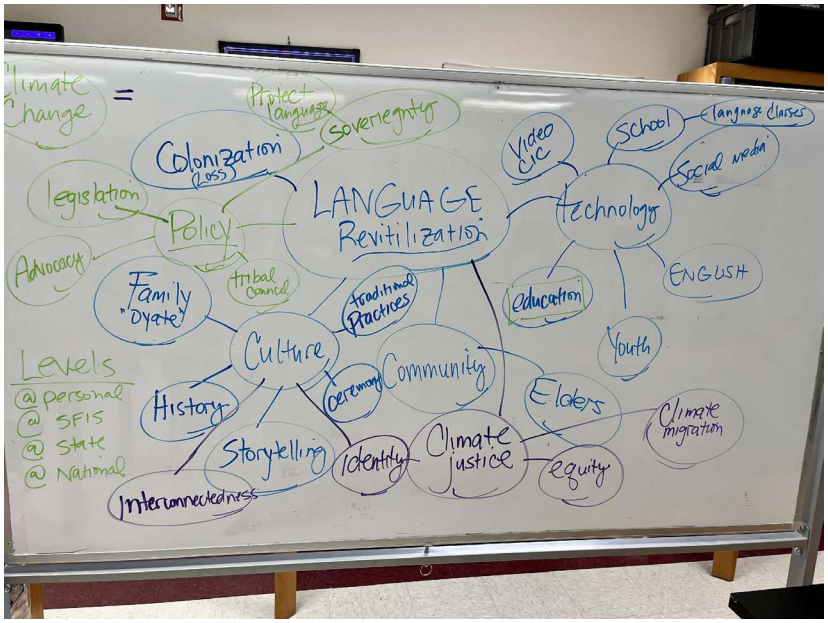



- **Mind Map Activity**
  - A mind map is a great way for students to brainstorm climate change solutions and impacts for their entry point. As a systems thinking tool, students can quickly organize their thoughts and ideas around climate change while making connections between cause and effect, potential solutions, stakeholders, and community impacts.
    - This activity can be done as an entire class or individually.
    - Use a piece of paper or an online program to complete the map.
    - Students should start by drawing or typing their climate change problem or solution in the middle of the paper or screen.
    - Next, students can continue to add key ideas, techniques, structures, dream concepts, solutions, causes, and components of the system as branches that seem to be related to their main idea or topic.
    - As ideas come to mind, students can add more branches and concepts that spread throughout the page.
    - Adding color and images can help inspire creativity and critical thinking.
    - Free online mind map option: Canva Mind Map Maker

Follow up question for students:

- How do you take this web of ideas and formulate a specific solution to address climate change in your community?
- Have students share their proposed solutions either individually or in groups.

Mind map example from Santa Fe Indian School 9th graders around language revitalization as an entry point for climate change.




- **Project Assessment** (20 minutes)
  - Using their mind map, have students identify one solution that resonates with them. Then, have students use the following checklist to assess the feasibility and effectiveness of their proposed solution. Students can discuss as pairs or in groups.
    - it be expensive? Think about the cost vs. the benefit.
    - Is it even possible? What tools, skills, and resources would you need?
    - Does it address the root of the problem?
    - How long would it take to complete? Is it a short-term or long-term solution?
    - Does the idea conflict with or support community values and traditional practices?
    - Does your solution address climate justice concerns?

## Alignment to Standards

- MS ESS-3-2: Earth and Human Activity Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects
- CCSS.ELA-Literacy.CCRA.SL.2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
- CCSS.ELA-LITERACY.CCRA.L. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.