

### Learning Outcomes

Students will:

- ✦ Explore climate change solutions.
- ✦ Distinguish between “mitigation” and “adaptation” strategies for climate change.
- ✦ Reflect on the impact of climate change in their community.
- ✦ Outline their initial ideas for their Climate Innovation Challenge.

### Essential Question



- ✦ What can we do to protect our community and the Earth from climate change now and in the future?

### Notes to Teacher



- ✦ **Lesson Preparation:** It’s recommended that you complete these steps before leading the lesson with your students:
  - ✦ Preview [Adaptation & Mitigation / Climate Wisconsin](#).
  - ✦ Familiarize yourself with the terms **adaptation** and **mitigation**. Consider how you will support your students in creating a definition and providing examples of each.
  - ✦ Print or digitally assign the lesson 2 handout(s)
  - ✦ Choose which (if any) of the optional extension activities you will complete
- ✦ **Optional Extension Activities:** Use these activities to provide students with additional opportunities to learn about adaptation and mitigation strategies and provide examples of Traditional Ecological Knowledge (TEK) to reflect how world view and culture play a role in the choices we make and the solutions we devise.



- ◆ [Climate Change in My Community](#)

### Optional Extension Activities:

- ◆ [Adaptation Strategies Jigsaw](#)
- ◆ [Seasonal Rounds & Ecological Calendars](#)

## Classroom Discussion and Activities



### ◆ Hook: Adaptation & Mitigation Terms (10 minutes)

- ◆ Write the following examples on the board or display this table for students:

I wear a helmet while biking.	I wear rain boots when it's wet outside.
I wash my hands before eating.	I move seats when a new student joins the class.

Ask students: *What is the **outcome** of each of the solutions on the board? Can you figure out what the two on the left have in common? What about the two on the right?*

- ◆ Students should think-pair-share or brainstorm in small groups.
- ◆ Explain that the two on the left are what we call **mitigation strategies**- these reduce the consequences of something bad (ex. Getting a concussion, getting sick)
- ◆ Explain that the two on the right are what we call **adaptation strategies**- these help us adapt to new circumstances (ex. Wearing waterproof gear so as not to get wet, allowing a new student a place to sit.)
- ◆ Propose a few other problematic scenarios and ask students to come up with **mitigation** or **adaptation strategies** for addressing them or preventing them from happening again:
  - ◆ Scenario: Someone gets hurt during a dodgeball game at recess.
    - ◆ *Mitigations: take them to the nurse, take them to the hospital/doctor (reduce the seriousness of the injury)*
    - ◆ *Adaptations: decide to play a different game that is safer for everyone else, make new rules that ban head shots (change the circumstances of the game to make it safer)*
  - ◆ Scenario: One classroom doesn't evacuate during a fire drill.
    - ◆ *Mitigations: install a new firm alarm system, ask firefighters to make sure all classrooms are empty (reduce the risk of students getting hurt or injured in a real fire)*
    - ◆ *Adaptations: create a buddy system for classrooms to alert each other during drills, hold a new fire drill training for all classrooms so they understand what to do, create a school-wide competition to see who can be first to evacuate safely during the next drill (change the expectations around fire drills)*

- ◆ **Adaptation and Mitigation Strategies for Climate Change** (5 minutes)
  - ◇ Show the video [Adaptation & Mitigation / Climate Wisconsin](#) (2:47)
  - ◇ Share these definitions of adaptation & mitigation:
    - ◆ **“Adaptation” is the act of changing to meet a new set of circumstances.**
      - ◇ Animals and plants can adapt in the short or long term by changing their physiology or behavior. Humans have the benefit of being able to predict future circumstances and can adapt even before changes happen. In relation to climate change, “adaptation” refers to adjustments in ecological, social, or economic systems in response to climate change impacts. (i.e. rain catchment, land use changes, and/or community response protocols)
    - ◆ **“Mitigation” is reducing the severity or seriousness of something.**
      - ◇ In relation to climate change, “mitigation” is reducing the amount of greenhouse gasses in the atmosphere, either by reducing emissions (i.e., driving less) or pulling the existing greenhouse gasses out of the atmosphere. (i.e., planting trees, recycling, and/or storing carbon underground).
- ◆ **Climate Change Solutions** (15 minutes)
  - ◇ Ask the class, **“How do we respond to climate change?”** Encourage them to recall solutions from what they already know and the videos they’ve watched.
    - ◆ Students may complete the brainstorming individually or in small groups, recording their ideas.
    - ◆ Ask students to provide suggestions to the class and create a list of possibilities on the board or in a shared document.
      - ◇ As a class, identify which are adaptation strategies and which are mitigation strategies for addressing climate change. Circle, highlight or underline them accordingly. Discuss which strategies might be both an adaptation and a mitigation (ex. Planting trees could be seen as both because it both sequesters carbon and has local cooling and habitat benefits).
- ◆ **Analyze CIC Videos** (15 minutes)
  - ◇ Choose 2-3 of past winning videos submitted by elementary and middle school students. After each video, students should work in small groups to identify:
    - ◆ *What is the climate change solution being proposed?*
    - ◆ *Is it an **adaptation** or **mitigation** strategy? How do you know?*
  - ◇ Recommended videos (for more options, view the [CAVU YouTube Channel](#))
    - ◆ [“Recycling Clothes”](#) (3:57) by Annabelle at Santa Fe Preparatory School in Santa Fe, NM
    - ◆ [“Smart Kitchen Farming Through Sunken Beds”](#) (3:10) by Dinaice, Florence, Eveline, Elizabeth, Geoffrey, Saumu, Dorine. Racheal, Leonard, Tobias, Solomon, Elias, Jared, Joseph, Jefferson, Esther, Julius, Clarice, Ibrahim, Juliana, Jeremiah, Rophence, Josphine, Loice Dorcus, Moses, Evan, Phoebe at Mbulia Comprehensive School, Kenya.
    - ◆ [“3D Printing Homes”](#) (2:45) by Alexandra and Lilly, 6th graders at New Mexico International School, Albuquerque, NM.
  - ◇ As a class, add the discussed strategies to the appropriate sections of the Venn diagram, if they are not already included.
- ◆ **Wrap-Up: Climate Change in My Community** (20 minutes)
  - ◇ Students work in pairs, small groups, or as an entire class to complete the [Climate Change in My Community](#) worksheet.
    - ◆ NOTE: Students should leave the last column of the table blank for now. They will return to this in lesson 3.

- ✦ If time allows, teachers may lead a whip-around for students to share one row of their table with the class. Teachers may also consider creating a table on large paper, a projector or whiteboard that compiles class ideas for reference later in the project.

**Optional Extension Activities for Lesson 2:** *If time allows, teachers may decide to include one or more of these activities to reinforce the concepts taught in today’s lesson and provide students with additional opportunities to learn about adaptation and mitigation strategies used in their local area and around the world.*

- ✦ **Adaptation & Mitigation Strategies Kahoot!** (20 minutes)
  - ✦ If students are familiar with Kahoot, have them participate in a fun, interactive game that delineates the difference between these key terms.
- ✦ **Adaptation Strategies Jigsaw** (45 minutes)
  - ✦ In this jigsaw activity, students each research one climate change impact and an associated adaptation strategy using videos, then teach their findings to classmates. As a group, students collaborate to complete a shared table, gaining a broader understanding of how different communities adapt to various climate challenges.
- ✦ **Indigenous-Led Solutions to Climate Change** (25 minutes)
  - ✦ Consider sharing a few examples of Indigenous world views and how Indigenous communities are addressing climate change in their own traditional and cultural ways:
    - ✦ [Holding on to the Corn](#) (5:55)
    - ✦ [Fighting to Keep Mexico’s Floating Farms Alive](#) (3:22)
    - ✦ [Affiliated Tribes of NW Indians Tribal Climate Camp in Alaska](#) (3:40)
  - ✦ Discussion Questions:
    - ✦ *What are some valuable lessons we can learn from Indigenous-led climate solutions?*
    - ✦ *How do Indigenous communities use both adaptation and mitigation to create climate solutions?*
    - ✦ *Do you see lessons in how Indigenous-led approaches might influence how you want to address climate change in your community?*
- ✦ **Seasonal Rounds & Ecological Calendars** (45 minutes)
  - ✦ In this extension activity, students learn how Indigenous communities use seasonal rounds—calendars based on careful observations of plants, animals, and weather—to guide activities like planting, harvesting, and hunting. These traditional knowledge systems help communities adapt to climate change. Students will explore real examples and create their own seasonal rounds by tracking changes in their local environment.

## Alignment to Standards



- ✦ [CCSS.ELA-LITERACY.CCRA.R.4](#) Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.